

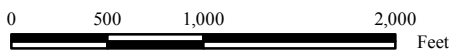
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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

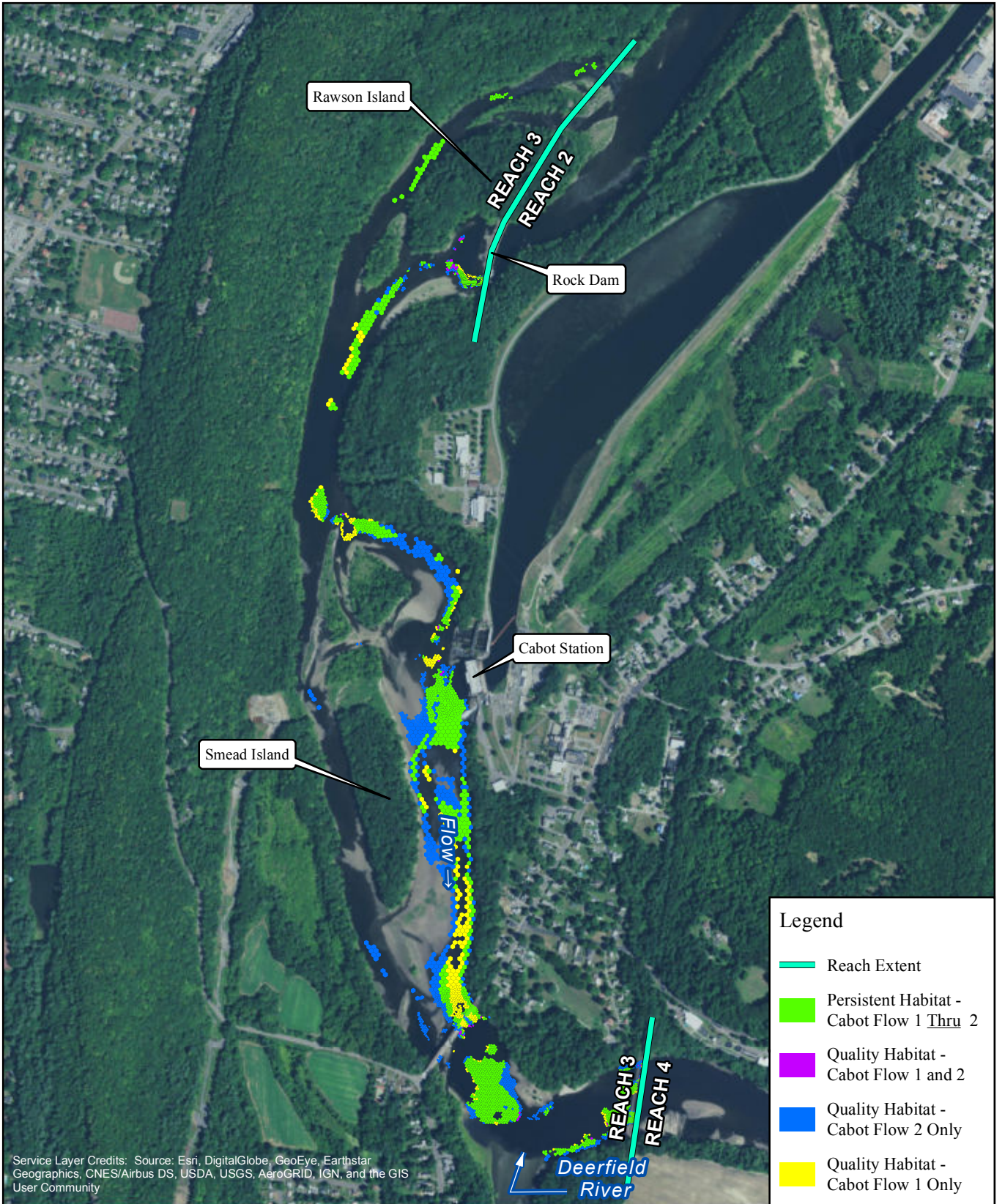


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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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