



October 29, 2015

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: FirstLight Hydro Generating Company, FERC Project Nos. 2485 and 1889
Request for Data Relating to Study No. 3.6.3 Whitewater Boating Evaluation

Dear Secretary Bose:

At the September 30, 2015 Updated Study Report (USR) meeting for the relicensing of FirstLight Hydro Generating Company's (FirstLight) Turners Falls Hydroelectric and Northfield Mountain Pumped Storage Projects, FERC staff and American Whitewater (AW) requested data relating to Relicensing Study No. 3.6.3 *Whitewater Boating Evaluation*. (The final report for Study No. 3.6.3 was posted to the FirstLight relicensing website on March 31, 2015 and filed with FERC on September 14, 2015 in connection with the USR.) Specifically, FERC staff and AW requested either the copies of the whitewater evaluation surveys that were completed in the field by study participants or a spreadsheet that compiled the responses contained in the completed surveys.

On October 22, 2015, FirstLight posted copies of the completed whitewater evaluation surveys on the relicensing website at www.northfieldrelicensing.com/Pages/Documents2015.aspx in connection with the Relicensing Study 3.6.3 *Whitewater Boating Evaluation* Report. FirstLight is also filing the surveys electronically with the Commission. If you have any questions, or need additional information, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "John S. Howard".

Cc: Bob Nasdor, American Whitewater
Norm Sims, Appalachian Mountain Club
Tom Christopher, New England FLOW
Andrea Donlon, Connecticut River Watershed Council
Adam Beeco, FERC

Encl.

John S. Howard
Director FERC Compliance, Hydro

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Northfield, MA 01360
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Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21/14, 2014

Name: Jim Dowd

1. Watercraft used (Circle appropriate one):

Hard shell kayak *Sunday + Monday*

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): *Can Rafted Hyscote Paddle cat raft on Saturday*

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21/14	10000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. Flow (cfs)
3000 cfs
- From your perspective, what is the **optimum flow** for this run? 10000 cfs

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	2500			✓		
3	3000			✓		
4	2000				✓	
5	10000					✓
6	15000			✓		

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive					X
Other rivers in Massachusetts					✓
Other rivers in the northeast				✓	
Other rivers in the country			X		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemonot	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	3	3	3	3	1	3	3	3	3	3	3	
Suitable for intermediate boater	2	2	1	2	2	2	2	2	2	2	2	
Suitable for advanced boater	2	2	2	2	2	2	2	2	2	2	2	
Size & difficulty of features	3	3	2	3	3	3	3	3	3	3	3	
Play boating	3	3	3	3	3	3	3	3	3	3	3	
Rafting	3	3	3	3	2	3	3	3	3	3	3	
Tubing	0	0	0	0	1	0	0	0	0	0	0	
Canoeing	2	2	0	0	2	0	2	2	2	0	0	
Kayaking	2	2	2	2	2	2	2	2	2	2	2	
Eddy hopping	2	2	2	2	2	2	2	2	2	2	2	
Technical maneuvering	2	2	2	2	2	1	1	2	1	1	2	
River gradient	1	2	1	2	2	1	1	1	2	1	2	
Driving distance to river	3	3	3	3	2	3	3	3	2	3	3	
Shuttles	2	2	2	2	2	2	2	2	2	2	2	
Access to river	1	1	1	1	1	1	1	1	1	1	1	
Parking	2	2	2	2	2	2	2	2	2	2	2	
Scenery	1	3	1	1	1	1	2	1	3	1	2	
Water quality	1	3	1	1	1	1	2	1	3	1	2	
Overall	2	3	1	1	1	1	2	1	2	1	2	

11. Any other comments?

The Take-out is horrible for rafts and heavy boats. Please obtain "Right of way" to River left shore for take-out access. This was possible in the past and hopefully could be arranged. Without a wench raft take out would be extremely difficult and potentially dangerous

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/19, 2014
Name: Scott Kallman

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input checked="" type="radio"/> Cataract |
| <input type="radio"/> C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
2:50	2500	-2	-1	0	1	2
	2000	-2	-1	0	1	2
	5000	-2	-1	0	1	2
	8000	-2	-1	0	1	2

1305

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

800 Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

3000
8000

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	250					
2	300					
3	500					
4	800					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts					
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	2	1								
Suitable for intermediate boater	4			2								
Suitable for advanced boater				1								
Size & difficulty of features				1								
Play boating	4											
Rafting												
Tubing												
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?

8000 PPGS
 SUMFCITY

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7.20, 2014

Name: Tracey Kallman

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Advanced

Novice

Expert

Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7.19.14	3500	-2	-1	0	1	2
7.19.14	5000	-2	-1	0	1	2
7.20.14	8000	-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 3500
 - From your perspective, what is the **optimum flow** for this run? 8000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	3500				✓	
2	5000					✓
3	8000					✓
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts					
Other rivers in the northeast		✓			
Other rivers in the country					

no experience

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls' bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

1 = More desirable than Turners Falls bypass section of the Connecticut

2 = Similar to the Turners Falls bypass section of the Connecticut

3 = Less desirable than the Turners Falls bypass section of the Connecticut

4 = No experience boating the river

no for all

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield. E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemon	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater												
Suitable for intermediate boater												
Suitable for advanced boater												
Size & difficulty of features												
Play boating												
Rafting												
Tubing												
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project-FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: SACH PETERSON

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	16,000	-2	-1	0	1	2
7/24	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 3,000
 - From your perspective, what is the **optimum flow** for this run? 3,000

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5	16,000				✓	
6	13,000				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts			✓		
Other rivers in the northeast	✓	✓			
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somers to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater					3							
Suitable for intermediate boater					3							
Suitable for advanced boater					3							
Size & difficulty of features					3							
Play boating					3							
Rafting					3							
Tubing					4							
Canoeing					4							
Kayaking					4							
Eddy hopping					2							
Technical maneuvering					1							
River gradient					3							
Driving distance to river					2							
Shuttles					3							
Access to river					3							
Parking					2							
Scenery					1							
Water quality					1							
Overall					47							

11. Any other comments?

I had A Blast

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21/2014, 2014

Name: Matt Gwertin

1. Watercraft used (Circle appropriate one):

- Hard shell kayak (circled)
Inflatable kayak
OC1
OC2
C1
Stand up paddle board
C2
Raft
Cataract
Other (describe):

2. Your whitewater boating skill level (Circle one):

- Beginner
Advanced
Novice (Expert circled)
Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
1-5 times
6-10 times
11-20 times
>20 times (circled)

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/15 9-11	2500	2	-1	0	1	2
7/15 1-3	3500	-2	-1	0	1	2
7/21 9-11	10000	-2	-1	0	1	2
7/21 1-3	13000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

5000

10,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500	X				
2	3500		X			
3						
4						
5	10000				X	
6	13000					X

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive					X
Other rivers in Massachusetts					X
Other rivers in the northeast			X		
Other rivers in the country			X		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater						4		5			4	
Suitable for intermediate boater						4		4			4	
Suitable for advanced boater						4		4			4	
Size & difficulty of features						4		4			4	
Play boating						4		4			4	
Rafting						4		4			4	
Tubing						4		4			4	
Canoeing						4		4			4	
Kayaking						4		4			4	
Eddy hopping						4		4			4	
Technical maneuvering						4		4			4	
River gradient						4		4			4	
Driving distance to river						4		4			4	
Shuttles						4		4			4	
Access to river						4		4			4	
Parking						4		4			4	
Scenery						4		4			4	
Water quality						4		4			4	
Overall						4		4			4	

11. Any other comments? Conn R. is big water - its not like these other rivers!!

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/20, 2014
Name: PATRICK WYMAN

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input checked="" type="radio"/> OC2 | <input checked="" type="radio"/> Cataract |
| <input type="radio"/> C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
	2500	-2	-1	0	1	2
	3500	-2	-1	0	1	2
	5600	-2	-1	0	1	2
	8000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. 5000
 - From your perspective, what is the **optimum flow** for this run? 8000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500	✓				✓
2	3300	✓				✓
3	5000	✓				✓
4	8000					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4 3	3	1	4	1	4 1	1	1	3	2	2	4
Suitable for intermediate boater	4 3	3	1	4	1	4 1	1	1	3	2	2	4
Suitable for advanced boater	4	1	1	4	1	4	1	2	1	2	1	4
Size & difficulty of features	4	1	1	4	1	4	1	2	1	1	1	4
Play boating	4	1	1	4	1	4	1	2	1	1	1	4
Rafting	4	2	1	4	1	4	2	1	1	1	1	4
Tubing	4	1	2	4	1	4	1	1	3	1	1	4
Canoeing	4	1	1	4	1	4	1	2	1	1	1	4
Kayaking	4	1	1	4	1	4	1	2	1	1	1	4
Eddy hopping	4	1	1	4	1	4	1	2	1	1	1	4
Technical maneuvering	4	1	1	4	1	4	1	2	1	1	1	4
River gradient	4	1	1	4	1	4	1	2	1	1	1	4
Driving distance to river	4	3	2	4	1	4	3	3	2	1	1	4
Shuttles	4	3	3	4	1	4	3	3	3	1	2	4
Access to river	4	2	2	4	1	4	2	2	2	2	2	4
Parking	4	2	2	4	1	4	2	2	2	2	2	4
Scenery	4	1	1	4	1	4	1	1	1	1	1	4
Water quality	4	1	2	4	1	4	1	2	2	1	1	4
Overall	4	1	1	4	1	4	1	2	2	2	1	4

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: July 21st, 2014
Name: James Kelly-Rand

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19-9:30	2500	-2	-1	0	1	2
7/19-1:00	3500	-2	-1	0	1	2
7/20-9:30	5000	-2	-1	0	1	2
7/20-1:00	8000	-2	-1	0	1	2
7/21 9:30	10,000				1	

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 2500
 - From your perspective, what is the **optimum flow** for this run? 5000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500				✓	
2	3500					✓
3	5000					✓
4	8000					✓
5	10,000				✓	
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	④	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	④	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	3	4	4	2	4	3	4	3	3	3	3
Suitable for intermediate boater	4	3	1	1	2	1	3	1	2	2	3	2
Suitable for advanced boater	4	1	1	1	2	1	1	1	1	1	1	1
Size & difficulty of features	4	1	1	1	2	1	1	1	1	1	1	1
Play boating	4	2	1	1	1	1	1	1	2	2	1	1
Rafting	4	3	1	1	2	1	1	1	1	1	1	1
Tubing	4	3	1	1	1	1	1	1	1	1	1	1
Canoeing	4	2	1	1	2	1	1	1	1	1	1	1
Kayaking	4	2	1	1	2	1	1	1	1	1	1	1
Eddy hopping	4	1	1	1	1	1	1	1	1	1	1	1
Technical maneuvering	4	1	1	1	1	1	1	1	1	1	1	1
River gradient	4	1	1	1	2	1	1	2	1	1	1	1
Driving distance to river	4	1	1	1	3	3	3	2	2	2	2	3
Shuttles	1	1	1	1	1	1	1	3	1	2	2	2
Access to river	1	1	1	1	1	1	1	3	1	2	2	1
Parking	1	1	1	1	1	1	1	2	2	2	2	2
Scenery	1	2	1	1	2	2	2	2	2	1	1	2
Water quality	1	2	1	1	1	1	1	2	1	1	1	1
Overall	1	1	1	1	2	1	1	1	1	1	1	1

11. Any other comments?

With regular predictable releases I would come here to boat occasionally with family and friends. The take out access will need major improvement. The put in will need similar boat drop off access as on this study -

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Jack Gill

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	13000	-2	-1	0	1	2
7/21	10000	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
7/20	5000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 2500
 - From your perspective, what is the **optimum flow** for this run? 5000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500				✓	
2	3500					✓
3	5000					✓
4	8000					✓
5	10000					✓
6	13000				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓	✗		
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	1	3	1	4	1	3	3	2	2	1	1	1
Suitable for intermediate boater	1	3	3	4	2	2	3	2	2	1	1	1
Suitable for advanced boater	3	1	3	4	3	1	1	3	3	3	3	3
Size & difficulty of features	3	2	3	4	3	1	1	3	3	3	3	3
Play boating	1	1	3	4	2	2	1	3	2	2	3	1
Rafting	4	4	4	4	4	4	4	4	4	4	4	4
Tubing	4	4	4	4	4	4	4	4	4	4	4	4
Canoeing	1	1	1	4	1	1	1	1	1	1	1	1
Kayaking	1	1	2	4	1	1	1	1	1	1	1	1
Eddy hopping	1	1	2	4	1	1	1	1	1	1	1	1
Technical maneuvering	2	1	3	4	2	1	1	3	3	3	3	2
River gradient				4								
Driving distance to river	1	2	3	3	2	1	1	3	3	3	3	1
Shuttles	2	2	2	3	2	2	2	3	3	2	3	2
Access to river	1	1	1	4	1	1	1	3	2	1	1	1
Parking	2	2	2	4	2	2	2	3	2	2	2	2
Scenery	1	3	2	4	2	2	2	1	3	3	2	1
Water quality	1	3	1	4	1	1	1	1	2	1	1	1
Overall	1	1	3	4	2	1	1	3	3	3	3	1

11. Any other comments?

The 1st Rapids, after the put-in and Rock Dam are the features that make this run worthwhile. The Rock Dam is not suitable for novices & The 1st Rapid is only suitable for beginners and novices at the lower flows.

3.6.3 - Whitewater Boating Evaluation

An alternate take-out needs to be found to make this river frequently used.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: July 19, 2014 2014
Name: Mark Blatchley

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/17	2500	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. 4000
 - From your perspective, what is the **optimum flow** for this run? 6,000+

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		X			
2	3500				X	
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	X				
Other rivers in Massachusetts	X				
Other rivers in the northeast	X				
Other rivers in the country	X				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	1	1	1	1	1	1	1	1	1	1	1	1
Suitable for intermediate boater												
Suitable for advanced boater												
Size & difficulty of features												
Play boating												
Rafting												
Tubing												
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?
 All these rivers are better
 Section is short
 a competent boater should do it.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/19, 2014

Name: Stephen Robinson (Zogor Outdoor)

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Advanced

Novice

Expert

Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19 AM	2500	-2	-1	0	1	2
7/19 PM	3500	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

4,000

- From your perspective, what is the **optimum flow** for this run?

5,000 - 8,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		✓			
2	3500		✓			
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

At today's flows

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	✓				
Other rivers in Massachusetts	✓				
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater					1		2					
Suitable for intermediate boater					2		2					
Suitable for advanced boater					3		2					
Size & difficulty of features					2		2					
Play boating					1							
Rafting					2		3					
Tubing					2							
Canoeing					1		2					
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river					3		3					
Shuttles												
Access to river					2		2					
Parking					2		2					
Scenery					1		1					
Water quality					1		1					
Overall					2		2					

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: July 21, 2014

Name: Michael Beauregard

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
9am-11am 7/21/14	10,000	-2	-1	0	1	2
1pm-3pm 7/21/14	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

10,000

- From your perspective, what is the **optimum flow** for this run?

10,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	13,000					X
2	10,000					X
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive				X	
Other rivers in Massachusetts				X	
Other rivers in the northeast			X		
Other rivers in the country			X		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	3	4	3	4	3	4	4	4	4	4
Suitable for intermediate boater	1	1	3	1	3	1	3	1	1	1	1	1
Suitable for advanced boater			3		3		3					
Size & difficulty of features			2		3		3					
Play boating			3		3		3					
Rafting			3		3		3					
Tubing			2		2		2					
Canoeing			3		3		3					
Kayaking			3		3		3					
Eddy hopping			3		3		3					
Technical maneuvering			3		3		3					
River gradient			3		3		3					
Driving distance to river			2		2		3					
Shuttles			3		3		3					
Access to river			2		2		2					
Parking	✓	✓	2	✓	2	✓	2	✓	✓	✓	✓	✓
Scenery	✓	✓	2	✓	2	✓	2	✓	✓	✓	✓	✓
Water quality		✓	2	✓	2	✓	2	✓	✓	✓	✓	✓
Overall			3		3		3					

11. Any other comments?

at higher flow, rock dam is a smaller drop, but surfing is better

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/19/14, 2014

Name: JONATHAN Pennell

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19 AM	2500	-2	-1	0	1	2
7/19 PM	3500	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate.

over 3500

- From your perspective, what is the **optimum flow** for this run?

?

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		✓			
2	3500		✓	✓		
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	3	3	4	4	1	1	3	4	4	4	4	
Suitable for intermediate boater	1	1			1	1	2	4	4	4	4	
Suitable for advanced boater	1	1			1	1	1	4	4	4	4	
Size & difficulty of features	3	3			2	2	1	4	4	4	4	
Play boating	3	3			1	1	1	4	4	4	4	
Rafting	1	1			1	1	3	1		1	1	
Tubing	1	1			1	1	3	1		1	1	
Canoeing	2	2			1	1	1	1		1	1	
Kayaking	2	2			1	1	2			1	1	
Eddy hopping	3	3			1	1	1			1	1	
Technical maneuvering	1	1			1	1	1			1	1	
River gradient	1	1			2	2	1			1	1	
Driving distance to river	1	1			3	3	3			1	1	
Shuttles	3	3			2	2	3			1	1	
Access to river	3	3			2	2	2			1	1	
Parking	3	3			2	2	2			1	1	
Scenery	1	1			1	1	1			1	1	
Water quality	1	1			1	1	1			1	1	
Overall	1	1	↓	↓	2	2	2	↓	↓	↓	↓	

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7.21, 2014
Name: Glenn Stewart

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7-19-14	2500/3500	-2	-1	0	1	2
7-20-14	5000/8000	-2	-1	0	1	2
7-31-14	10000/13000	-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

• From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

2500

• From your perspective, what is the **optimum flow** for this run?

unsure

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	3500			✓		
3	5000				✓	
4	8000				✓	
5	10,000					✓
6	13,000					✓

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive					
Other rivers in Massachusetts					
Other rivers in the northeast					
Other rivers in the country					

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	3	2	4	4	1	4	3	1	4	4	4	
Suitable for intermediate boater	2	2	4		2		2	2				
Suitable for advanced boater	2	2	4		3		2	2				
Size & difficulty of features	1	2	4		3		2	2				
Play boating	1	1	4		3		3	3				
Rafting	4	4	4		4		4	4				
Tubing	4	4	4		4		4	4				
Canoeing	4	4	4		4		4	4				
Kayaking	1	1	4		3		2	2				
Eddy hopping	1	1	4		3		2	3				
Technical maneuvering	1	1	4		3		1	2				
River gradient	1	1	4		2		1	3				
Driving distance to river	3	3	4		3		3	2				
Shuttles												
Access to river	1	1	4		1		1	3				
Parking	2	1	4		1		1	3				
Scenery	2	2	4		2		3	1				
Water quality	1	2	4		1		1	1				
Overall	2	2	4		3		1	3				

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/20/14, 2014

Name: Zachary Hvizdak

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

or beginners
e warm water
s very important
ey don't have
e gear
ore advanced
on less have
d they will
is less affect
of swimming
hich will make
ven advance note
quickly

Relative

- Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
	2500	2	-1	0	1	2
	3500	2	-1	0	1	2
	5000	-2	-1	0	1	2
	8000	-2	1	0	1	2

- Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

5000

- From your perspective, what is the **optimum flow** for this run?

5000 for Rock Dam
Much Higher than 8000 for everything else

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500	X				
2	3500	X				
3	5000				X	
4	8000			X		
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	3
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		?			
Other rivers in Massachusetts					
Other rivers in the northeast		X			
Other rivers in the country	X				

not local
not local

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

Dry way?

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	3	3	4	3	4	4	4	4	4
Suitable for intermediate boater				3	3		3					
Suitable for advanced boater				1	3		3					
Size & difficulty of features				1	3		3					
Play boating				1	3		3					
Rafting				2	2		N/A					
Tubing				3	2		?					
Canoeing				2	3		3					
Kayaking				1	3		3					
Eddy hopping				1	1		1					
Technical maneuvering				1	3		3					
River gradient				1	3		2					
Driving distance to river				N/A	N/A		N/A					
Shuttles				2	3		3					
Access to river				2	2		3					
Parking				2	2		3					
Scenery				1	2		3					
Water quality				1	1		1					
Overall				1	3		3					

Not local

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014
Name: Alex Trubenberg

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|---|--------------------------------|
| <input checked="" type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 9am	10,000	-2	-1	0	1	2
7/21 1pm	14,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. 5000
 - From your perspective, what is the **optimum flow** for this run? 8500

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,600				✓	✓
2	14,000				✓	✓
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	-1 Worse than average	0 Average	1 Better than average	2 Excellent	3 Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	2	4	4	4	2	4	4	4
Suitable for intermediate boater					2				2			
Suitable for advanced boater					2				2			
Size & difficulty of features					3				3			
Play boating					2				2			
Rafting					2				2			
Tubing					2				2			
Canoeing					2				2			
Kayaking					2				2			
Eddy hopping					3				3			
Technical maneuvering					2				2			
River gradient					3				3			
Driving distance to river					3				3			
Shuttles					3				3			
Access to river				2					2			
Parking												
Scenery												
Water quality												
Overall					2				2			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Ryan Mooney

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
		-2	-1	0	1	2
		-2	-1	0	1	2
7/21	10,000	-2	-1	0	1	2
7/21	13,000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

2,500

- From your perspective, what is the **optimum flow** for this run?

13,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,000					X
2	13,000					X
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences; ✓	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft; ✓	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive				X	
Other rivers in Massachusetts			X		
Other rivers in the northeast			X		
Other rivers in the country			X		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

10,000-13,000

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	3	4	3	4	4	4	2	4	4	4
Suitable for intermediate boater	4	4	2	4	2	4	4	4	2	4	4	4
Suitable for advanced boater	4	4	2	4	2	4	4	4	2	4	4	4
Size & difficulty of features	4	4	2	4	3	4	4	4	1	4	4	4
Play boating	4	4	3	4	2	4	4	4	2	4	4	4
Rafting	4	4	2	4	2	4	4	4	2	4	4	4
Tubing	4	4	4	4	4	4	4	4	4	4	4	4
Canoeing	4	4	3	4	4	4	4	4	4	4	4	4
Kayaking	4	4	2	4	2	4	4	4	2	4	4	4
Eddy hopping	4	4	2	4	1	4	4	4	2	4	4	4
Technical maneuvering	4	4	2	4	1	4	4	4	2	4	4	4
River gradient	4	4	2	4	2	4	4	4	2	4	4	4
Driving distance to river	4	4	2	4	2	4	4	4	2	4	4	4
Shuttles	4	4	2	4	3	4	4	4	2	4	4	4
Access to river	4	4	2	4	2	4	4	4	3	4	4	4
Parking	4	4	1	4	2	4	4	4	2	4	4	4
Scenery	4	4	2	4	1	4	4	4	2	4	4	4
Water quality	4	4	2	4	1	4	4	4	3	4	4	4
Overall	4	4	2	4	2	4	4	4	2	4	4	4

11. Any other comments?

This section of river is very fun and would be valuable to New England whitewater. The more water the better for this section. Having a "big" water option in this region would be very valuable.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/20/2014, 2014
Name: Michael D. Parker

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
7/20	5000	-2	-1	0	1	2
7/20	8000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

5000

- From your perspective, what is the **optimum flow** for this run?

Maybe 10,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		✓			
2	3500		✓			
3	5000				✓	
4	8000					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	①	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	①	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating. *Optimal Flow would be great, the boater can choose easy, or difficult while on that optimal level.*

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast					
Other rivers in the country					

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield. E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater					1				1			
Suitable for intermediate boater					2				2			
Suitable for advanced boater					3				3			
Size & difficulty of features					3				3			
Play boating					2				2			
Rafting					2				2			
Tubing					1				1			
Canoeing					1				1			
Kayaking					1				1			
Eddy hopping					1				1			
Technical maneuvering					1				1			
River gradient					1				1			
Driving distance to river					1				1			
Shuttles					1				1			
Access to river					1				1			
Parking					1				1			
Scenery					1				1			
Water quality					1				1			
Overall					1				1			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 1/21, 2014

Name: Tyler Randolph

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

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	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	10,000	-2	-1	0	2	2
7/21	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

7,000
9,000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,000				✓	
2	13,000				✓	
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country					

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	3	4	1	4	4	4	3	4	4	4
Suitable for intermediate boater			2		2				2			
Suitable for advanced boater			3		3				1			
Size & difficulty of features			1		1				1			
Play boating			2		2				1			
Rafting			2		1				1			
Tubing			3		3				3			
Canoeing			2		2				1			
Kayaking			2		2				1			
Eddy hopping			1		1				1			
Technical maneuvering			1		2				1			
River gradient			1		3				1			
Driving distance to river			3		1				3			
Shuttles			3		1				1			
Access to river			2		1				1			
Parking			1		1				1			
Scenery			1		1				1			
Water quality			2		2				1			
Overall			1		2				1			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: July, 21, 2014

Name: Jeffrey Green

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 9-11	10,000	-2	-1	0	1	2
2/21 1-3	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

5,000

10,000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5	10,000					X
6	13,000				X	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive				X	
Other rivers in Massachusetts			X		
Other rivers in the northeast		X			
Other rivers in the country	X				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farrington, Otis to New-Boston	Green, VT To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	4	4	4	3	4	4	4
Suitable for intermediate boater					1				2			
Suitable for advanced boater					3				1			
Size & difficulty of features					3				2			
Play boating					2				3			
Rafting					2				3			
Tubing					2				3			
Canoeing					2				3			
Kayaking					2				3			
Eddy hopping					1				1			
Technical maneuvering					2				1			
River gradient					3				1			
Driving distance to river					2				3			
Shuttles					2				2			
Access to river					1				2			
Parking					1				3			
Scenery					1				2			
Water quality	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Overall	↓	↓	↓	↓	3	↓	↓	↓	2	↓	↓	↓

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Jesse Cohen

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 9-11	10K	-2	-1	0	1	2
1-3	13K	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

5K?

- From your perspective, what is the **optimum flow** for this run?

8-9K

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10K				✓	
2	13K				✓	
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		x			
Other rivers in Massachusetts		x			
Other rivers in the northeast	x	x			
Other rivers in the country					

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater					1				3			
Suitable for intermediate boater					2				1			
Suitable for advanced boater					3				2			
Size & difficulty of features					3				2			
Play boating					3				2			
Rafting					2				1			
Tubing					3				3			
Canoeing					2				2			
Kayaking					3				2			
Eddy hopping					1				1			
Technical maneuvering					3				1			
River gradient					3				1			
Driving distance to river					3				3			
Shuttles					3				3			
Access to river					1				2			
Parking					2				3			
Scenery					1				2			
Water quality					1				2			
Overall	4	4	4	4	1	4	4	4	1	4	4	4

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7-21, 2014

Name: Robert Masforakis

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermédiate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
AM 7-21	10 K	-2	-1	0	1	2
PM 7-21	13 K	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

5 K
5-10 K

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
 Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10 K				✓	
2	13 K		✓			
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	X				
Other rivers in Massachusetts	X				
Other rivers in the northeast	X				
Other rivers in the country	X				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	4	4	4	3	4	4	4
Suitable for intermediate boater	↓	↓	↓	↓	1	↓	↓	↓	1	↓	↓	↓
Suitable for advanced boater	↓				2				1			
Size & difficulty of features					1				2			
Play boating					1				1			
Rafting					1				1			
Tubing					3				3			
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering					1				1			
River gradient					1				1			
Driving distance to river					3				3			
Shuttles					3				3			
Access to river					1				2			
Parking					1				2			
Scenery					1				2			
Water quality					1				2			
Overall					1				2			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7-21-14, 2014
Name: Mackae Freedom

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
- 1-5 times
- 6-10 times
- 11-20 times
- >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 10:00-11	10,000	-2	-1	0	1	2
11:30	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

5,000
5,000 - 50,000
cfs

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,000			<input checked="" type="checkbox"/>		
2	13,000			<input checked="" type="checkbox"/>		
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	<input checked="" type="checkbox"/> 3	4	5
provide opportunities for people with different skill levels and watercraft;	1	<input checked="" type="checkbox"/> 2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	<input checked="" type="checkbox"/>				
Other rivers in Massachusetts	<input checked="" type="checkbox"/>				
Other rivers in the northeast	<input checked="" type="checkbox"/>				
Other rivers in the country	<input checked="" type="checkbox"/>				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	4	4	4	1	4	4	4
Suitable for intermediate boater					1				1			
Suitable for advanced boater					2				1			
Size & difficulty of features					1				1			
Play boating					1				1			
Rafting					1				1			
Tubing					1				1			
Canoeing					1				1			
Kayaking					1				1			
Eddy hopping					1				1			
Technical maneuvering					1				1			
River gradient					1				1			
Driving distance to river					3				3			
Shuttles					3				1			
Access to river					3				1			
Parking					3				3			
Scenery					1				3			
Water quality					3				1			
Overall					1				1			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21/14, 2014

Name: COLLIN SCHAUERMAN

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Advanced

Novice

Expert

Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 9-11	10,000	-2	-1	0	1	2
7/21 1-5	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

2,500

- From your perspective, what is the **optimum flow** for this run?

10,000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5	10,000					✓
6	13,000					✓

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive				✓	
Other rivers in Massachusetts		✓	✓		
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater												
Suitable for intermediate boater												
Suitable for advanced boater												
Size & difficulty of features												
Play boating												
Rafting			3	2	1				2			
Tubing												
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21/14, 2014

Name: SHAHID JALIL

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	10,000	-2	-1	0	1	2
7/21	13,000	-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

Flow (cfs)
 10,000 cfs
 LOWER THAN
 10,000 cfs

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,000					✓
2	13,000					✓
3						
4	13,000					
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts		✓			
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	not suitable	1	not suitable	not suitable	4	not suitable	4	4	4
Suitable for intermediate boater	↓	↓	↓	1	1	1	↓	↓	↓	↓	↓	↓
Suitable for advanced boater	↓	↓	↓	1	1	1	↓	↓	↓	↓	↓	↓
Size & difficulty of features	↓	↓	↓	1	1	1	↓	↓	↓	↓	↓	↓
Play boating	↓	↓	↓	3	1	3	↓	3	↓	↓	↓	↓
Rafting	↓	↓	↓	1	1	3	↓	1	↓	↓	↓	↓
Tubing	↓	↓	↓	not suitable	1	3	↓	not suitable	↓	↓	↓	↓
Canoeing	↓	↓	↓	1	1	1	↓	1	↓	↓	↓	↓
Kayaking	↓	↓	↓	1	1	1	↓	1	↓	↓	↓	↓
Eddy hopping	↓	↓	↓	1	1	3	↓	1	↓	↓	↓	↓
Technical maneuvering	↓	↓	↓	1	1	1	↓	1	↓	↓	↓	↓
River gradient	↓	↓	↓	1	1	1	2	1	↓	↓	↓	↓
Driving distance to river	↓	↓	↓	1	1	3	↓	2	↓	↓	↓	↓
Shuttles	↓	↓	↓	1	1	1	↓	1	↓	↓	↓	↓
Access to river	↓	↓	↓	1	1	1	↓	1	↓	↓	↓	↓
Parking	↓	↓	↓	3	1	1	↓	1	↓	↓	↓	↓
Scenery	↓	↓	↓	2	1	1	↓	1	↓	↓	↓	↓
Water quality	↓	↓	↓	1	1	3	↓	3	↓	↓	↓	↓
Overall	↓	↓	↓	1	1	2	↓	2	↓	↓	↓	↓

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7-21, 2014

Name: FRANK MOONEY

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Advanced

Novice

Expert

Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 AM	10,000	-2	-1	0	1	2
		-2	-1	0	1	2
7/21 PM	13,000	-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

3500

- From your perspective, what is the **optimum flow** for this run?

5000 - 8000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5	10,070			✓	✓	
6	15,600				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts			✓		
Other rivers in the northeast		✓			
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsium to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Southegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	1	4	1	4	3	4	1	4	4	4
Suitable for intermediate boater			1		1		1		1			
Suitable for advanced boater			1		3		1		3			
Size & difficulty of features			1		1		1		3			
Play boating			1		3		1		2			
Rafting			1		1		3		2			
Tubing			1									
Canoeing												
Kayaking												
Eddy hopping			1		1		1		2			
Technical maneuvering			1		1		1		1			
River gradient			1		1		1		2			
Driving distance to river			3		1		3		3			
Shuttles			3		1		2		2			
Access to river			1		1		2		2			
Parking			3		1		2		2			
Scenery			1		1		1		1			
Water quality			1		1		1		2			
Overall			1		1		1		2			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Rodney Claiborne

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
- 1-5 times
- 6-10 times
- 11-20 times
- >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21 9:00-1:00	10000	-2	-1	0	1	2
7/21 1:00-3:00	13000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

7500

13000 maybe higher

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10000				X	
2	12000					X
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		X			
Other rivers in Massachusetts		X			
Other rivers in the northeast	X				
Other rivers in the country	X				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	2	1	4	2	4	2	4	4	4
Suitable for intermediate boater	4	4	4	2	2	4	2	4	2	4	4	4
Suitable for advanced boater	4	4	4	2	2	4	2	4	2	4	4	4
Size & difficulty of features	4	4	4	2	3	4	2	4	2	4	4	4
Play boating	4	4	4	3	1	4	4	4	3	4	4	4
Rafting	4	4	4	4	4	4	4	4	4	4	4	4
Tubing	4	4	4	4	4	4	4	4	4	4	4	4
Canoeing	4	4	4	4	4	4	4	4	4	4	4	4
Kayaking	4	4	4	2	2	4	2	4	2	4	4	4
Eddy hopping	4	4	4	1	1	4	1	4	1	4	4	4
Technical maneuvering	4	4	4	1	1	4	1	4	1	4	4	4
River gradient	4	4	4	1	2	4	2	4	2	4	4	4
Driving distance to river	4	4	4	2	1	4	3	4	2	4	4	4
Shuttles	4	4	4	1	1	4	2	4	2	4	4	4
Access to river	4	4	4	3	3	4	3	4	1	4	4	4
Parking	4	4	4	3	2	4	2	4	3	4	4	4
Scenery	4	4	4	3	3	4	2	4	2	4	4	4
Water quality	4	4	4	3	3	4	2	4	2	4	4	4
Overall	4	4	4			4		4		4	4	4

11. Any other comments?

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21, 2014
Name: Jim Michaud

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
7/20	5000	-2	-1	0	1	2
7/20	8000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

8000

10000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500	✓				
2	3500		✓			
3	5000			✓		
4	8000				✓	
5	10000					✓
6	13000				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somers to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	2	2	4	4	1	4	3	4	1	4	4	
Suitable for intermediate boater	1	1			3		1		2			
Suitable for advanced boater	1	3			3		1		3			
Size & difficulty of features	1	3			3		1		3			
Play boating	3	2			3		1		3			
Rafting	3	3			3		3		3			
Tubing	1	3			3		3		3			
Canoeing	1	1			3		3		3			
Kayaking	1	1			3		3		3			
Eddy hopping	1	2			3		1		3			
Technical maneuvering	1	1			2		1		3			
River gradient	1	2			3		1		2			
Driving distance to river	2	1			2		1		2			
Shuttles	1	1			2		1		2			
Access to river	1	1			2		1		1			
Parking	1	1			1		2		1			
Scenery	1	2			2		1		1			
Water quality	2	3			1		1		2			
Overall	1	2			3		1		2			

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/20/14, 2014

Name: Robert Breaux

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	(4)	5
Size/difficulty of features	1	2	3	(4)	5
Driving distance to river	1	2	(3)	4	5
Accessibility	1	2	(3)	4	5
Shuttle Availability	1	(2)	3	4	5
Crowding	1	2	3	(4)	5
Weather	1	2	(3)	4	5
Water temperature	1	2	(3)	4	5
Attractive scenery	1	2	3	(4)	5
Water quality	1	2	(3)	4	5
Thrilling experience	1	2	3	(4)	5
Safe trip	1	2	3	(4)	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19/14/9 AM	2500	-2	-1	0	(1)	2
7/19/14/1 PM	3500	-2	-1	0	1	2
7/20/14/9 AM	5000	-2	-1	0	1	2
7/20/14/1 PM	8000	-2	-1	0	1	(2)

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate.