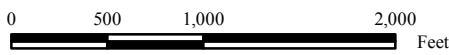
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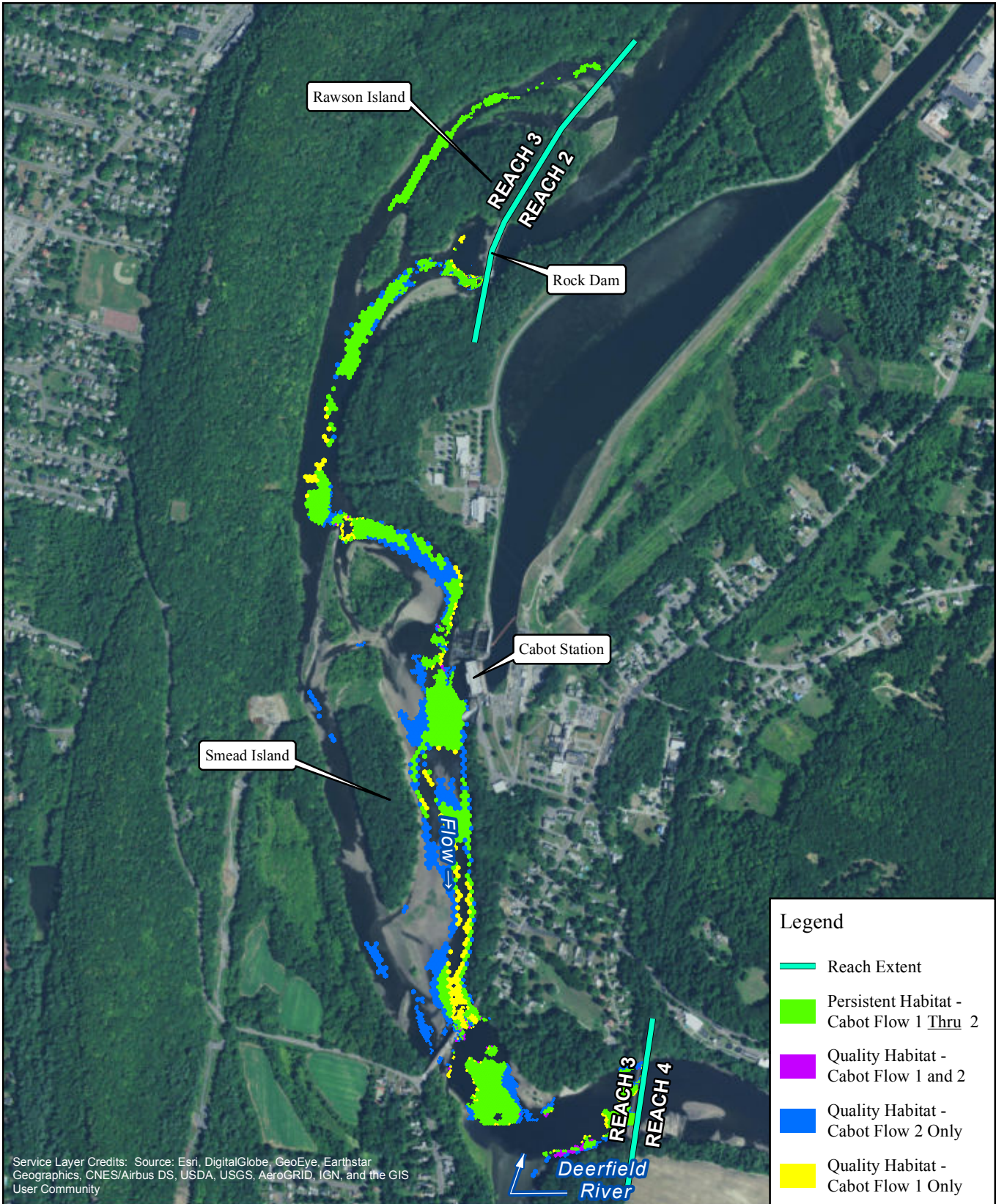


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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 500 cfs
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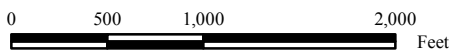