2500

- From your perspective, what is the **optimum flow** for this run?

around 8000 cfs

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
 Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500					X
2	3500				X	X
3	8000					X
4	8000					X
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		X	X		
Other rivers in Massachusetts		X			
Other rivers in the northeast		X			
Other rivers in the country		X			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

Score using the following system:

1 = More desirable than Turners Falls bypass section of the Connecticut

2 = Similar to the Turners Falls bypass section of the Connecticut

3 = Less desirable than the Turners Falls bypass section of the Connecticut

4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilssum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	2	4	4	4	1	4	4	4	4	4	4	2
Suitable for intermediate boater	2	4	4	4	1	4	4	4	4	4	4	2
Suitable for advanced boater	3	4	4	4	1	4	4	4	4	4	4	3
Size & difficulty of features	3	4	4	4	1	4	4	4	4	4	4	3
Play boating	2	4	4	4	1	4	4	4	4	4	4	2
Rafting	3	4	4	4	1	4	4	4	4	4	4	3
Tubing	1	4	4	4	1	4	4	4	4	4	4	1
Canoeing	2	4	4	4	1	4	4	4	4	4	4	2
Kayaking	2	4	4	4	1	4	4	4	4	4	4	2
Eddy hopping	2	4	4	4	1	4	4	4	4	4	4	2
Technical maneuvering	2	4	4	4	1	4	4	4	4	4	4	2
River gradient	2	4	4	4	1	4	4	4	4	4	4	2
Driving distance to river	2	4	4	4	1	4	4	4	4	4	4	2
Shuttles		4	4	4	1	4	4	4	4	4	4	
Access to river	2	4	4	4	1	4	4	4	4	4	4	2
Parking	3	4	4	4	1	4	4	4	4	4	4	3
Scenery	2	4	4	4	2	4	4	4	4	4	4	2
Water quality	2	4	4	4	2	4	4	4	4	4	4	2
Overall	2	4	4	4	1	4	4	4	4	4	4	2

11. Any other comments?

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
Modified Revised Study Plan

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: July 21, 2014

Name: Carin A. Tinney

1. Watercraft used (Circle appropriate one):

- | | | |
|--|-------------------|--|
| <input checked="" type="checkbox"/> Hard shell kayak | creek + play boat | <input type="checkbox"/> Stand up paddle board |
| <input type="checkbox"/> Inflatable kayak | | <input type="checkbox"/> C2 |
| <input type="checkbox"/> OC1 | | <input type="checkbox"/> Raft |
| <input type="checkbox"/> OC2 | | <input type="checkbox"/> Cataract |
| <input type="checkbox"/> C1 | | <input type="checkbox"/> Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Beginner | <input checked="" type="checkbox"/> Advanced |
| <input type="checkbox"/> Novice | <input type="checkbox"/> Expert |
| <input type="checkbox"/> Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	④	5
Size/difficulty of features	1	2	3	④	5
Driving distance to river	1	②	3	4	5
Accessibility	1	2	③	4	5
Shuttle Availability	1	2	3	4	5
Crowding	①	2	3	4	5
Weather	①	2	3	4	5
Water temperature	1	②	3	4	5
Attractive scenery	①	2	3	4	5
Water quality	1	2	③	4	5
Thrilling experience	1	②	3	4	5
Safe trip	1	2	③	4	5

not day →
out weather/
rain
before
impacts
planning

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	①	0	1	2
7/19	3500	-2	①	0	1	2
7/20	5000	-2	-1	①	1	2
7/20	5000	-2	-1	0	①	2
7/21	10000				①	
7/21	13000				①	

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

1 - think 5-8000 offer nice technical challenge at rock dam
10,000 - introduced play
13000 - had some play but a bit washed

• From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

Flow (cfs)
5000

• From your perspective, what is the **optimum flow** for this run?

9000-10K

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		X			
2	3500		X			
3	5000			X		
4	8000				X	
5	10000				X	
6	13000				X	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	(2)	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	(3)	4	5

-beginner-beginners would do fine without much instr. at 3500

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	X				
Other rivers in Massachusetts	X				
Other rivers in the northeast		X			
Other rivers in the country	X				

I'm sorry!

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Cavin Timney

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater					3		1					
Suitable for intermediate boater					3		1					
Suitable for advanced boater					N/A		1					
Size & difficulty of features		4			3		1					
Play boating					3		3					
Rafting					4		4					
Tubing					4		4		4			
Canoeing				4	4		4				4	4
Kayaking	4				3		1	4		4		4
Eddy hopping					1		1					
Technical maneuvering					1		1					
River gradient					3		1					
Driving distance to river					same		1					
Shuttles					3		1					
Access to river					3		1					
Parking					3		1					
Scenery					3		3					
Water quality					1		1					
Overall					3		1					

11. Any other comments? It's a great second river (or 1st of two); great teaching river - at 8-10K you can easily spend a few hours at first rapid teaching, play, ferry, river reading, skills, surfing

if you add some rocks to make eddies on 1st rapid river left - you could have a nice play park!

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: JORDAN YARUS

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19 9am	2500	-2	-1	0	1	2
7/19 1pm	3500	-2	-1	0	1	2
7/20 9am	5000	-2	-1	0	1	2
7/20 1pm	8000	-2	-1	0	1	2

7/21 9am 10K
 7/21 1pm 13K

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate.
- From your perspective, what is the **optimum flow** for this run?

5000
 8000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level *- See answer to #5*

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		X			
Other rivers in Massachusetts	X				
Other rivers in the northeast	X				
Other rivers in the country	X				

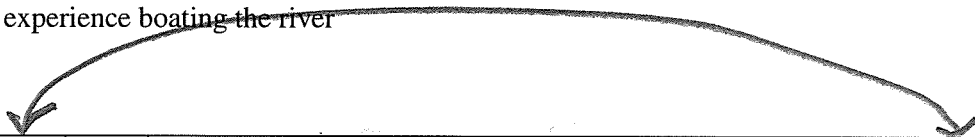
10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river



	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	4	2	4	4	3	4	4
Suitable for intermediate boater					3		2			1		
Suitable for advanced boater					3		2			3		
Size & difficulty of features					2		3			3		
Play boating					3		3			3		
Rafting					4		4			4		
Tubing					2		2			3		
Canoeing					4		4			4		
Kayaking					1		2			2		
Eddy hopping					3		2			2		
Technical maneuvering					3		2			2		
River gradient					3		2			2		
Driving distance to river					2		2			2		
Shuttles					2		2			2		
Access to river					1		2			2		
Parking					2		2			2		
Scenery					1		1			1		
Water quality					1		1			1		
Overall					1		1			1		

11. Any other comments? My main reason for coming back here would be for teaching. I probably wouldn't return to paddle it with people above an intermediate level.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Evan Eichhorn

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19-9	2500	-2	-1	0	1	2
7/19-1	3500	-2	-1	0	1	2
7/20-9	5000	-2	-1	0	1	2
7/20-1	8000	-2	-1	0	1	2

7/21-9 10000
7/21-1 13000

1
1

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

3500

- From your perspective, what is the **optimum flow** for this run?

5000

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	3500					✓
3	5000					✓
4	4000					✓
5	10000				✓	
6	13000				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓	✓		
Other rivers in Massachusetts		✓			
Other rivers in the northeast			✓		
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4		2		2		3			3		
Suitable for intermediate boater			2		3		1			1		
Suitable for advanced boater			1		3		1			1		
Size & difficulty of features			1		3		1			2		
Play boating			2		2		1			1		
Rafting			5		5		5			5		
Tubing			5		1		5			5		
Canoeing			4		3		5			5		
Kayaking			4		5		5			5		
Eddy hopping			1		1		1			1		
Technical maneuvering			1		2		1			1		
River gradient			1		2		1			1		
Driving distance to river			2		3		2			1		
Shuttles			2		2		1			2		
Access to river			2		2		2			2		
Parking			2		2		2			2		
Scenery			2		1		1			1		
Water quality			1		1		1			1		
Overall	4	4	1	4	2	4	4	4	4	1	4	4

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21/14, 2014
Name: Ryan Galway

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19/14	2500	-2	-1	0	1	2
7/19/14	3500	-2	-1	0	1	2
7/26/14	5000	-2	-1	0	1	2
7/27/14	10000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)

• From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 3500
- From your perspective, what is the **optimum flow** for this run? 10,000

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemon	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	4	2	4	4	1	4	4
Suitable for intermediate boater	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
Suitable for advanced boater	↓	↓	↓	↓	3	↓	1	↓	↓	3	↓	↓
Size & difficulty of features	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
Play boating	↓	↓	↓	↓	1	↓	3	↓	↓	1	↓	↓
Rafting	↓	↓	↓	↓	2	↓	3	↓	↓	2	↓	↓
Tubing	↓	↓	↓	↓	3	↓	3	↓	↓	3	↓	↓
Canoeing	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
Kayaking	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
Eddy hopping	↓	↓	↓	↓	3	↓	1	↓	↓	3	↓	↓
Technical maneuvering	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
River gradient	↓	↓	↓	↓	1	↓	1	↓	↓	1	↓	↓
Driving distance to river	↓	↓	↓	↓	2	↓	2	↓	↓	2	↓	↓
Shuttles	↓	↓	↓	↓	2	↓	2	↓	↓	2	↓	↓
Access to river	↓	↓	↓	↓	1	↓	1	↓	↓	1	↓	↓
Parking	↓	↓	↓	↓	2	↓	2	↓	↓	2	↓	↓
Scenery	↓	↓	↓	↓	2	↓	1	↓	↓	2	↓	↓
Water quality	↓	↓	↓	↓	1	↓	4	↓	↓	1	↓	↓
Overall	↓	↓	↓	↓	2	↓	4	↓	↓	2	↓	↓

11. Any other comments?

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500		✓			
2	3500					✓
3	5000					✓
4	8000				✓	
5	10000					✓
6	13000				✓	

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date: 7/31/2014, 2014

Name: Patrick Joyce

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Advanced

Novice

Expert

Intermediate

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	10,000	-2	-1	0	1	2
7/21	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. 10,000
 - From your perspective, what is the **optimum flow** for this run? 13,000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
 Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5	10,000					✓
6	13,000					✓

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive					✓
Other rivers in Massachusetts				✓	✓
Other rivers in the northeast			✓	✓	
Other rivers in the country			✓		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater				3	2		3	2	2	2		
Suitable for intermediate boater				3	2		3	2	2	2		
Suitable for advanced boater				3	2		3	2	2	2		
Size & difficulty of features				3	2		3	2	2	2		
Play boating				3	2		3	2	2	2		
Rafting	4	4	4	3	2	4	3	2	2	2	4	4
Tubing	4	4	4	3	2	4	3	2	2	2	4	4
Canoeing				3	2		3	2	2	2		
Kayaking				3	2		3	2	2	2		
Eddy hopping				3	2		3	2	2	2		
Technical maneuvering				3	2		3	2	2	2		
River gradient				3	2		3	2	2	2		
Driving distance to river				3	2		3	2	2	2		
Shuttles				3	2		3	2	2	2		
Access to river				3	2		3	2	2	2		
Parking				3	2		3	2	2	2		
Scenery				3	2		3	2	2	2		
Water quality				3	2		3	2	2	2		
Overall				3	2		3	2	2	2		

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/19-20, 2014

Name: John Modena

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
- 1-5 times
- 6-10 times
- 11-20 times
- >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
7/20	5000	-2	-1	0	1	2
7/20	8000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate.

5000

- From your perspective, what is the **optimum flow** for this run?

8000

Northfield Mountain Pumped Storage Project (No. 2485) and Turners Falls Hydroelectric Project (No. 1889)
 Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	3500			✓		
3	5000				✓	
4	8000					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts		✓			
Other rivers in the northeast		✓			
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	1	4	2	4	1	4	2	1	4	2
Suitable for intermediate boater					2							
Suitable for advanced boater												
Size & difficulty of features												
Play boating												
Rafting												
Tubing												
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?

Jaw guys did a great job. Thanks for the opportunity. A model for a study.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/20, 2014
Name: Steve Bridges

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times, 1-5 times, 6-10 times, 11-20 times, >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/20 9	5000	-2	-1	0	1	2
7/20 1	8000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate.

5000

- From your perspective, what is the **optimum flow** for this run?

9000-10,000

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3	5000				✓	
4	8000					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive			✓		
Other rivers in Massachusetts			✓	✓	
Other rivers in the northeast			✓		
Other rivers in the country		✓			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield. E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	2	4	4	4	1	4	3	4	2	4	4	2
Suitable for intermediate boater	2	4	4	4	3	4	2	4	2	4	4	2
Suitable for advanced boater	2	4	4	4	3	4	2	4	2	4	4	2
Size & difficulty of features	3	4	4	4	3	4	3	4	2	4	4	3
Play boating	2	4	4	4	3	4	2	4	3	4	4	2
Rafting	3	4	4	4	2	4	2	4	2	4	4	2
Tubing	3	4	4	4	3	4	2	4	3	4	4	2
Canoeing	2	4	4	4	2	4	2	4	2	4	4	2
Kayaking	2	4	4	4	2	4	2	4	2	4	4	2
Eddy hopping	3	4	4	4	3	4	3	4	3	4	4	3
Technical maneuvering	3	4	4	4	3	4	3	4	3	4	4	3
River gradient	2	4	4	4	2	4	2	4	2	4	4	2
Driving distance to river	1	4	4	4	1	4	1	4	1	4	4	1
Shuttles	1	4	4	4	1	4	1	4	1	4	4	1
Access to river	1	4	4	4	2	4	1	4	1	4	4	1
Parking	1	4	4	4	1	4	1	4	1	4	4	1
Scenery	3	4	4	4	3	4	3	4	3	4	4	3
Water quality	3	4	4	4	3	4	3	4	3	4	4	3
Overall	2	4	4	4	3	4	1	4	1	4	4	2

11. Any other comments?

Thank You!

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: July 17, 2014

Name: Julia Khouran

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1 run 1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): Shredder run 2

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	-1	0	1	2
7/19	2500	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run? 2500
 Note that minimum acceptable differs from minimum flow necessary to navigate.
 - From your perspective, what is the **optimum flow** for this run? 3500

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

OC1 -
Shredde

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2560				X	
2	3000				X	
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	X				
Other rivers in Massachusetts		X			
Other rivers in the northeast	X				
Other rivers in the country	X				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Southegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	4	4	1	1	1	4	4	3	3	
Suitable for intermediate boater					1		1			1	1	
Suitable for advanced boater					1		1			3	3	
Size & difficulty of features					1		1			1	1	
Play boating					1		1			1	1	
Rafting					1		3			3	3	
Tubing					1		1			3	3	
Canoeing					1		1			1	1	
Kayaking					1		1			1	1	
Eddy hopping					1		1			1	1	
Technical maneuvering					1		1			1	1	
River gradient					1		1			1	1	
Driving distance to river					3		3			2	2	
Shuttles					2		2			2	2	
Access to river					1		3			2	2	
Parking					2		3			3	3	
Scenery					2		3			2	2	
Water quality					1		2			2	2	
Overall					1		1			1	1	

11. Any other comments?

~~It~~ Liked 3500 better. Better to bring novice for instruction because safer. Too much flab & too few ~~flat~~ & small features for WW. Rockdam - better at 3500 & could be a great play place but access just there is hard.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21/14, 2014

Name: Tom Christopher

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
- 1-5 times
- 6-10 times
- 11-20 times
- >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	3,500	-2	-1	0	1	2
7/20	5,000	-2	-1	0	1	2
7/20	8,000	-2	-1	0	1	2
7/21	10,000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate.

3,500

- From your perspective, what is the **optimum flow** for this run?

5,000

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1					✓	
2						✓
3						✓
4						✓
5						✓
6						✓

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive				✓	
Other rivers in Massachusetts				✓	
Other rivers in the northeast			✓		
Other rivers in the country			✓		

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	1	1	2	2	2	2	2	2	2	1	1	2
Suitable for intermediate boater	2	1	3	3	1	2	1	3	3	3	2	2
Suitable for advanced boater	3	3	3	3	3	3	3	3	3	3	3	3
Size & difficulty of features	3	3	3	3	3	3	3	3	3	3	3	3
Play boating	3	3	3	3	3	3	3	3	3	3	3	3
Rafting	3	3	3	3	3	3	3	3	3	3	3	3
Tubing	3	3	3	3	3	3	3	3	3	3	3	3
Canoeing	3	3	3	3	3	3	3	3	3	3	3	3
Kayaking	3	3	3	3	3	3	3	3	3	3	3	3
Eddy hopping	3	3	3	3	3	3	3	3	3	3	3	3
Technical maneuvering	3	3	3	3	3	3	3	3	3	3	3	3
River gradient	3	3	3	3	3	3	3	3	3	3	3	3
Driving distance to river	3	3	3	3	3	3	3	3	3	3	3	3
Shuttles	3	3	3	3	3	3	3	3	3	3	3	3
Access to river	3	3	3	3	3	3	3	3	3	3	3	3
Parking	3	3	3	3	3	3	3	3	3	3	3	3
Scenery	3	3	3	3	3	3	3	3	3	3	3	3
Water quality	3	3	3	3	3	3	3	3	3	3	3	3
Overall	3	3	3	3	3	3	3	3	3	3	3	3

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: July 21, 2014, 2014

Name: Charles Murray

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19	2500	-2	-1	0	1	2
7/19	3500	-2	-1	0	1	2
7/20	5000	-2	-1	0	1	2
7/20	8000	-2	-1	0	1	2
7/21	10K				1	
7/21	13K				1	

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. Flow (cfs)
3500
- From your perspective, what is the **optimum flow** for this run? 5000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1						
2						
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive					
Other rivers in Massachusetts					
Other rivers in the northeast					
Other rivers in the country					

The river reminds me of the Sacandaga in NY (the section that flows into the Hudson.)

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	3	3	4	4	1	4	3	1	3	3	1	
Suitable for intermediate boater	1	1			3		1	1	2	1	1	
Suitable for advanced boater	1	1			3		1	2	2	2	1	
Size & difficulty of features	1	1			2		1	2	2	1	1	
Play boating	1	1			2		1	2	2	1	1	
Rafting	4	4			4		4	4	4	4	4	
Tubing	4	4			4		4	4	4	4	4	
Canoeing	1	1			2		1	1	2	1	1	
Kayaking	4	4			4		4	4	4	4	4	
Eddy hopping	1	1			2		1	1	2	1	1	
Technical maneuvering	1	1			2		1	2	2	1	1	
River gradient	1	1			2		1	1	2	1	1	
Driving distance to river	1	3			2		1	2	3	3	3	
Shuttles	2	2			2		2	2	2	2	2	
Access to river	2	2			2		2	2	2	2	2	
Parking	2	2			2		2	3	2	2	3	
Scenery	1	1			1		1	1	1	1	1	
Water quality	2	2			2		2	1	2	2	1	
Overall	1	1			2		1	1	2	1	1	

11. Any other comments?

I enjoyed the Turners full bypass and would paddle it one or twice a year, especially if it was the only river w/ B&S water. I prefer smaller rivers like the Otter, per barrel west, Housatonic. These rivers tend to need lower flows to paddle and have many features and are close to my home.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/20, 2014

Name: Priscilla Lessau

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe):

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19 AM	2500	-2	1	0	1	2
7/19 PM	3500	-2	-1	0	1	2
7/20 AM	5000	-2	-1	0	1	2
7/20 PM	8000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

Flow (cfs)

- From a recreational perspective what is the **minimum acceptable flow** for this run? Note that minimum acceptable differs from minimum flow necessary to navigate.

2500

- From your perspective, what is the **optimum flow** for this run?

7000-10000

Modified Revised Study Plan

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	3500				✓	
3	5000					✓
4	8000					✓
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		✓			
Other rivers in Massachusetts		✓			
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsium to Shaw's Corner	Deerfield, E. Branch, Somersset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	1	3	1	1	1	3	3	1	1	4	1	1
Suitable for intermediate boater	2	1	2	3	2	1	1	2	1	4	2	
Suitable for advanced boater	3	2	3	3	3	2	2	3	2	1	3	
Size & difficulty of features	3	2	2	3	3	3	2	3	2	1	3	
Play boating	3	2	2	3	2	3	2	3	2	1	3	
Rafting	1	1	1	3	1	2	3	3	1	1	2	
Tubing	1	3	2	3	1	3	3	2	2	1	2	
Canoeing	1	1	1	1	1	1	1	1	1	1	1	
Kayaking	2	2	2	3	2	1	1	2	2	1	3	
Eddy hopping	1	1	1	3	1	1	1	1	1	1	1	
Technical maneuvering	1	1	1	2	1	1	1	1	1	1	1	
River gradient	2	2	2	3	2	1	1	1	2	1	2	
Driving distance to river	3	3	3	3	1	1	3	2	3	1	3	
Shuttles	3	3	2	3	2	2	2	2	3	1	2	
Access to river	2	1	1	3	1	1	1	1	2	1	2	
Parking	3	2	2	3	1	3	3	3	3	1	3	
Scenery	1	2	1	1	1	1	1	1	1	1	3	
Water quality	1	2	1	1	1	1	1	1	2	1	2	
Overall	2	1	1	1	1	2	1	2	2	4	2	

11. Any other comments?

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Ken Glusman

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level (Circle one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times 1-5 times 6-10 times 11-20 times >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
2500	2500	-2	-1	0	1	2
	5000	-2	-1	0	1	2
	8000	-2	-1	0	1	2
	10000	-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. 2,500 cfs
 - From your perspective, what is the **optimum flow** for this run? 8,000 cfs

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500			✓		
2	1000 3500			✓		
3	1000 5000				✓	
4	8000				✓	
5	10000			✓		
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	✓				
Other rivers in Massachusetts	✓				
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsun to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	3	3	4	4	2	3	3	4	3	3	3	
Suitable for intermediate boater	1	1	1	1	1	1	1	1	1	1	1	
Suitable for advanced boater	1	1	1	1	1	1	1	1	1	1	1	
Size & difficulty of features	1	1	1	1	1	1	1	1	1	1	1	
Play boating	1	1	1	1	2	2	1	1	1	2	1	
Rafting	3	3	1	1	2	3	3	1	3	3	3	
Tubing	3	3	1	1	4	3	3	1	2	2	3	
Canoeing	1	1	1	1	1	1	1	1	1	2	1	
Kayaking	1	1	1	1	1	1	1	1	1	2	1	
Eddy hopping	1	1	1	1	1	1	1	1	1	1	1	
Technical maneuvering	1	1	1	1	1	1	1	1	1	1	1	
River gradient	1	1	1	1	1	1	1	1	1	2	1	
Driving distance to river	2	3	1	1	3	3	3	2	3	3	2	
Shuttles	2	3	1	1	2	2	2	2	2	2	2	
Access to river	1	2	1	1	2	2	2	2	2	2	2	
Parking	2	2	1	1	2	2	2	2	2	2	2	
Scenery	1	1	1	1	1	1	1	1	1	1	2	
Water quality	2	1	1	1	1	1	1	2	2	2	2	
Overall	1	1	1	1	1	1	1	1	1	1	2	

11. Any other comments?

There is too little whitewater on this run for it to be worth the drive for me - I had a reasonable alternative.

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/19/2014, 2014

Name: MIKE DUCLOS

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level (Circle one):

Beginner

Novice

Intermediate

Advanced

Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

0 times

1-5 times

6-10 times

11-20 times

>20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/19 AM	2500	-2	-1	0	1	2
7/19 PM	3500	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
Note that minimum acceptable differs from minimum flow necessary to navigate. 2500
 - From your perspective, what is the **optimum flow** for this run? 3500

7. Rate the flows evaluated in terms of your craft and skill level

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	2500				X	
2	3500					X
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive		X			
Other rivers in Massachusetts			X		
Other rivers in the northeast		X			
Other rivers in the country		X			

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsom to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater	4	4	1	4	1	4	1	4	3	3	1	
Suitable for intermediate boater					2		1		1	1		
Suitable for advanced boater			3		3		1		3	3	3	
Size & difficulty of features			2		1		1		1	1	1	
Play boating		2	2		1		1		1	1	1	
Rafting			2		1		1		1	3	3	
Tubing			3		1		3		3	3	3	
Canoeing			1		1		1		1	1	1	
Kayaking			1		1		1		1	1	1	
Eddy hopping			1		1		1		1	1	1	
Technical maneuvering			1		1		1		1	1	1	
River gradient			1		1		1		1	1	1	
Driving distance to river			1		3		3		1	1	1	
Shuttles			2		2		2		3	2	2	
Access to river			2		2		2		1	2	2	
Parking			2		2		2		1	2	2	
Scenery			2		2		2		2	2	2	
Water quality	✓	✓	2	✓	1	✓	1	✓	2	1	1	
Overall	✓	✓	2	✓	1	✓	1	✓	1	1	1	

11. Any other comments?
 VALUE IN WARM WATER / SUMMER BOATING, ROCK DAM
 FEATURE OF INTEREST TO ADVANCED BOATERS,
 NOVICE INSTRUCTION POSSIBLE -
 I LIKE VERY TECHNICAL RIVERS, SO NOT SO MUCH INTEREST FOR ME

Figure 3.6.3-1c: Comparative Flow Evaluation Form

COMPARATIVE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date: 7/21, 2014

Name: Pat Perkins

1. Watercraft used (Circle appropriate one):

- Hard shell kayak *Play boat*
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level (Circle one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

Please answer each of the following questions based on your experience or reaction to the river at each of the flows boated. If you have no opinion about a particular item, leave it blank. Please do not discuss these questions or your responses with other participants.

3. How many times have you boated the Turners Falls bypass of the Connecticut River before this study? (Circle one)

- 0 times
- 1-5 times
- 6-10 times
- 11-20 times
- >20 times

4. A number of factors can affect one's satisfaction with a whitewater trip. How important are each of these factors to you? (Circle one number for each factor)

Modified Revised Study Plan

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Availability of features	1	2	3	4	5
Size/difficulty of features	1	2	3	4	5
Driving distance to river	1	2	3	4	5
Accessibility	1	2	3	4	5
Shuttle Availability	1	2	3	4	5
Crowding	1	2	3	4	5
Weather	1	2	3	4	5
Water temperature	1	2	3	4	5
Attractive scenery	1	2	3	4	5
Water quality	1	2	3	4	5
Thrilling experience	1	2	3	4	5
Safe trip	1	2	3	4	5

5. Evaluate the following flows for your craft and skill level. In making your evaluations, consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., navigability, whitewater challenge, safety, availability of features, aesthetics, and length of run). If you did not boat a particular flow(s) during the evaluation, do not rate that flow.

Release Date/Time	Flow (CFS)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
7/21	10,000	-2	-1	0	1	2
7/21	13,000	-2	-1	0	1	2
		-2	-1	0	1	2
		-2	-1	0	1	2

6. Based on your boating runs on this section of the Connecticut River as part of this study, specify the flows that provide the following types of experiences. (Note: you can specify flows that you did not run/observe, but which you think would provide the type of experience in question).

- Flow (cfs)
- From a recreational perspective what is the **minimum acceptable flow** for this run?
 Note that minimum acceptable differs from minimum flow necessary to navigate. No idea
 - From your perspective, what is the **optimum flow** for this run? No idea

7. Rate the flows evaluated in terms of your craft and skill level *Why the Same as #5!?*

FLOW	CFS	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable
1	10,000			✓		
2	13,000			✓		
3						
4						
5						
6						

8. How important is it to have a variety of flows in the Turners Falls bypass section of the Connecticut River? Rate the importance of having variable flows for the reasons below, or check the box below the table.

A variety of flows is necessary to:	Not at all important	Slightly important	Moderately important	Very important	Extremely important
provide different types of boating experiences;	1	2	3	4	5
provide opportunities for people with different skill levels and watercraft;	1	2	3	4	5

or, it isn't important to provide a variety of flow levels for boating.

9. Compared to other rivers of similar difficulty, how would you rate the boating opportunities on the Turners Falls bypass section of the Connecticut River? (Circle appropriate response for each region. If you are unsure about a comparison, leave that item blank.)

Compared to:	Worse than average	Average	Better than average	Excellent	Among the very best
Other rivers within a 1 hour drive	✓				
Other rivers in Massachusetts	✓				
Other rivers in the northeast	✓				
Other rivers in the country	✓				

10. Based on your experience at other regional rivers, use the following scoring system to compare the boating opportunities at these regional rivers to those of the Turners Falls bypass section of the Connecticut River.¹ Assume optimal flow conditions for boating.

¹ Other rivers (and specific river sections) will be identified in consultation with whitewater boating stakeholders prior to the evaluation. Whitewater classifications of rivers and sections will be added to this table once sections are identified

Modified Revised Study Plan

Score using the following system:

- 1 = More desirable than Turners Falls bypass section of the Connecticut
- 2 = Similar to the Turners Falls bypass section of the Connecticut
- 3 = Less desirable than the Turners Falls bypass section of the Connecticut
- 4 = No experience boating the river

	Westfield, N. Branch - all sections	Quabog, Warren to Brimfield	Ashuelot, Gilsum to Shaw's Corner	Deerfield, E. Branch, Somerset to Searsburg	Deerfield, Fife Brook	Chickley, Hawley to Charlemont	Farmington, Otis to New Boston	Green, VT. To MA.	Millers, S. Royalston to Athol	Otter Brook, Roxbury to Keene	Souhegan, Greenville to Wilton	Westfield, N. Branch, all sections
Suitable for novice boater									2			
Suitable for intermediate boater												
Suitable for advanced boater												
Size & difficulty of features												
Play boating												
Rafting												
Tubing			X						X		X	
Canoeing												
Kayaking												
Eddy hopping												
Technical maneuvering												
River gradient												
Driving distance to river												
Shuttles												
Access to river												
Parking												
Scenery												
Water quality												
Overall												

11. Any other comments?

Both levels are similar in fun, though some waves are better @ 13, 00.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Jim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time <u>7/19/14 9:00-11:55 AM</u>
Flow 2		cfs	Date/time
Flow 3		cfs	Date/time
Flow 4		cfs	Date/time
Flow 5, if applicable		cfs	Date/time
Flow 6, if applicable		cfs	Date/time

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): 2 or Rigged Hydside Paddler
Shredder deck

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

Strongly suggest that right of way be obtained at take-out that goes from Poplar Street down to sandbar at river's edge on River Right - just upstream of the take-out that we used today.
 Note - people were camping and fishing there on Saturday

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate

difficult for Raft

Take-out Access: easy moderate

Very difficult for Raft

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

Saw three bald eagles!

If portaging Rock Dam, it would be only moderately difficult

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

Acceptable for class II boater

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher, for whitewater

if fishing, then slightly lower would be better

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Strainers at various locations present hazards</u>	<u> </u>
<u>Rock jam - class III+ at this level</u>	<u> </u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u> 2 </u>
Number of hits with stops (did not have to get out of boat)	<u> 0 </u>
Number of hits with stops (had to get out of boat to continue)	<u> 0 </u>
Number of portages	<u> 0 </u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

I saw two strainers.
 Tom Christopher was swept underneath
 one - very dangerous situation

Right side, River Right Channel
 at very top of river just
 below put in

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14
 Name: PATRICK WYMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time	7/19/14	930AM.
Flow 2		cfs	Date/time		
Flow 3		cfs	Date/time		
Flow 4		cfs	Date/time		
Flow 5, if applicable		cfs	Date/time		
Flow 6, if applicable		cfs	Date/time		

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
	2500	II (2)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>ROCK DAM</u>	<u>3</u>
<u>FIRST RAPID</u>	<u>2</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>1</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>ROCK DAM</u>	①	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Nice Level for CLASS 2 Boaters

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Matt Guertin

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u> cfs	Date/time	<u>7/19 8-12</u>
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	<u>-2</u>	-1	0	1	2		
Availability of powerful hydraulics	<u>-2</u>	-1	0	1	2		
Availability of whitewater play areas	<u>-2</u>	-1	0	1	2		
Overall whitewater challenge	<u>-2</u>	-1	0	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	<u>-2</u>	-1	<u>0</u>	1	2		
Overall Rating	<u>-2</u>	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500	II/III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II / III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<i>rock bar</i>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>No</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
N/A	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
N/A	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

way too low!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: John Mudano

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time	<u>7/19 9:30-12</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2 - II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>No portages</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This would be great for a novice - to make this more palatable for a more experienced boater, the level would have to be higher.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: PROCK LESSEES

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2600</u>	cfs	Date/time	<u>Am 7/19/14</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataraft |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	↙	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	↙	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	↙	
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 AM	2500	II (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>POT IN RAPID</u>	<u>II</u>
<u>ROCK DAM</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>1</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
N/A	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

At first aged log on top of ledge
 caused a dangerous swim

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2,500	cfs	Date/time	Morning
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3+</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
<u> </u>	1	2	3	4
<u> </u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

WAS PINNED AGAINST A LOG & WA
swept under. Had to wet suit
and swim

Top ledges along RIVER RIGHT

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Better flow than what I experienced last year.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: JORDAN YARUSS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 7/19 - 8AM	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	<u>-2</u>	<u>-1</u>	0	1	2	X	
Availability of powerful hydraulics	<u>-2</u>	<u>-1</u>	0	1	2	X	
Availability of whitewater play areas	<u>-2</u>	-1	0	1	2	X	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	X	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	<u>-1</u>	0	1	<u>2</u>	X	
Overall Rating	<u>-2</u>	-1	0	1	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500	I+(III)	-2	-1	(0)	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I+ (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>ROCK DAM</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
DOWNED TREE, LEFT OF CENTER. with exact location	#1
ON ROCK RUN	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-19-14

Name: Glenn Stewart

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 7-19-14 9 AM	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-11-14 9 AM	2500	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III+</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>@ Few</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Downed Tree

First rapid route 2 side

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014
 Name: Carm Tinney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2,500 cfs	Date/time	7/19 9:30am
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataraft |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2	X	
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/2014	2500	I+(3)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I + (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Rock Dam	3

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	0
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

N/A

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
tree in 1 st rapid after put in easy to avoid	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014
 Name: RICK HANSON

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataraft |
| <input type="radio"/> C1 | <input type="radio"/> Other,(describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	<u>-2</u>	-1	0	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	<u>-1</u>	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
	2500	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2-3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>WAVE RIVER RIGHT @ TOP</u>	<u>3</u>
<u>ROCK JAM DROP</u>	<u>3</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NONE	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

BEAUTIFUL RIVER
 NEED A LOT MORE
 WATER FOR GOOD WW

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: _____

Name: Zachary Hvizdak

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time	7/19/14 10:00am
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	X	
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	X	
Availability of whitewater play areas	<u>-2</u>	-1	0	1	2	X	
Overall whitewater challenge	<u>-2</u>	-1	0	1	2	X	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	<u>-1</u>	0	1	2	X	
Overall Rating	<u>-2</u>	-1	0	1	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 10:00a	2500	I+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|--------------------|
| Much lower | Higher |
| Lower | <u>Much higher</u> |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19/14
Name: Scott R. Callahan

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time	7/19	9:30
Flow 2		cfs	Date/time		
Flow 3		cfs	Date/time		
Flow 4		cfs	Date/time		
Flow 5, if applicable		cfs	Date/time		
Flow 6, if applicable		cfs	Date/time		

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>	<u> </u>	
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	<u>2</u>		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
	2500	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>5</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

- 15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

- 16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

- 17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Fine For Novice

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time <u>7/19/14</u>	<u>8:30</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2	✓	
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	✓	
Availability of powerful hydraulics	<u>-2</u>	-1	0	1	2	✓	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	✓	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	✓	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
8:30	2500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Beginning ledges</u>	<u>II</u>
<u>Rock Man</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____ *Trees in River* _____

_____ *throughout the run* _____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

2500 cfs

Date of run: Sat July 19

Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 10AM	July 19 (SAT)
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy / moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

note: rock dam was not like rest of the run.