Legend

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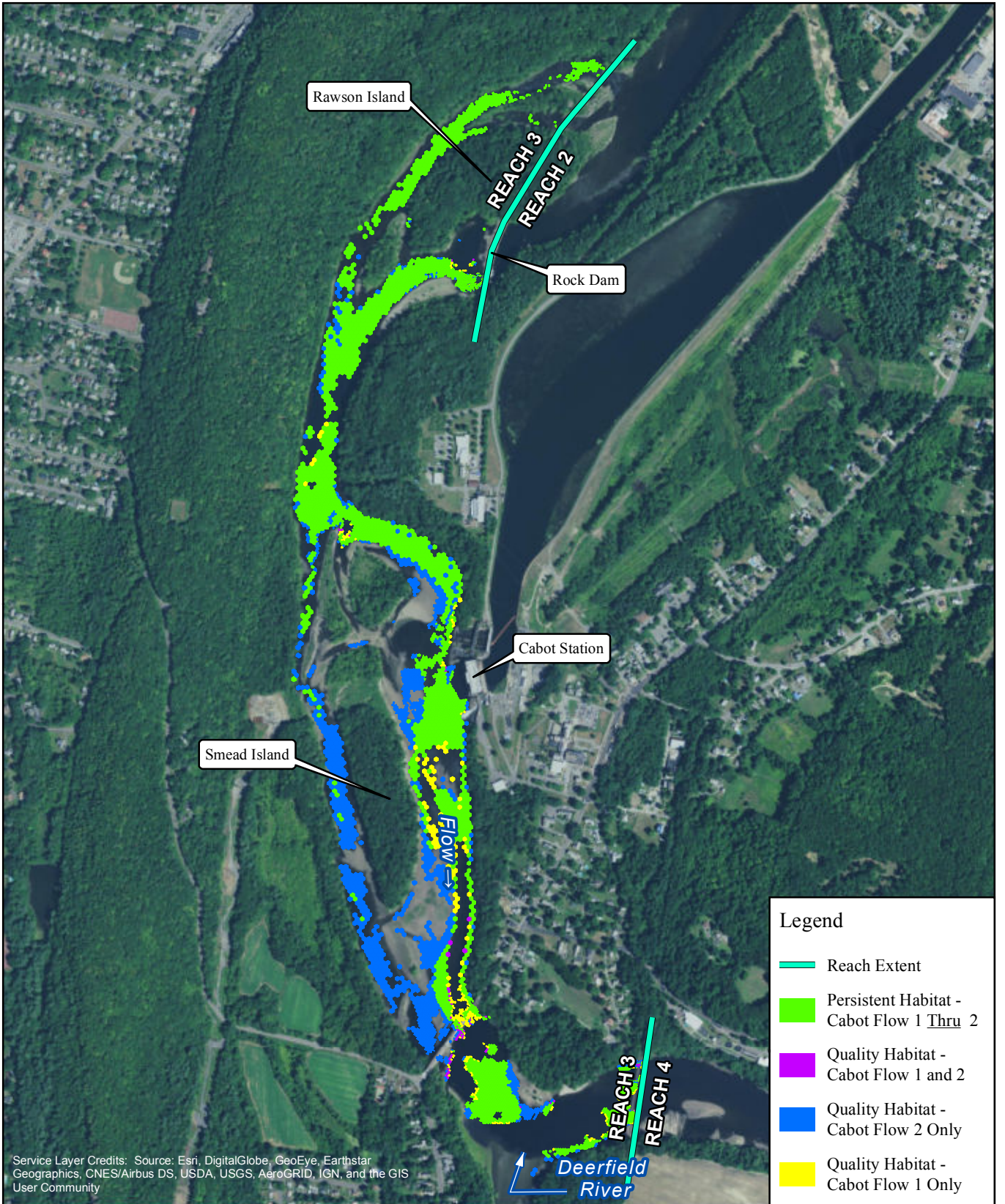
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Persistent Habitat
 American Shad-Spawning Bypass Flow:

Cabot Flow 1:	1000 cfs
Cabot Flow 2:	2500 cfs
	7000 cfs