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

not including rock dam

This flow rates at Class: I - II -

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---|----------|
| <input checked="" type="radio"/> Beginner | Advanced |
| <input type="radio"/> Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--|---|
| Much lower | <input checked="" type="radio"/> Higher |
| Lower | Much higher |
| <input checked="" type="radio"/> No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---|
| Much lower | <input checked="" type="radio"/> Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>rock dam</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
rock dam	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
none	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19/2014

Name: MICHELLE DULLO

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 7/19/2014 AM	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	X	
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	X	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
A.M. 7/19/14	2500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>FIRST RAPID BELOW DAM</u>	<u>II</u>
<u>ROCK DAM</u>	<u>IV</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>5</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

- Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
ϕ _____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

- Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
ϕ _____	_____
_____	_____
_____	_____

- Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

BEAUTIFUL, SCOTT VALLEY, WE SAW AN EAGLE & HERON.
 FLOW APPROPRIATE FOR WW INSTRUCTION,
 DUE TO LOW FLOW SOME LONG FLATWATER SECTIONS

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19/14

Name: Julia Khorana

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time <i>am</i>	<input checked="" type="checkbox"/>
Flow 2		cfs	Date/time	<input type="checkbox"/>
Flow 3		cfs	Date/time	<input type="checkbox"/>
Flow 4		cfs	Date/time	<input type="checkbox"/>
Flow 5, if applicable		cfs	Date/time	<input type="checkbox"/>
Flow 6, if applicable		cfs	Date/time	<input type="checkbox"/>

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	✓	
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	✓	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
8/19/14 4m	2500	I-II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I - II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>IV</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>no portage</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>no</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

a lot of flat water

1 saw a bald eagle

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Evan Eichorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time	<u>7/19/14 - 9am</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	✓	
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	✓	
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19-9am	2500	II - 2	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Put-in</u>	<u>2</u>
<u>Rock Dam</u>	<u>3</u>
<u>Right of Island at Rock Dam</u>	<u>2</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>5</u>
Number of hits with stops (did not have to get out of boat)	<u>2</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ ——— N/A. _____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____ ——— N/A _____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Very easy, can avoid anything dangerous
- Take out would be tough
- I'd come only if nothing else running
- Rock Dam was fun
- Pt-in surfing was decent, nothing to hard but nothing of note

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014
 Name: Jim Michaud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time	<u>7/19 / AM</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Catacraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|---------------|
| Beginner | Advanced |
| Novice | <u>Expert</u> |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	<u>-2</u>	-1	0	1	2		
Availability of powerful hydraulics	<u>-2</u>	-1	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	<u>-2</u>	-1	0	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	<u>-1</u>	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 AM	2500	II I	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|--------------------|
| Much lower | Higher |
| Lower | <u>Much higher</u> |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 2/19/14

Name: Ken Glusman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time <u>2/19</u>	<u>MORNING</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2,500	II	-2	-1	0	1	2		

A.m.

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2500

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III+</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	_____
Number of hits with stops (had to get out of boat to continue)	_____
Number of portages	_____

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock Dam</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>no difficulties</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

~~at~~ at this level, there is only one significant feature. I doubt I'd make the drive if I had a reasonable alternative.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19/14

Name: Stephen Robinson (Zoar Outdoor)

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1 ✓	2500	cfs	Date/time	AM	7/19
Flow 2		cfs	Date/time		
Flow 3		cfs	Date/time		
Flow 4		cfs	Date/time		
Flow 5, if applicable		cfs	Date/time		
Flow 6, if applicable		cfs	Date/time		

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	✓	
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	✓	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	✓	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	✓	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	<u>-1</u>	0	1	2	✓	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 AM	2500	II+	-2	(-1)	0	1	2	✓	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III (Rock dam is the only class III at this level)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock dam

III

All else

I-II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

2

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>Some downed trees, easily avoided</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Definitely too low for a satisfying rafting run. Rock dam was fun. Several areas appear to have good potential at higher flows.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 4/19/14
 Name: Mark Blatchley

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>2500</u>	cfs	Date/time <u>morning 4/14</u>
Flow 2		cfs	Date/time
Flow 3		cfs	Date/time
Flow 4		cfs	Date/time
Flow 5, if applicable		cfs	Date/time
Flow 6, if applicable		cfs	Date/time

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2	X	
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2	X	
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2	X	
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2	X	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	X	
Safety	-2	-1	0	1	<u>2</u>	X	
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	<u>-1</u>	0	1	2	X	
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II	-2	-1	0	1	2	X	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations	Rating
Rock Dam	III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	None
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	1
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
None	1	2	3	4
None	1	2	3	4
None	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
None	
None	
None	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Too low

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19/14

Name: JONATHAN PENNELL

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time	7/19/14 9 AM
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally, unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	<u>0</u>	1	2	✓	
Availability of challenging technical boating	<u>-2</u>	<u>-1</u>	0	1	2	✓	
Availability of powerful hydraulics	<u>-2</u>	-1	0	1	2	✓	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	✓	
Overall whitewater challenge	-2	<u>-1</u>	0	1	2	✓	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	<u>-1</u>	0	1	2	✓	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 9AM	2500	II +	-2	-1	0	1	2	<input checked="" type="checkbox"/>	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
① Rock DAM	<u>III</u>
② BYPASS	<u>II</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

3

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
② BYPASS UPPER	1	2	3	4
① ROCK DAM	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NO ISSUE	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

FLOW LESS THAN OPTIMUM. MORE WATER WOULD MAKE FOR A BETTER RECREATIONAL FLOW.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: July 19 2014

Name: Michael D. Parker

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1 <input checked="" type="checkbox"/>	2500	cfs	Date/time 7/19/14	9:30 AM → 11:30 AM
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	2500	II+	-2	-1	0	1	2	<input checked="" type="checkbox"/>	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current, and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

3/II

Everything Else

1/II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

2 or 3

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in-consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Rock Dam	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: July 19th 2014
 Name: James Kelly Brand

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 7/19 9:30	
Flow 2		cfs	Date/time 7/19 9:30	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 9:30	L 2500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14
 Name: Jack Gill

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<input checked="" type="checkbox"/>	2500	cfs	Date/time	7/19 Morning
Flow 2	<input type="checkbox"/>		cfs	Date/time	
Flow 3	<input type="checkbox"/>		cfs	Date/time	
Flow 4	<input type="checkbox"/>		cfs	Date/time	
Flow 5, if applicable	<input type="checkbox"/>		cfs	Date/time	
Flow 6, if applicable	<input type="checkbox"/>		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 Mon	2500	Cl 2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2 Except for Rock Dam

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>3</u>
Number of hits with stops (did not have to get out of boat)	_____
Number of hits with stops (had to get out of boat to continue)	_____
Number of portages	_____

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Stopped at Rock Dam and scouted from shore and then ran.	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Made several roll attempts before successful. Rock Dam

Downed tree at the beginning looked like a ledge.

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Robert Breaux

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	2500	cfs	Date/time 7/19/14	9 AM
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14 9am	2500		-2	-1	0	1	2		

Class II with one class III drop

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Rock Dam	<u>3</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	
Number of hits with stops (had to get out of boat to continue)	
Number of portages	

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<i>None</i> _____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<i>None</i> _____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

No rec.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Jim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14	1:00 - 3:30pm
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): Oar Rigged
Hydro Paddlecat

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

Extremely Difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

*3500 would be class II
The Rock Dam would be class III+ } @ 3500 cfs
If unacceptable, was flow:*

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14 <i>11:00-2:20 pm</i>	3500	<i>II - III</i>	-2	-1	0	<u>1</u>	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II, w one class III+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Strainer approx 1/3 mile upstream of the first
bridge below the put-in

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Did not portage</u>	1	2	3	4
<u>Got out to scout Rock Jam on ledge in center of river, and on River left shore</u>	①	2	3	4
<u>on River left shore</u>	①	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>2 forementioned strainer</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Take Out Comment

Thank you to First Light for providing shuttle and launch at Take-out

However - I strongly suggest/request that access should be negotiated with landowner immediately upstream of takeout for right of way from Poplar street down to the River Left shore.

This would enable recreational users to take rafts and/or heavy boats without necessity for launch. Without such access, the takeout is EXTREMELY Arduous and potentially dangerous.

In the past, this was allowed so there is precedent.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19
 Name: PATRICK WYMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19	1 PM
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft
- Catacraft
- Other (describe): SHREDDER

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 PM	3500	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>ROCK DAM</u>	<u>3</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ 0 _____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____ 0 _____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

LIKED 3500 MUCH MORE THAN 2500 for a CLASS 2 BOATER

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014

Name: Cann Tinney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	3	cfs	Date/time	
Flow 2	3500	cfs	Date/time	7/19 1:30
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 1:50	3500	II (III)	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers, in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|-------|
| Number of hits (but did not stop) | _____ |
| Number of hits with stops (did not have to get out of boat) | _____ |
| Number of hits with stops (had to get out of boat to continue) | _____ |
| Number of portages | _____ |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

N/A

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

easy - downed trees on left shore

just above the ^{2nd} power plant/dam

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- nice wild life - beaver, eagles, yellow birds (orioles?)
- water quality seemed very low - eyes stinging a bit

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Jordan Varuss

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14 - 1 PM	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	X	
Availability of whitewater play areas	<u>-2</u>	-1	0	1	2	X	
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	3500	II (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|--------------------|
| Much lower | Higher |
| Lower | <u>Much higher</u> |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>ROCK DAM</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
TREE IN RIVER	1

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Glenn Stewart
 Name: 7-19-14

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	<u>0</u>	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-19-14 1:00 PM	3500	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features; rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|-------|
| Number of hits (but did not stop) | _____ |
| Number of hits with stops (did not have to get out of boat) | _____ |
| Number of hits with stops (had to get out of boat to continue) | _____ |
| Number of portages | _____ |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
None	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NO	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19

Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	<u>3,500</u>	cfs	Date/time	<u>Afternoon</u>
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+ - 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3+/4</u>
<u>Upper Ledges</u>	<u>2+/3</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NONE	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
No Difficulties	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Nice Flow

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Zachary Hvizdak

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time	7/19/14 1:00 PM
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	X	
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	Y	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	X	
Overall whitewater challenge	<u>-2</u>	-1	0	1	2	X	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	<u>-1</u>	0	1	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|--------------------|
| Much lower | Higher |
| Lower | <u>Much higher</u> |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Damn</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>Downed trees on River left just</u>	_____
<u>upriver of the canal outlet</u>	_____
<u>Very easy to miss</u>	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

a local mentioned there may be old steel ties in one of the lines at Rock Dam. I ran the line at the lower flow and didn't have a problem. This could cause injury or death under some conditions and should be cut out of the Rock when there is no flow. All assuming the local's correct. I did not and will not run that line again. but it was the most technical and interesting line.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14
 Name: Matt Guertin

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	3500	cfs	Date/time	7/19	12-3
Flow 2		cfs	Date/time		
Flow 3		cfs	Date/time		
Flow 4		cfs	Date/time		
Flow 5, if applicable		cfs	Date/time		
Flow 6, if applicable		cfs	Date/time		

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

swim! yay!

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	<u>0</u>	1	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	<u>-1</u>	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II / III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>rock dam</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
N/A	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
N/A	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

too low!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: BRUCE LESSERUS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time	7/19/14 PM
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	2500	II (III)	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|----------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| → Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>1st Rapid</u>	<u>II</u>
<u>Rock Dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Rock Dams	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
No	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19

Name: John Mudano

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19	12 - 3
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/15	3500		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

Rock Dam

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>. Rock Dam</u>	1	2	③	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Good, but could be higher.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14
 Name: Jim Michaud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time	7/19/2014 PMA
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	3500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>IV</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/18/14 PM

Name: Ken Glusman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	3500	cfs	Date/time 7/18/14	PM
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/2014 PM	3500	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3+</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>1</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Sat July 19, 2014
 Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	<u>3500</u>	cfs	Date/time <u>1 PM</u>	<u>July 19</u>
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

much more fun 1 3500 vs 2500

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

3500 still class II

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II Rock Dam III + IV -

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change

- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change

- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock dam

Rating

III+ IV -

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

1

Rock dam

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Rock dam (paddled around it) 1	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
None	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Better than 2500 CFS

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14	100
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced.

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	3500	II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>1st Ledges on Left</u>	<u>II +</u>
<u>Rock Dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

this flow was a lot of fun. The ledges on river left had great play features as well as some of the waves down stream.
 Rock Dam was fun at this level.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014

Name: MJUE DOGLOS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14 PM	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	X	
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14 PM	3500	II +	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>FIRST RAPID</u>	<u>II</u>
<u>ROCK DAM</u>	<u>IV</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>φ</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>φ</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

I PREFER VERY TECHNICAL RUNS, LIKE SCALOM RACING -> SO NOT SO INTERESTING FOR ME FOR NOVICE INSTRUCTION/ PUP HAS GOOD POTENTIAL
 I CAN SEE ADVANCED BOATERS COMING AND RUNNING ROCK DAM OVER AND OVER, AS SOME IN OUR GROUP DID TODAY

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Evan Eichorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time	7/19 - 1pm
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14pm	3500	II +	-2	-1	0	1	(2)		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II + or III -

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Pt-in - plenty of surf + drop spots - eddies to catch

II+ / III

Play waves above Rock Dam

II

Rock Dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

2

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ N/A	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Easy - Swam below Rock Dam	Rock Dam
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Put in - left channels great surf + play spots, intermediate level. I would drive to paddle this level
- Nice wave trains below put-in
- Surf waves by the 2nd power station above Rock Dam near "the Patch" were good on river left. Good spin spot for open boats
- Rock Dam was a good drop, straight forward but squirrely below in the outflow. I swam there but not a bad swim.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 9/19/14
 Name: Mark Blalock

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 9/19/14	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

*Need
stairs*

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>	X	
Availability of challenging technical boating	-2	-1	0	<u>-1</u>	2	X	
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2	X	
Overall whitewater challenge	-2	-1	0	<u>1</u>	2	X	
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	<u>-1</u>	0	1	<u>2</u>		
Length of run	-2	<u>-1</u>	0	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2	X	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/10	3000	##	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

~~##~~ (class I run)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner		Advanced
<input checked="" type="radio"/> Novice	walking Rock Dam	Expert
Intermediate		

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower	<input checked="" type="radio"/> Higher
Lower	Much higher
No change	

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower	<input checked="" type="radio"/> Higher
Lower	Much higher
No change	

13. Using site numbers or locations, please identify challenging features; rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Rock Dam	III +
Entry ledges	II +

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	1
Number of hits with stops (did not have to get out of boat)	1
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<i>Portage 3</i>	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

<i>Disco</i>	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Put stairs or steps on take out

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/2014

Name: Michael D. Parker

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	✓	3500	7/19/2014	1:00 PM
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number # for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
9/19/14 1:00	2500		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I/II Rock Dam III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

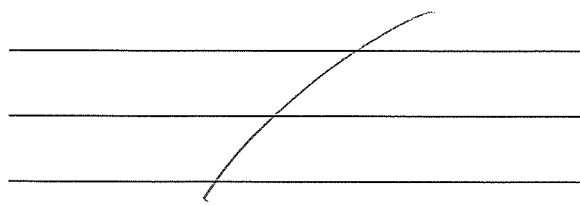
0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Strainers

Middle of section

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Jonathan Pennell

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	3500	cfs	Date/time	7/19/14	1 PM / AFTERNOON
Flow 2		cfs	Date/time		
Flow 3		cfs	Date/time		
Flow 4		cfs	Date/time		
Flow 5, if applicable		cfs	Date/time		
Flow 6, if applicable		cfs	Date/time		

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 1 PM	3500	II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

BYPASS UPPER

II-III

Rock DAM

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
N/A	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
N/A	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

GETTING BETTER

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Stephen Robinson

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	<input checked="" type="checkbox"/>	3500	cfs	Date/time 7/19 PM
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2	✓	
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	✓	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	✓	
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	<u>-1</u>	0	1	2	✓	

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19	3500	II - III	-2	(-1)	0	1	2	✓	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II + (Rock dam class III, all else I - II)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Entrance ledge

I - II

Rock dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

2

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>. none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>A couple of downed trees, easily avoided</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Slightly better than 2500 for rafting, but still too low.
Ledges have potential for surfing at higher flows.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-19-14
 Name: Seely Kallum

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	<u>3500</u>	cfs	Date/time	<u>After Lunch</u>
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft

Cataract
 Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate

Advanced
 Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
PM	3500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III - IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock dam</u>	1	2	3	4
<u>take out</u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Nice Level

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7.19.14

Name: Tracey Kallman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14 100	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	<u>2</u>		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7.19.14 100	3500	#	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock Dam</u>	①	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Julia Rhorana

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>3500</u>	cfs	Date/time <u>7/19</u> <u>afternoon</u>	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): Shredder

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	3000	II	-2	-1	0	1	2		

pm

except Rock Dam

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

if no obstruction - not for my WW pleasure

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II *except. Rock Dam*

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-----------------------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | <i>haven't done it high</i> |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).


<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>III Rock Dam</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).


- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

I thought this level was safer for class 2 paddlers & this better for novice instruction.

For my paddling - too much flat if I want a whitewater day. Not much technical just a one shot drop. I prefer continuous technical.

Scenery nice!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: July 19th 2014
 Name: James Kelly & Rasad

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19 1:00	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19 1:00	2500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

1st Rapid right channel good for Scory
2 eddy practice

11

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

5

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/19/14
 Name: Jack Gill

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	✓	3500	Date/time	7/19/14 Afternoon
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2 + Except for Rock Dam

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>4</u>
<u>1st set of Rapids After Put-In</u>	<u>2+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u> </u>
<i>Scouted at Rock Dam</i>	

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Scouted at Rock Dam The Scout was Moderately Difficult at this Level.	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

At the Put-In there were boils that made the ferry across to river right.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/19/14

Name: Robert Brean

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	3500	cfs	Date/time 7/19/14	1:00 pm
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/19/14	3500	class II	-2	-1	0	1	2		

1:00 pm

with one class III drop

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>rock dams</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Rock Dam	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
No	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Swam on rock dam a few times at this level
 much more turbulent landing after drop

No issues with strainers But there are multiple
 one along the run

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-20
 Name: PATRICK WYMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5,000	cfs	Date/time 7-20 AM	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	<u>-1</u>	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-20	5000	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>FIRST Rapid 2+</u>	<u> </u>
<u>ROCK DAM 3</u>	<u> </u>

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>ROCK DAM</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

BEST FLOW YET. MORE WAVES, MORE FEATURES

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/1/14

Name: Tim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>5000</u>	cfs	Date/time <u>7/1/14</u>	<u>9:00 am - 11:00 am (Approx)</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

*EXTREMELY
difficult*

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

5000 CFS CLASS II; Rock Dam

Right Side = Class II⁺
 Left Side = Class III⁺
 If unacceptable, was flow: Class III⁺

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14	5000	II III ⁺	-2	-1	0	1	2		

Rock Dam

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III⁺

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

- my change my mind after running higher flows

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

- my opinion may change after running higher levels

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Strainers at various places ... River hazards that are random
Rock Dam - challenge to scout at this level

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

Voluntarily

←

→ Carried boat upstream of Rock Dam two times in order to Run Right Side Slot and then the class III+ stop on river left

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock Run</u>	1	2	3	4
<u></u>	1	2	3	4
<u></u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Strainers

Approx 1/2 mile below
Turners Greenfield
bridge

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

* Take Out at Poplar Street

Request/Suggest that "Right of way" be obtained on (or) River Left immediately upstream of the takeout we are using for the study.

The "Right of way" is a path that used to be drivable from Poplar St to river's edge.

People are camping + fishing on that sandbar this weekend.

Taking a raft out would be extremely arduous + potentially unsafe at current take out. The "Right of way" would greatly improve the situation.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7-20-14

Name: Glenn Stewart

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7-20-14 9AM	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
9 AM 7-20-14	5000	III+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam III</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: JORDAN YARUSS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7/20 9AM	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 9A	5000	II (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>8</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NA	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Takeout will be very difficult when raining.

~~At this flow, I would bring people who were ready for a small step-up from Five.~~

At this flow, I would bring people who were ready for a small step-up from Five.

I believe the main line of the Rock Dam is safer at this level than 2500 or 3500.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/2014

Name: Camm A. Timney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	5,000	cfs	Date/time	7/20/9:30am
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak *creek*
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20, 9:30	5000	II (III)	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

to teach others

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner (portage rock dam) Advanced
- Novice (do rock dam) Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change (this seems like ^{good} minimum flow)
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- Higher
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
- the right channel (left channel leading to rock dam) had some play waves. at higher flow it might be more playful	
- First rapid (R) of island after dam had some waves	

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- Number of hits (but did not stop) 0
- Number of hits with stops (did not have to get out of boat) 0
- Number of hits with stops (had to get out of boat to continue) 0
- Number of portages 0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

N/A

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<i>no more than first two runs.</i>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

this seems like a nice flow for beginners stepping up from the five block of Deerfield. I can also see teaching a safety + rescue class ~~at~~ at this level, in ledges at ordam. Very easy to portage rock down on river left.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: BRUCE LESSERS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time	7/20 AM
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 AM	5000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>1st RAPID</u>	<u>II</u>
<u>ROCK DAM</u>	<u>II-III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Fun Play in first rapid

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: Sunday, July 20, 2014

Name: Kathie O'Brien

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>5000 cfs</u>	cfs	Date/time <u>7/20/14</u>	<u>9 AM - 11 AM</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak *play boat*
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy ~~x~~ moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)
River left: main tongue River right: ^{miss}boof

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u> *	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

* The waves are there, but lack access (eddies). Everything is "catch on the fly"

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: class II w/ one class III (rock dam)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert

Intermediate *Advanced beginner if they portage / by pass the rock dam*

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>First Rapid (below dam)</u>	<u>Class II+</u>
<u>Rock dam (river left class III) river right class II+</u>	<u>Class III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>No portaging (Rock dam would</u>	1	2	3	4
<u>have been simple to portage or</u>	1	2	3	4
<u>take a different channel. Easy to</u> <u>walk back up to).</u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

A few shore line trees on the islands,
but all in mild current and easily
avoided.

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This river stretch has a lot of potential. It's conveniently located & access is easy. I'm not sure how many boaters will want to run this with only 2 rapids they were run at 5000 cfs, but still might not be enough to draw people here.

The rapid below the dam has some great waves. Most of these though must be caught on the fly and have no eddy service. This limits how much they can be played.

The first rapid would be the perfect place for a whitewater play park. Enhancing / building a few eddies would significantly increase the desire for this run and amount of boater traffic.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>5,000</u>	cfs	Date/time	<u>Morning</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III - IV

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Upper ledges
Rock Dam

III
IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>NONE</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>No</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14

Name: Zachary Hvizdak

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7/20/14	10:00 am ish
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

Batz

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly as an instructor for Beginners Probably Definitely yes
 but not on my own

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
 - Higher
 - Lower
 - Much higher
 - No change
- for me*
- for class // Boaters*

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Rock Dam	III

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	0
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

at this level Rock Dam offers multiple technical lines which would make me willing to take ^{novices} ~~beginners~~ down this river. Rock dam is now better than Zore Gap because it can be run many times very easily. it is a good place to teach novices how to Scout Drops and line up horizon lines.

I heard the Steel 1 was told about yesterday was out of Play and Ran the line left of the tower with no trouble. It was very good.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14

Name: John Modena

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time	7/20 9:00
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/1/10	2000	2.3	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rox Dam	III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>no portage</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Great flow - I would drive for 90 minutes to paddle it.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14
Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7/20/14	8:3
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14	5000	II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Ledges @ port in	<u>II</u>
Rock Dam	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

good play at ledges below dam
 more than 1 route through rock dam at this site

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Evan Eichhorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time	7/20 - 9am
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/15 am	5000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Put-in - left of island

II

Below Mid-Canal Power Station - left center/center

II

Rock Dam - normal drop for right

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

1

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

Middle Channel @ Rock Dam Island - 2ft drop - paths on left and right - II

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ N/A _____	1	2	3	4
_____ _____	1	2	3	4
_____ _____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____ N/A _____	_____
_____ _____	_____
_____ _____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Great level - went left of island at pt-in, right of island seemed to take more of the water with the #4 gate open, ~~and~~
- some mid-river surfing above Rock Dam, not as easy to catch for single blade canoe
- Far right side of Rock Dam (left channel) was a good drop-easy
- Middle Channel @ Rock Dam was a good 2ft drop - good surf/play on right side

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/18 AM
Name: Ken Glusman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>5000</u>	cfs	Date/time <u>7/20/18</u>	<u>AM</u>
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
5/20/14 7/20/14 AM	5000	2	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>3</u>
_____	_____
_____	_____

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | _____ |
| Number of hits with stops (had to get out of boat to continue) | _____ |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Sun July 20, 2014

Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 9:30	July 20
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

can on far river right

0
?

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
	5000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (rock dam IV) *for the lines I took*

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
rock dam	IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- Number of hits (but did not stop) 0
- Number of hits with stops (did not have to get out of boat) 3
- Number of hits with stops (had to get out of boat to continue) 2
- Number of portages 0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>no portages</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

good level, opened up many possibilities for routes - easier to harder

many routes through rock dam. opened up at higher level of 5000 cfs.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14

Name: Jim Michaud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time	7/20/14
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20	5000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>First rapid = class 3</u>	<u>3</u>
<u>The rest of the river = class 2</u>	<u>2</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>N/A</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Rock Dam was the easiest level yet.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Jack Gill

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3 ✓	5000	cfs	Date/time 7/20	Morning
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response): *Ran Rock Dam in someone else's canoe. Not in C2* *Open*
Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20	5000	Cl. 2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+ Except for Rock Dam.

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice**
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change**

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change**

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

At this level, a new easier route opened up at Rock Dam. This was far river right, directly alongside the Island show

	<u>Rating</u>
	<u>3 -</u>

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>Scouted at Rock Dam</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Scouted from island at Rock Dam but did not portage.	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Partner and I flipped in the C2 due to miscommunication and lack of practice together.	Directly at the Put-In in the outflow of dam.
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: July 20th 2014
 Name: James Kelly-Rand

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	<u>5000</u>	cfs	Date/time	<u>7/20 9:30</u>
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Middle channel of rock down bypass</u>	<u> </u>
<u>becomes runtable - ledge in retention hole</u>	<u>11+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

5000 cfs provide a more fluid run through upper rapids (river right). Less flow than at 3500 was flowing through the river left rapids. Gate # 4 favors river right. If gate # 1 was used flow may be more balanced or favor river left.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/2014

Name: Michael D. Parker

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5,000	cfs	Date/time	7/20/2014 9:30 AM
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2	✓	
Availability of whitewater play areas	-2	<u>-1</u>	0	1	2	✓	
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/23/14 AM	5,600	II +	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I, II, III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III

Middle channel above Rock Dam River Right

II feature (hole)

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

Number of hits with stops (did not have to get out of boat)




Number of hits with stops (had to get out of boat to continue)

Number of portages

Four horizontal lines with a diagonal slash through them, representing zero for all categories.

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Class II sticky River wide hole. ~~is~~ Not too bad though.

Middle channel above Rock Dam

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Steve Bridges

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time	7/20, 9AM
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/9/11	5000		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (IV)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>1</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
struggled to exit surf	_____
at bottom of small ledge,	
middle channel above Rock Dam	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7.20.14

Name: Tracey Kallman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7.20.14	950
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

*Paddled ^{falls} with 2oar raft
on kataraft*

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14	5000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock fall Dam</u>	<u>IV</u>
_____	_____

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>1</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock Dam</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/16
 Name: Jeff Kacim

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	<u>5060</u>	cfs	Date/time	<u>Am</u>
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | <u>Cataract</u> |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 Run	5000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

3

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Rock Dam Chichon Skill	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Best Run Yet

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14

Name: Robert Breau

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	5000	cfs	Date/time 7/20/14	9:00 AM
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/26/14 9:00 AM	5000	II	-2	-1	0	1	2		

Class II with class III drop

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---------------|
| Much lower | <u>Higher</u> |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|--------------------------------------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>1</u> up over dam to scout it out |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Far river right channels</u> <u>new put in</u>	①	2	3	4
_____	1	2	3	4
<u>Rock Dam</u>	1	2	③	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

like the fact that it is very easy to portage around dam for multiple runs.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20
 Name: Patrick WYMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20	Afternoon
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20	8000	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

SURF WAVE, EDDY (First Rapid)

2+

ROCK DAM

3+

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
No	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Best Flow of Study so far. Less Dead spots
 More waves better eddy's

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Jim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	8000	cfs	Date/time 7/20/14	1:00 - 3:30 + 2 pm
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

*without
first night
assistance*

Put-in Access: easy moderate

difficult

*i.e. how would we
get past the locked gate*

Take-out Access: easy moderate

difficult -

*extremely difficult for
rafts / heavy boats*

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam
both Right and Left sides

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14 pm	8000	II-III+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: Class II overall with Class III+ @ Rock Dam

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate Kayakers should have a solid, dependable roll

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam (Horizon line/Mandatory scout)

Rating

III+

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

2

↳ Portaged in order to run Rock Dam several times

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Kayak Rock Dam portage	1	2	3	4
River right thru the woods along shore	①	2	3	4
River left up over high rocks on a "goat trail"	1	2	③	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
No difficulties	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

TAKE-OUT

Please enhance by obtaining landowner permission or a "Right of Way" in order to allow access from Poplar Street to the River Right Beach just upstream of the Take-Out we used in this study.

The current TAKE-OUT is extremely arduous and potentially dangerous for rafts and/or heavy watercraft.

It is my understanding that this right of way access to the riverbank was formerly available to the public (and is still used by emergency personnel) but was closed due to littering and/or vandalism. At one point in the past the Connecticut River Watershed Council published a brochure describing access points for "Source to the Sea" river travellers. This site was in use at that time.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Zack Hvizdak

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20	1:00 PM
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam, *Middle Canal*)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2	X	X
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		1/1 +	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

for instruction

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 1/1 +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|---|-------------|
| Much lower | Higher |
| <u>Lower</u> - Rock dam was Better @ 5000 | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|--------------------|
| Much lower | <u>Higher</u> |
| Lower | <u>Much higher</u> |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Center Canal @ Rock Dam</u>	<u>III Hydraulic</u>
<u>Rock Dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Rock Dam was more dynamic @ 8000

The Rest of the River was much Better @ this flow 8000. more visible waves.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: BRUCE LESSER

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time	7/20 PM
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 PM	5000	II+	-2	-1	0	1	(2)		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---|----------|
| Beginner | Advanced |
| Novice | Expert |
| <input checked="" type="radio"/> Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--|-------------|
| Much lower | Higher |
| <input checked="" type="radio"/> Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|---|
| Much lower | <input checked="" type="radio"/> Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>1st Rapid</u>	<u>II⁺</u>
<u>Rocks Dam</u>	<u>III in hardest place</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

First rapid would be attractive as a play rapid at this level but you would want to take out as soon after the first rapid as possible. The rest of the run would be just nuisance paddling.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/2014

Name: Corn Tinney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time 7/20 ; 1:30pm	
Flow 3		cfs	Date/time	
Flow 4	8,000 cfs	cfs	Date/time 7/20 1:30pm	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak <i>playboat</i> | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

*

→ someone mentioned there is rebar in rock dam → may want to check on this + remove it during fish flow

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 1:30	8000	II (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
 - Novice
 - Intermediate
 - Advanced
 - Expert
- moving up to*

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Lower
 - Much lower
 - No change
 - Higher
 - Much higher
- 5,000 was okay*

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
2. NICE draw wave	II
3. minor play wave	I+

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- Number of hits (but did not stop) — /
- Number of hits with stops (did not have to get out of boat) — /
- Number of hits with stops (had to get out of boat to continue) — /
- Number of portages —

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	N/A			
	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
none of relevance	
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- nice play wave opened up right channel of first island
- good level for beginners moving into novice, lot to practice in first rapid river B + D channels.
- I wouldn't personally come to paddle but would certainly add it to existing Deerfield trip (Sunday) - take the newbies down.
- if you take the time - a few lines open up at rock dam e.g. far right boat.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: John Madero

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	5000	cfs	Date/time	7/20/14
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14	8000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam

Rating

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Perfect level !

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-20-14

Name: Glewn STEWART

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7-20-14 1 PM	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-20-14 1 PM	8000	II+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
None	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: JORDAN YARUSS

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3	8000	cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20/14 1PM	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20 1pm	8000	II (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

PRECCA CAVE ISLAND
ROCK DAM

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
TREE @ # 1 IS under water	# 1

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

LEFT LINE @ ROCK DAM HAS REMAINED THE SAME @ ALL LEVELS. SEEM TO get easier w/ more water.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	8,000	cfs	Date/time	Afternoon
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3+ / IV

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam -
Upper Leases

IV
III/IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>No Portages</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Very good flow with lots of surfing available at the upper ledge. If there was a portage trail to carry back up one could spend an entire afternoon playing the waves and surfing.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14
 Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20/14	100
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7:00	8000	II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Beginning Ledges
Rock Dam

III
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: Sunday July 20, 2014

Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	<u>4000</u>	cfs	<u>7 pm</u>	<u>July 20</u>
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|--------------------------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <input checked="" type="radio"/> OC1 | Raft |
| OC2 | Cataraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---|----------|
| Beginner | Advanced |
| <input checked="" type="radio"/> Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate *w/ winch* difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

ran twice on right side

0 ?

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II+	-2	-1	0	1	2		

rock dam IV

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+ II- rock dam IV

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
rock dam	
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>NO portages</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>swam twice at rock dam</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

The higher flow (8000 cfs) made the flat stretches easier to paddle but it also washed out most features. It did create several play waves.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/2014

Name: Jim Michaud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	.8000	cfs	Date/time 7/20 PM	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20	8000	3	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14 PM
Name: Ken Glusman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	8000	cfs	Date/time	7/20/14 PM
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14 <i>pm</i>	8000	3	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

3+

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

Number of hits with stops (had to get out of boat to continue)

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This was the best level so far.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Evan Eichorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time	7/20 - 1pm
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20-1pm	8000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Pt in - left channel/island

III

Play wave at power lines below mid-canal porch

II

Middle Channel Rock Dam Island

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

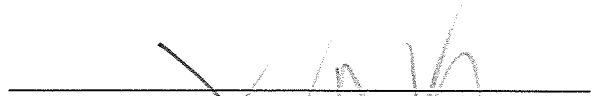
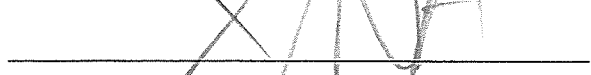

Rock Dam - mid-river - por over - boat - III

Play wave above Cabot-glassy wave - river right - II

Play wave right of Smead Island - river left - III

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Swam - couldn't roll at Smead Island play wave - easy big recovery

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Better take out access - take out at Rock Dam?
- Great play waves below rock dam - river right
 - 1 @ Cabot
 - 1 @ right of Smead Island

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: July 20th 2014

Name: James Kelly-Rand

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	<u>Good</u>	cfs	Date/time	<u>7/20 1:00</u>
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

Other

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
		II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III ROCK TOWER)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

The 8000 cfs flow opened up new features at the beginning left channel ~~to~~ at the rock dam. The new inside of the river was washed out for most play.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/14

Name: Jack Gill

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	.8000	cfs	Date/time 7/20	. Afternoon
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)
Ran Rock Dam on far right adjacent to island shore

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	2		

*1 to 2
1.5*

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20	8000	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam (far right along the Island)

3

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

Shore scouted Rock Dam

—

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
I witnessed and threw a rope to an open boater who messed up their boof at Rock Dam	(far right along the island shore)
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

An alternate take-out just upstream of the take-out we used would greatly add to the ease of doing this run.

At this level, the river moved too quick and was too pushy for novices to feel comfortable. They might be able to hang on and paddle it, but their level of comfort probably would not be there.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20
 Name: Steve Bridges

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time	7/20 1 PM
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

ledge in middle channel
above Rock Dam

II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>NA</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>difficulty escaping</u>	_____
<u>surf at ledge in</u>	_____
<u>middle channel above</u>	_____
<u>Rock Dam</u>	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/20/2014

Name: Michael D. Parker

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4 <input checked="" type="checkbox"/>	8,000	cfs	Date/time 7/20/14	1:00 PM
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
9/20/2014 1:00 PM	8,000	II / Kicker III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

II/III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam - Scouting the Rapid
and then being able to run it would be
Difficult.