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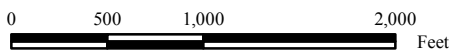
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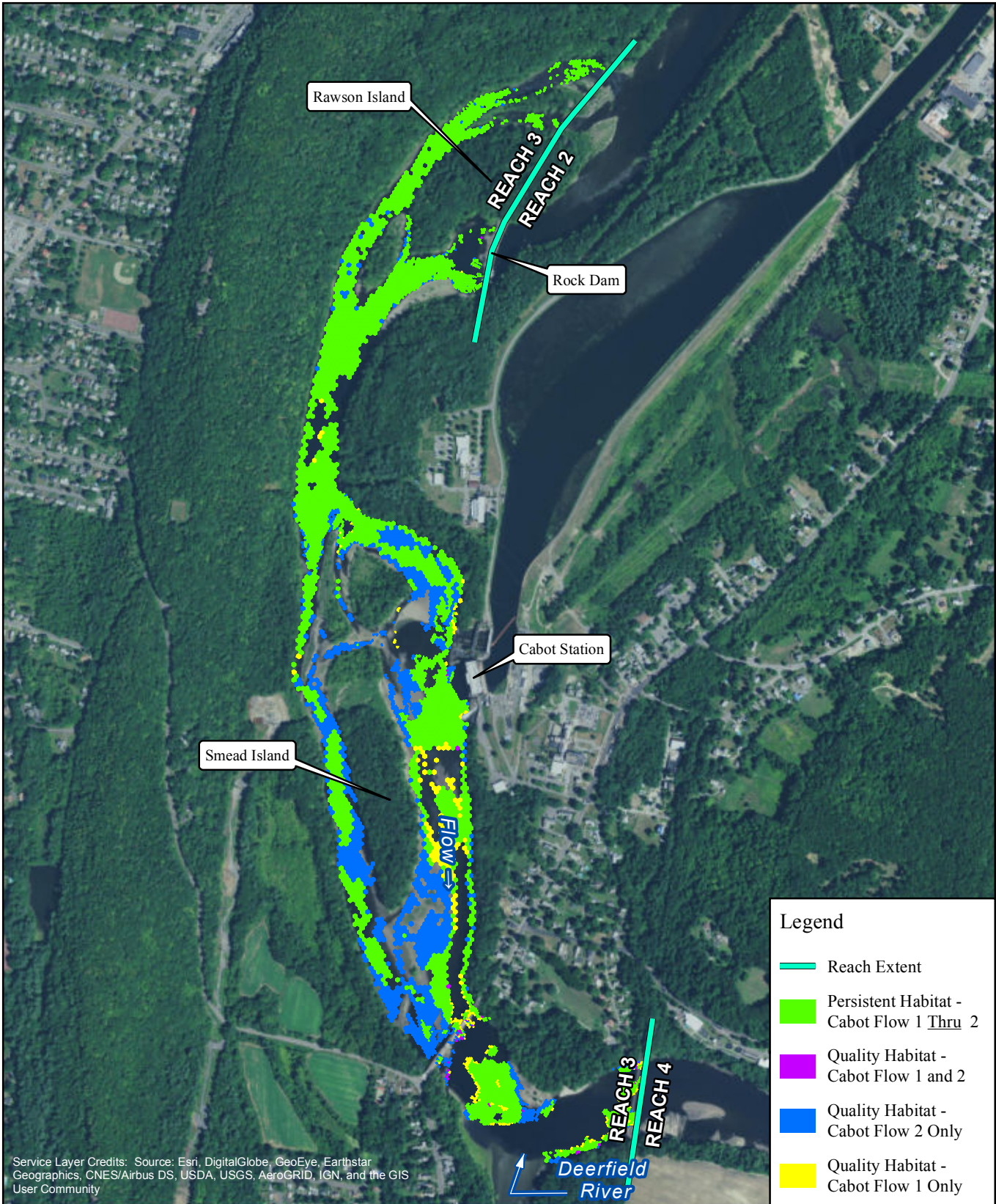
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 3000 cfs
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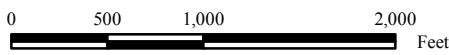