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

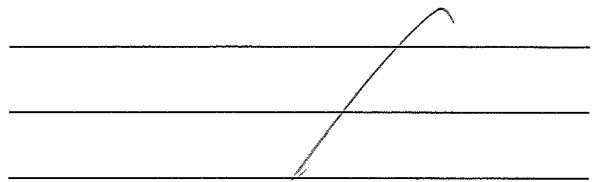
Number of hits with stops (did not have to get out of boat)

Number of hits with stops (had to get out of boat to continue)

Number of portages

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Middle channel Above Rock Dam (Sticky surf) Fun!	
Getting Raft up Rock Dam	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/19
Name: Seth Hollman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	<u>2000</u>	cfs	<u>Date/time</u> <u>PM</u>	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | <u>Cataract</u> |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
8/27/15	2000		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Run

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

2

Number of hits with stops (did not have to get out of boat)

1

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock dam</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

great level

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7.20.14

Name: Tracey Kallman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20/14 100	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14 100	5000	II +	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam

Rating

II-III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

1

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

no

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/20/14

Name: Robert Brean

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4	8000	cfs	Date/time 7/20/14	1:00 PM
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/26/14	3000	II	-2	-1	0	1	2		

1:00 pm

with III drop

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|----------------------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> possibly Higher | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>First rapids river right channel</u>	<u>II</u>
<u>Rock Dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
First rapids	1	2	3	4
rock dam	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Over all I thought this was a very good level
And liked it very much

I personally liked rock dam at 2500 But only rock
dam. over all ~~at~~ 8000 cfs ~~was~~ made the whole
river good

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000	cfs	Date/time 7/21/14	900 AM - 11 AM +/-
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access:

easy
for kayak

moderate

difficult

for raft - weigh 140-200 lb
All fishing Rafts

Take-out Access:

easy

moderate
for kayak

difficult

Extremely difficult for Raft

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

Outstanding!
Best level yet!

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14	10000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change - This flow (100000 cfs) was the best flow yet during this study

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam

Rating

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

↳ Note these were "voluntary" portages, because I chose to carry my boat upstream to paddle Rock Dam.

By taking River right channel + avoiding Rock Dam, no portages would be needed.

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Portage at Rock Town</u>	1	2	3	4
<u>River Right (on island)</u>	①	2	3	4
<u>River Left - did not attempt at this level</u>	1	2	3	④ - looked dangerous

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>N/A</u>	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

TAKE-OUT Access

Need to negotiate "Right of Way" with landowner from Poplar St down to shore on (at) River left. Currently posted as no Trespassing. The current take-out is extremely difficult and potentially dangerous for rafts and heavy watercraft. The option to drive a vehicle to the shore was available in the past. Please negotiate to obtain this access again.

Put-In Access

Rafts rigged with rowing frames, such as those used by fly fishermen, are heavy (150-200 lbs). Please allow the bridge to be used - i.e. open gate access - so that vehicles can drive to the Put-In just like we have done at the study. Rafters can carry boats from parking lot. That is nearly impossible with heavy rafts. THANK YOU!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-21-14

Name: Glenn Stewart

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	7-21-14 9AM	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-21-74	10,000	II+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam III +

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000	cfs	Date/time	Morning
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Upper Leogos
Rock Dam

IV
IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1.	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>No</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Large waves & powerful rapids. Moving back and forth was challenging. Needed to look ^{for} ahead to plan your series. Instruction only for upper level boaters. Safety needs to occur in groups.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21

Name: Matt Guestin

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>10,000</u> cfs	Date/time <u>7/21</u>	<u>9-11am</u>
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataraft |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	10,000	II/III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II / III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- ~~No change~~
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>rock dam</u>	<u>III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>2</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____ N/A	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____ N/A	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

FUN!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14
 Name: Ryan Mooney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	7/21/14 9:00	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 9:00	10,000	II+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I, II, II+ 1 class II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>II+</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA _____	1	.2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NO _____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Good intermediate flow. One good play feature with eddy service. One other with "catch on the fly" service. Rock Dam easy at this level - not a big hydraulic. Easy river running most of the river.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21

Name: Alex Trolenberg

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000 cfs	Date/time 7/21/14 9-11	<input checked="" type="checkbox"/>
Flow 2	cfs	Date/time	<input type="checkbox"/>
Flow 3	cfs	Date/time	<input type="checkbox"/>
Flow 4	cfs	Date/time	<input type="checkbox"/>
Flow 5, if applicable	cfs	Date/time	<input type="checkbox"/>
Flow 6, if applicable	cfs	Date/time	<input type="checkbox"/>

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataraft |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---|--------------------------------|
| <input checked="" type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input checked="" type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 9-11	10,000	II/III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II/III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Damn</u>	<u>II/III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>~2</u>
Number of hits with stops (did not have to get out of boat)	<u>~1</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Fun , Flats could be filled w/ games if with commercial guest.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21

Name: Tyler Randolph

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>10,000</u>	cfs	Date/time <u>9-11</u>	<input checked="" type="checkbox"/>
Flow 2		cfs	Date/time	<input type="checkbox"/>
Flow 3		cfs	Date/time	<input type="checkbox"/>
Flow 4		cfs	Date/time	<input type="checkbox"/>
Flow 5, if applicable		cfs	Date/time	<input type="checkbox"/>
Flow 6, if applicable		cfs	Date/time	<input type="checkbox"/>

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---|--------------------------------|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input checked="" type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
Wyoed		II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Road Dam
Mf-h

III
II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: Monday 7/21st
 Name: Pat Perkins

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000	cfs	Date/time 7/21 9-11	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	<u>-1</u>	0	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	10,000	III-	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III-

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower ?

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam

Rating

III/IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Some wood in eddies - saw a board w/ nails in it.	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Honestly, I found it boring.. too much flat water for not enough for running or playing...

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/2014

Name: Carin Tinney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10000	cfs	7/21/2014	9:30
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak <i>playboat</i> | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

→ not a ton of challenge for me, but fun nonetheless

→ this would be a good lead for class 3 boot camp people moving from novice to intermediate

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
8/21/9:30	10000	II+(III)	-2	-1	0	(1)	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This was we're running at this level when Injway wasn't, I might come here
II+(III)

This flow rates at Class:

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |
- but I think higher will be funner!*

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>left channel entrance- surf possibilities</u>	<u>II+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

N/A

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Not at this flow

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- fun level, play if you look for it

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Rodney Claiborne

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>10,000</u>	cfs	Date/time <u>7/21/14 9:00-11:00</u>
Flow 2		cfs	Date/time
Flow 3		cfs	Date/time
Flow 4		cfs	Date/time
Flow 5, if applicable		cfs	Date/time
Flow 6, if applicable		cfs	Date/time

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	<u>-1</u>	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/2 4:10-11:00	10,000	II-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate Long Swims

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Beh. dam
Rock Dam

II+
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

23

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>— no portages</u>	1	2	3	4
<u> </u>	1	2	3	4
<u> </u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

<p>Difficulty</p> <p><u>there were many ^{living} trees in the river on the banks due to the higher water</u></p>	<p>Location</p> <p><u>Particularly Below the Put-in on river Right</u></p>
---	--

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

It felt a little between too high and a little too low for playability in the rapids just below the Put-in

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jordan V. Aruss

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10K	cfs	7/21/14	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14 9AM	10K	II+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+ (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations; please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock DAM

Rating

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits.(but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NA	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

A few nice sit waves at beginning of right channel that bypasses rock dam.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Mon July 21, 2014

Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10K	cfs	9 AM	July 21, 2014
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

I ran down the left side below the dam, the middle channel above rock dam; and the right side of rock dam
 If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
July 21 9AM	10K	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

III

The section that I ran (lines) at 10K

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

note: Lines that I avoided were much more difficult (class VI?)

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner
 Novice
 Intermediate
 Advanced
 Expert

again, the lines I ran

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower
 Lower
 No change
 Higher
 Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower
 Lower
 No change
 Higher
 Much higher

I don't need big water

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations ¹	Rating
<u>ran middle line down island above rock dam</u>	<u>II-III</u>
<u>rock dam (very right hand side)</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop) 0
 Number of hits with stops (did not have to get out of boat) 0
 Number of hits with stops (had to get out of boat to continue) 0
 Number of portages 0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>no portages</u>	1	2	3	4
<u> </u>	1	2	3	4
<u> </u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>no problems; clean run</u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

I avoided the big water associated w/ the 10K release, I paddled the left hand side below the dam; took the middle route at the island above the rock dam; and paddled over the right hand side of the rock dam. But I did the same at 5K and 8K releases.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/2014

Name: Jim Michaud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	<u>10,000</u>	cfs	<u>7/21/2014</u>	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	<u>0</u>	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

7??

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	10000	4	-2	-1	0	1	2		<input checked="" type="checkbox"/>

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

1st rapid -

3+

rest of the river

3

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Evan Eichorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	7/21 - 9am	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
1/21-9am	10000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations; please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Put-in - right of island - surf

III

Mid Canal Poror Hase - left center surf

II

Rack Dam - main left center drop

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

Cabot Station left side right channel - glassy wave

II

Right of Smead island surf

III

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ N/A	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Swam @ Smead Island Surfing/Playing	- Easy, big recovery pool
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Features are more powerful, playing/surfing can be limited as you flush downstream
- Play below Rock Dam at Cabot & Smead Island was excellent, easy recovery areas

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	7/21/14	8:30
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14	10,000	III	-2	-1	0	1	2		<input checked="" type="checkbox"/>

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam
Below Dam Right Channel

III
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

Number of hits with stops (did not have to get out of boat)

Number of hits with stops (had to get out of boat to continue)

Number of portages

~~0~~
~~0~~
~~0~~
~~0~~

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14 AM

Name: Ken Blusman

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10000	cfs	Date/time <u>7/20/14 AM</u>	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/20/14 AM	1000	3	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rich Dam</u>	<u>3+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- Number of hits (but did not stop) 0
- Number of hits with stops (did not have to get out of boat) _____
- Number of hits with stops (had to get out of boat to continue) _____
- Number of portages 0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

*Optimal level for OC-1
I like them as 8000.*

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Brian Pytko

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	7/21/14 9:00 am	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): Raft

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 9 AM	12,000	II+	-2	-1	0	①	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+ Rock Dam is a borderline 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>II + 013011 III</u>
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>2</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

My guess is that ideal rafting level is a touch lower. 6,000-8,000

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: VIRIAN BLACK

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10K	cfs	Date/time	7/21/14
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	1'	cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	(2)		
Availability of challenging technical boating	-2	-1	0	1	(2)		
Availability of powerful hydraulics	-2	-1	0	1	(2)		
Availability of whitewater play areas	-2	-1	0	1	(2)		
Overall whitewater challenge	-2	-1	0	(1)	(2)		
Safety	-2	-1	0	1	(2)		
Aesthetics	-2	-1	0	1	(2)		
Length of run	-2	-1	0	1	(2)		
Number of portages	-2	-1	0	1	(2)		
Boating instruction	-2	-1	0	1	(2)		
Overall Rating	-2	-1	0	1	(2)		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	10k		-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>1st section</u>	<u>II</u>
<u>Rock dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|-------|
| Number of hits (but did not stop) | _____ |
| Number of hits with stops (did not have to get out of boat) | _____ |
| Number of hits with stops (had to get out of boat to continue) | _____ |
| Number of portages | _____ |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Rock dam</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Flipped trying to surf

First drop in

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-21-14
 Name: Mackae Freeland

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>10,000</u>	cfs	Date/time <u>9:00 AM</u>	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-------------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-21/9:00	10,000	I-III	-2	-1	0	1	2		

7-21/9:00

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

3

Number of hits with stops (did not have to get out of boat)

Number of hits with stops (had to get out of boat to continue)

Number of portages

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>Put-in Flow</u>	1	2	3	4
<u>Middle</u>	1	2	3	4
<u>Rock Dam</u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jeffrey Green

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	cfs	Date/time	
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	10,000cfs	Date/time 7/21/14 9am-11am	✓
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 9-11	16,000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

4

Number of hits with stops (did not have to get out of boat)

1

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>N/a</u>	1	2	3	4
<u></u>	1	2	3	4
<u></u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>flipped boat</u>	<u>Just below Gate 4</u>
<u>downed trees</u>	<u>River banks</u>
<u>whirlpools</u>	<u>bridges</u>

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This river seems ideal for rafting and paddling either commercially or just for fun. While it may be more feasible to only release ~5,000 cfs, I felt that 10,000 cfs provided a wonderful combination of fun, challenge, and time to rest/swim.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/21/14

Name: ZACH Peterson

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	Date/time 7/21/14	9-11 Am
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy ~~moderate~~ difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14 9-11	10,000	I-II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages, or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Pann</u>	<u>II+</u>
<u>Below spillway</u>	<u>II+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|-------------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u> </u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>No Portages</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>OCCASIONAL STRAINER</u>	<u>SIDE OF RIVER</u>
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

5-8000 cfs is optimum. A lot of Fetures were Run out.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: July 21, 2014

Name: FRANK MOONEY

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	Date/time 7/21 9-11A	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/22	10,000	11+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 11+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>OPENING LEDGES</u>	<u>11⁺</u>
<u>ROCK DAM</u>	<u>11⁺</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>SEVERAL TREES DOWN</u>	<u>BRAIDED SECTION</u>
<u>TREE DOWN (LEFT)</u>	<u>ABOVE POWER STATION LAST MILE</u>
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

ROCK DAM FEATURE OFFERED CLASS II⁺ OPTIONS,
BUT ENJOY MORE AT LOWER FLOWS.

LEDGES BELOW DAM FORM SOME PLAY FEATURES,
BUT ARE HARD TO CATCH W/ A KAYT.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: CACIN SCHAUERMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	Date/time 9-11 7/21/14	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14 9-11	10,000	I, II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: CLASS II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|---------------|
| Much lower | <u>Higher</u> |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock DAM</u>	<u>CLASS II</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

A LOWER FLOW WOULD MAKE THIS STRETCH MORE ACCESSIBLE FOR NOVICE PADDLERS

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7-21-14

Name: Robert Mastorakis

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>10000</u>	cfs	Date/time <u>7-21 AM</u>	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-4	10000	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III -

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Dam Flow Roster tail</u>	<u>3</u>
<u>Rock Dam</u>	<u>3</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Dam Rooster tail we flipped it was an easy swim.	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

If there were an easier way to get back up from below the rock dam, that would be awesome.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jesse Cohen

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000	cfs	Date/time 7/21	9-11
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
9/21/14-11	10K	2+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>2+</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Flipped surfing	First Dam
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Michael Beauregard

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	10,000	cfs	Date/time 7/21/14 7/21/14	9am - 11am
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/24/14 7-11	10,000	I, II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

just below the damn

III, IV

rock damn

II, IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

- 15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
no portages				
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

- 16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
no difficulties	
_____	_____
_____	_____
_____	_____

- 17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

occasional strainers on the sides

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/2014

Name: Patrick Joyce

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	16,000	cfs	7/21/2014 9-11 AM	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 11AM	10,000	I, II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|-----------------|----------|
| <u>Beginner</u> | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>II/III</u>
<u>Below the Dam</u>	<u>II</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

No Portages

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Occasional strainers	_____
_____	_____
_____	_____

no

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Rock Dam will be better at a lesser flow.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14
 Name: SHAHID R. JALIL

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	10,000 cfs	Date/time	7/21/14/9-11am
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 9-11 am	10,000	III	-2	-1	0	1	2		✓

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

PUT - IN
ROCK DAM

III
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)


Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>NO PORTAGES</u>	1	2	3	4
<u>/ /</u>	1	2	3	4
<u>/ /</u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swim) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>FLIPPED ENTERING THE CURRENT BELOW DAM TRYING TO SURF</u>	<u>BELOW DAM (SAFE SWIM)</u>

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

THANK YOU FOR ALL THE WORK AND INVITING US TO PADDLE THE

CT!!


THANKS AGAIN
 SRS

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: July 21st 2014
 Name: James Kelly-Rand

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable	<u>10,000</u>	cfs	Date/time	<u>7/21 9:30</u>
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Catacraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
9:30 7/21		II+	-2	-1	0	1	2		

L10,000

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

12

Number of portages

6

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jim Dowd

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	13000	cfs	Date/time 7/21/14	IP - 3pm+L
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|-------------------------|-------------------------|
| <u>Hard shell kayak</u> | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | Cataraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy for Kayak moderate

difficult for Raft unless one can
drive to the put-in

Take-out Access: easy moderate

difficult
Extremely difficult for Rafts
unless one has a wench

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam both sides Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic). *R1, advanced*

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	(1)	2		
Availability of challenging technical boating	-2	-1	0	(1)	2		
Availability of powerful hydraulics	-2	-1	0	(1)	2		
Availability of whitewater play areas	-2	-1	0	(1)	2		
Overall whitewater challenge	-2	-1	0	(1)	2		
Safety	-2	-1	0	(1)	2		
Aesthetics	-2	-1	0	(1)	2		
Length of run	-2	-1	0	(1)	2		
Number of portages	-2	-1	(0)	1	2		
Boating instruction	-2	(-1)	0	1	2		
Overall Rating	-2	-1	0	(1)	2		

Powerful, very fast currents would be a challenge for beginners

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/2/14	13000	III+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III+ to IV minus up top near Put. (N)
class II - III overall

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

10,000 CFS would be better

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

10,000 CFS would be better

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Upper Section below Putim Fast/Powerful

Rating

III+ to IV

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

one "voluntary portage" to Run Right Side of Rock run

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>no difficulties</u>	1	2	3	4
<u> </u>	1	2	3	4
<u> </u>	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>Take-out extremely Arduous without wade</u>	<u> </u>
<u>Put In requires vehicle access for drifts</u>	<u> </u>

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Preferred 10,000 cfs
Request "Right of Way" to shore at take out

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: JORDAN YARULL

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	<u>13,000</u>	cfs	<u>7/21 - 1 PM</u>	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 IPM	13 k	II+ (III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+ (III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam</u>	<u>III</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>1</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
NA	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Carin Tinney

Name: 7/21/2014

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21	1:30

1. Watercraft used (Circle appropriate one):

- | | | |
|---|-----------------|---|
| <input checked="" type="radio"/> Hard shell kayak | <i>playboat</i> | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	<u>0</u>	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/00	13000	II+(III)	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+(III)

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------------------|-------------|
| Much lower | Higher |
| <u>Lower</u> 10K seemed good | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Rock Dam (R) had an additional line</u>	<u>3</u>

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

- | | |
|--|----------|
| Number of hits (but did not stop) | <u>0</u> |
| Number of hits with stops (did not have to get out of boat) | <u>0</u> |
| Number of hits with stops (had to get out of boat to continue) | <u>0</u> |
| Number of portages | <u>0</u> |

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult <i>NA</i>
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- might want to remove tree top (R) on (R) channel of island before rock dam
 good play feature - need to paddle around it

- 13K seemed to wash out some nice play river right at put in rapid,

- 13K washed out standover line at rock dam.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-21-14

Name: Glenn Stewart

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7-21-14 1PM	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam.)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
1PM 7-21-14	13,000	II +	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam III +

Rating

III +

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
None	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
None	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21

Name: Matt Overlin

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	13,000 cfs	Date/time	7/21	1-3 pm
Flow 2	cfs	Date/time		
Flow 3	cfs	Date/time		
Flow 4	cfs	Date/time		
Flow 5, if applicable	cfs	Date/time		
Flow 6, if applicable	cfs	Date/time		

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

rock dam

III

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
N/A	1	2	3	4
N/A	1	2	3	4
N/A	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
N/A	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

FUN !!!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21

Name: Tyler Randolph

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	13000	cfs	Date/time 7/21	<input checked="" type="checkbox"/>
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1
- Stand up paddle board
- C2
- Raft
- Cataract
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	12,000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

II - III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

1

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14
 Name: Tom Christopher

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	Date/time	Afternoon

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | <input type="radio"/> Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input checked="" type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2	<input checked="" type="checkbox"/>	

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: IV

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Site numbers/Locations ¹	Rating
Left Upper Ledges / Right Island Wave Train	3+ / 4
Rock Dam River Left / Rock Dam River RT.	4 / 3

4

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>None</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>None</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

13,000 was somewhat easier than 10K. Left upper ledges provided much play. Rock run was runnable in multiple locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Ryan Mooney

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21 12:00	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 12:00	15000	I-III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: I-III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<i>No portages</i> _____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<i>NA</i> _____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This was the best flow we saw. Great surfing at rock dam in a raft. Great waves for kayakers in the beginning. A few good kayak play spots as well.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Rodney Claxiborne

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	13,000	cfs	Date/time 7/21 1:00-3:00	✓
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataract

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult
 Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	<u>-1</u>	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/24/10 1400-1500	1500	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Put-in
Rock Dam

II
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14
 Name: Pat Perkins

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	B 000	cfs	Date/time 7/21	1-3:00
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | | |
|---|------------|---|
| <input checked="" type="radio"/> Hard shell kayak | (Ply boat) | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|------------------------------------|---|
| <input type="radio"/> Beginner | <input checked="" type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

✓ this, then ran it

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	<u>0</u>	1	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	<u>-1</u>	0	1	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	13,000	III-	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III-

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Way too much flatwater to be worth it!
 A couple good waves, and fun drops @ rock dam, but that's about it.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21
 Name: Alex Trochenberg

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	<u>14000</u> cfs	Date/time <u>7/21 1-3</u>	<input checked="" type="checkbox"/>
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|---|---|
| <input checked="" type="radio"/> Hard shell kayak | <input type="radio"/> Stand up paddle board |
| <input type="radio"/> Inflatable kayak | <input type="radio"/> C2 |
| <input type="radio"/> OC1 | <input type="radio"/> Raft |
| <input type="radio"/> OC2 | <input type="radio"/> Cataract |
| <input type="radio"/> C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---|--------------------------------|
| <input checked="" type="radio"/> Beginner | <input type="radio"/> Advanced |
| <input type="radio"/> Novice | <input type="radio"/> Expert |
| <input type="radio"/> Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam

Portage Rock Dam

Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 10am	14000	II/III	-2	-1	0	1	2		✓

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II / III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Advanced
- Novice
- Expert
- Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Higher
- Lower
- Much higher
- No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations ¹	Rating
Rock Dana	II/III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	0
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>N/A</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>N/A</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Fun , should be lower

JM

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/2014
 Name: Jim Micheud

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21 PM	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataract |
| OC3 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	<u>-1</u>	0	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/24	13000	3	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
_____	_____
_____	_____

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>none</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>none</u>	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: Mon July 21, 2014

Name: Charles Murray

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13K	cfs	Date/time 1pm	Monday July 21, 2014

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice
Intermediate

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

give help from winch to get my OCI up the river bank

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
6/21/15	1315	IV	-2	-1	0	(1)	2		

1pm 7/21

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: IV

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations ¹	Rating
rock dam	IV
ledge in middle section of island above rock dam	III-

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	0
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
<u>paddled around rock dam</u>	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>Very careful at this level</u>	<u>rock dam</u>
<u>to avoid trouble</u>	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

of the big flows (10K vs 13K), I preferred the 10K. 13K was above my skill level.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/21/14
Name: Ryan Galway

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21/14	1:00

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| <u>OC1</u> | Raft |
| OC2 | Cataraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
1:00	13000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rock Dam

Rating

III
III

Below Dam

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Evan Eichhorn

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	<u>13,000</u>	cfs	Date/time	<u>7/21 - 1pm</u>

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Catacraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	1	<u>2</u>		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	<u>2</u>		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21-1pm	13000	III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rit-in left channel - surf waves - tentative holes

III

Power line @ mid-rapid powerhouse

II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

Rock Dam-main chute - III

Play wave @ Cabot - right side - II+

Play wave @ right of Smead Island - III

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____ N/A	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Easy big recovery pool

Right side Smead Island

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

- Big water feel - not slow between features
 - Still good play spots above and below
- Rock Dam especially for bigger open boats

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Michael Beauregard

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	Date/time 7/21/14	1pm - 3pm

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14 1-3	13,000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

rock dam

II

just below the dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
no portages	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
no difficulties	
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

rock dam was easier and the drop was smaller, but surfing was better

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jeffrey Green

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	cfs	Date/time	
Flow 2	cfs	Date/time	
Flow 3	cfs	Date/time	
Flow 4	cfs	Date/time	
Flow 5, if applicable	cfs	Date/time	
Flow 6, if applicable	13,000 cfs	Date/time 1pm - 3pm 7/21/14	✓

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataraft

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21, 1-3	13,000	II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rock Dam

III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14
 Name: COLVIN SCHAMERMAN

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21/14 1-3	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	<u>1</u>	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 1-3	13,000	II*	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II*

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------|----------|
| Beginner | Advanced |
| <u>Novice</u> | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|--------------|-------------|
| Much lower | Higher |
| <u>Lower</u> | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| <u>No change</u> | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>ROCK DAM</u>	<u>III</u>
_____	_____
_____	_____

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

A LOWER FLOW WOULD ACCENT THE ROCK DAM A BIT BETTER. THE ROCK DAM WAS WASHED OUT.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/21/2014

Name: Patrick Joyce

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/20/2014	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	<u>2</u>		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	1	<u>2</u>		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
1-3 PM 7/21	13,000	II/III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II / III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations ¹	Rating
Rock Dam	II
Below Dam	II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	0
Number of hits with stops (did not have to get out of boat)	0
Number of hits with stops (had to get out of boat to continue)	0
Number of portages	0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
No Portages	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
None	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Very Fun Flow

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM

Turners Falls Hydroelectric Project FERC No. 1889

Whitewater Controlled Flow Study

Date of run: 7/21
 Name: Zach Peterson

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- Hard shell kayak
- Inflatable kayak
- OC1
- OC2
- C1

- Stand up paddle board
- C2
- Raft**
- Cataraft
- Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- Beginner
- Novice
- Intermediate

- Advanced
- Expert**

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable, was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	<u>0</u>	1	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		✓
Availability of powerful hydraulics	-2	-1	<u>0</u>	1	2		
Availability of whitewater play areas	-2	-1	0	1	<u>2</u>		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	13,000	I-II	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- Beginner
- Novice
- Intermediate
- Advanced
- Expert

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- Much lower
- Lower
- No change
- Higher
- Much higher

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
SPIL WAY	II

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
SPRAY ATIC STRAINERS	Side of River
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Optimal level my guess would be 5,000-8000^{CF}

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: JULY 21, 2014
 Name: SHAHID JALIL

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	1300	cfs	Date/time	7/21/14 / 1-3 pm
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataraft |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|-----------------|
| Beginner | <u>Advanced</u> |
| Novice | Expert |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	<u>1</u>	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	1	<u>2</u>		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	0	1	<u>2</u>		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21/14	13,000	3	-2	-1	0	1	2		X

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no Possibly Probably Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

PWT - IN
ROCK DAM

III
III

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)



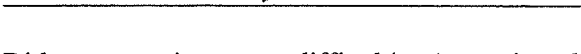
0

Number of portages




0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
	1	2	3	4
	1	2	3	4
	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
	
	
	

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

THANK YOU
 VERY MUCH!!

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: JULY 21

Name: FRANK MOONEY

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable	13,000	cfs	7/21 1-3pm	

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | <u>Raft</u> |
| OC2 | Cataract |
| C1 | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|--------------|---------------|
| Beginner | Advanced |
| Novice | <u>Expert</u> |
| Intermediate | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		✓
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		✓
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	1	<u>2</u>		
Aesthetics	-2	-1	0	<u>1</u>	2		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21 PM	15,000	II+	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

LEDGES

11⁺

ROCK DAM

11⁺

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
<u>NO DIFFICULTY USING LEFT CHANNEL</u>	<u>ABOVE ROCK DAM</u>
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

FW COMPRESSION WAVES IN SEVERAL AREAS, SOME
PLAS SPOTS, DROP AT ROCK DAM SMALL.

Figure 3.6.3-1b: Single Flow Evaluation Form

**SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study**

Date of run: 7/21/14

Name: Jesse Cohen

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	13,000	cfs	Date/time 7/21/14	1-3
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

Expert

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	2		
Availability of challenging technical boating	-2	-1	0	1	2		
Availability of powerful hydraulics	-2	-1	0	1	2		
Availability of whitewater play areas	-2	-1	0	1	2		
Overall whitewater challenge	-2	-1	0	1	2		
Safety	-2	-1	0	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	0	1	2		
Number of portages	-2	-1	0	1	2		
Boating instruction	-2	-1	0	1	2		
Overall Rating	-2	-1	0	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 2+

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|-------------------|-------------|
| <u>Much lower</u> | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|-------------------|-------------|
| <u>Much lower</u> | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
<u>Put-In</u>	<u>2-3+</u> depending how high you can start
<u>Rock Dam</u>	<u>2+</u>

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>0</u>
Number of hits with stops (did not have to get out of boat)	<u>0</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

_____	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Rock Dam became pretty straight forward, but a lot of surfing spots.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-21-14

Name: Robert Mastorakis

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2	13000	cfs	Date/time	7-21 1-3
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Inflatable kayak

OC1

OC2

C1

Stand up paddle board

C2

Raft

Cataraft

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Novice

Intermediate

Advanced

Expert

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	<u>0</u>	1	2		
Overall whitewater challenge	-2	<u>-1</u>	0	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	<u>0</u>	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	0	<u>1</u>	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	<u>0</u>	1	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7-21	13K	Flat-2	-2	-1	0	1	2		

1-3PM

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no
 Possibly
 Probably
 Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: II +

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

Rooster tail at Dam #4

3+

Rock Dam

2+

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
NONE	_____
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

This level washes out The Rock Dam
only one Real place to Run middle
of River left of large Rock.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7-21-14

Name: Mackae Freelard

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1	13,000	cfs	Date/time	1:00-3:00
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable		cfs	Date/time	
Flow 6, if applicable		cfs	Date/time	

1. Watercraft used (Circle appropriate one):

Hard shell kayak

Stand up paddle board

Inflatable kayak

C2

OC1

Raft

OC2

Cataract

C1

Other (describe): _____

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

Beginner

Advanced

Novice

~~Expert~~

Intermediate

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

If unacceptable,
was flow:

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	1	<u>2</u>		
Availability of challenging technical boating	-2	<u>-1</u>	0	1	2		
Availability of powerful hydraulics	-2	<u>-1</u>	0	1	2		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	<u>0</u>	1	2		
Safety	-2	-1	<u>0</u>	1	2		
Aesthetics	-2	-1	0	1	2		
Length of run	-2	-1	<u>0</u>	1	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
			-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class:

III

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

- | | |
|--------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| Intermediate | |

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

- | | |
|------------|-------------|
| Much lower | Higher |
| Lower | Much higher |
| No change | |

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

<u>Site numbers/Locations¹</u>	<u>Rating</u>
Below dam	II
Rock Dam	III

14. Estimate the number of hits,* stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)	<u>5</u>
Number of hits with stops (did not have to get out of boat)	<u>1</u>
Number of hits with stops (had to get out of boat to continue)	<u>0</u>
Number of portages	<u>0</u>

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty

Location

Minor tree Strainers	Along river's edge
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

Figure 3.6.3-1b: Single Flow Evaluation Form

SINGLE FLOW EVALUATION FORM
Turners Falls Hydroelectric Project FERC No. 1889
Whitewater Controlled Flow Study

Date of run: 7/21/14

Name: Jack Gill

Indicate which flow release this survey corresponds to (check appropriate box):

Flow 1		cfs	Date/time	
Flow 2		cfs	Date/time	
Flow 3		cfs	Date/time	
Flow 4		cfs	Date/time	
Flow 5, if applicable ✓	10,000	<u>cfs</u>	7/21	Morning
Flow 6, if applicable ✓	13,000	cfs	7/21	Afternoon

1. Watercraft used (Circle appropriate one):

- | | |
|------------------|-------------------------|
| Hard shell kayak | Stand up paddle board |
| Inflatable kayak | C2 |
| OC1 | Raft |
| OC2 | Cataraft |
| <u>C1</u> | Other (describe): _____ |

2. Your whitewater boating skill level for the watercraft used for this flow (Circle appropriate one):

- | | |
|---------------------|----------|
| Beginner | Advanced |
| Novice | Expert |
| <u>Intermediate</u> | |

3. Please evaluate the boating access for this segment of river (Circle appropriate one):

Put-in Access: easy moderate difficult

Take-out Access: easy moderate difficult

4. At "Rock Dam" did you (Circle appropriate response):

Run Rock Dam Portage Rock Dam Paddle alternate canal (avoid Rock Dam,)

Ran it far right alongside island

5. Please evaluate this flow for your craft and skill level for each of the following characteristics (Circle one number for each characteristic).

In the Afternoon ran Rock Dam twice, both the main channel and on the far right.

If unacceptable, was flow:

Morning

	Totally unacceptable	Unacceptable	Neutral	Acceptable	Totally acceptable	Too Low	Too high
Navigability	-2	-1	0	<u>1</u>	2		
Availability of challenging technical boating	-2	-1	0	<u>1</u>	2		
Availability of powerful hydraulics	-2	-1	0	1	<u>2</u>		
Availability of whitewater play areas	-2	-1	0	<u>1</u>	2		
Overall whitewater challenge	-2	-1	0	<u>1</u>	2		
Safety	-2	-1	0	<u>1</u>	2		
Aesthetics	-2	-1	0	1	<u>2</u>		
Length of run	-2	-1	0	<u>1</u>	2		
Number of portages	-2	-1	<u>0</u>	1	2		
Boating instruction	-2	-1	<u>0</u>	1	2		
Overall Rating	-2	-1	0	<u>1</u>	2		

*Afternoon
Neutral
Boats made Navigability more difficult*

I liked the 10,000 cfs level for a high water flow instead of the 13,000 cfs.

6. Evaluate the recently completed flow for your craft based on your perceived difficulty of the run for a "typical user". For example, if you perceived that a flow of 2,500 cfs was Class II, please rank this flow for a typical Class II boater.

If unacceptable, was flow:

Release Date/Time	Flow (cfs)	Your Perceived Difficulty of the run (Class I-V+)	Totally Unacceptable	Unacceptable	Neutral	Acceptable	Totally Acceptable	Too Low	Too high
7/21	10000 13000	Class III	-2	-1	0	1	2		

7. Are you likely to return for future boating in the Turners Falls bypass at this flow? (Circle one)

Definitely no

Possibly

Probably

Definitely yes

8. Based on the International Whitewater Scale (defined below), how would you rate the whitewater difficulty of the river at this flow? (if appropriate, provide a range of whitewater classifications for this flow)

This flow rates at Class: 3 Both Morning and Afternoon

- Class I – Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.
- Class II – Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium-sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful is seldom needed.
- Class III – Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control, in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.
- Class IV – Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended.
- Class V – Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult.

Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential.

9. What skill level does a paddler need to safely paddle the bypass at this flow? (Circle one)

Beginner

Advanced

Novice

Expert

Intermediate

Strong

10. Relative to this flow, would you consider the minimum acceptable flow (enough flow for an enjoyable recreation experience) to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

11. Relative to this flow, would you consider the optimum flow for this type of trip to be higher, lower, or about the same as this flow? Circle one

Much lower

Higher

Lower

Much higher

No change

13. Using site numbers or locations, please identify challenging features, rapids or sections and rate their difficulty (using the International Whitewater Scale at this flow).

Site numbers/Locations¹

Rating

14. Estimate the number of hits, stops, boat drags, and portages you had at this flow (i.e., did you hit anything and did you have to stop or get out of the boat to continue?).

Number of hits (but did not stop)

0

Number of hits with stops (did not have to get out of boat)

0

Number of hits with stops (had to get out of boat to continue)

0

Number of portages

0

¹ Site numbers/locations will be defined in consultation with the whitewater boating stakeholders during the field investigations for the IFIM study (Study No. 3.3.1)

15. Using site numbers/locations on the map provided, identify rapids or sections you portaged and rate the difficulty of the portages (for your type of watercraft at this flow)

Place site numbers/location and reason for portage	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult
Sorry - Did not portage.				
Rock, Dam, Falls, Right	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

16. Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks..

Difficulty	Location
Large holes that were difficult to spot when you were in the boat.	Rapid immediately after the Put In, River Left.
_____	_____
_____	_____

17. Provide any additional comments about this flow below. If necessary, please use site numbers/locations to identify specific locations.

It would be nice if First Light could post on the Internet an estimate of how much water is being spilled over the dam.

An alternate easier take-out would be appreciated.

Document Content(s)

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