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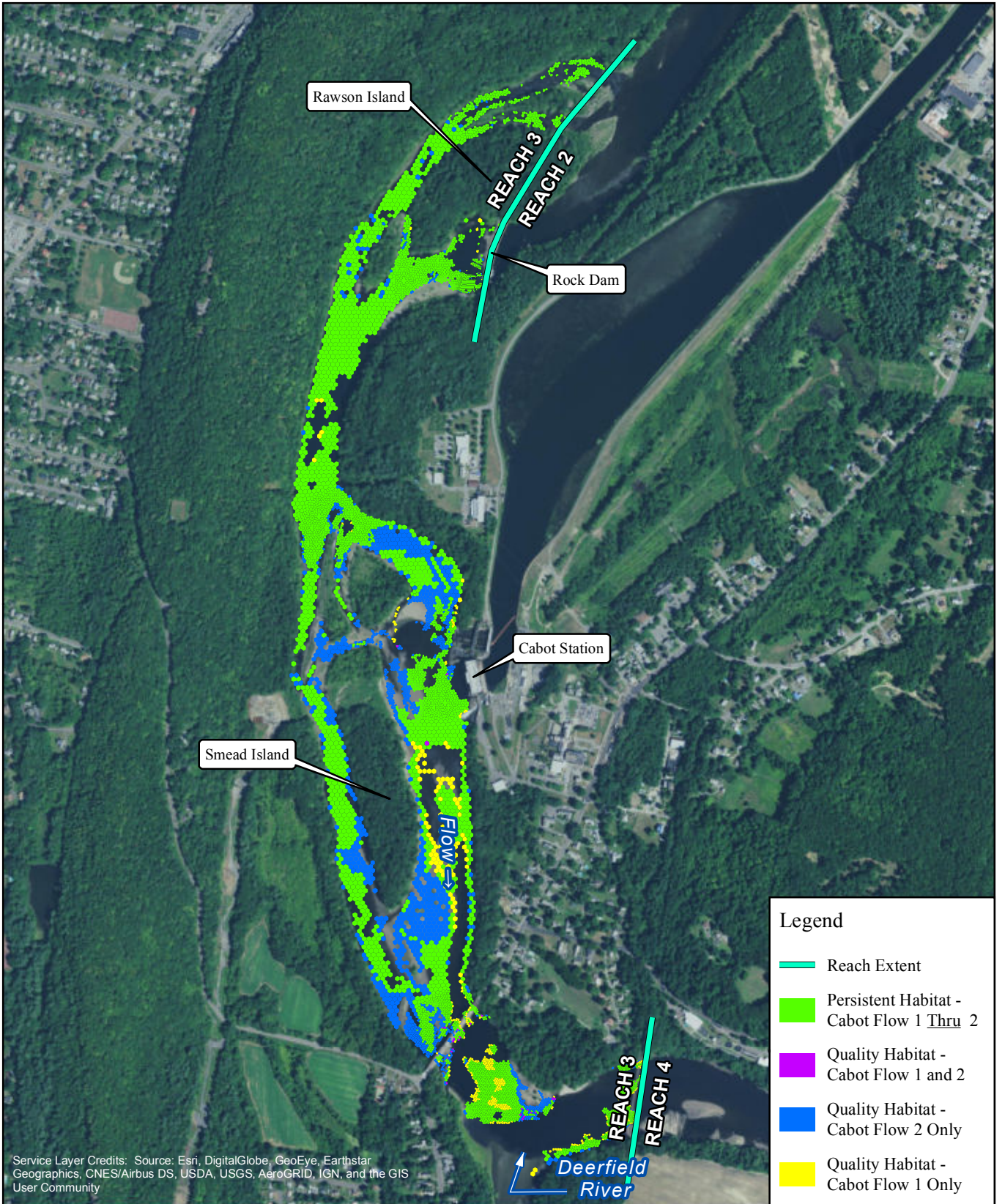
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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 5000 cfs
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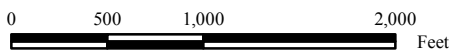
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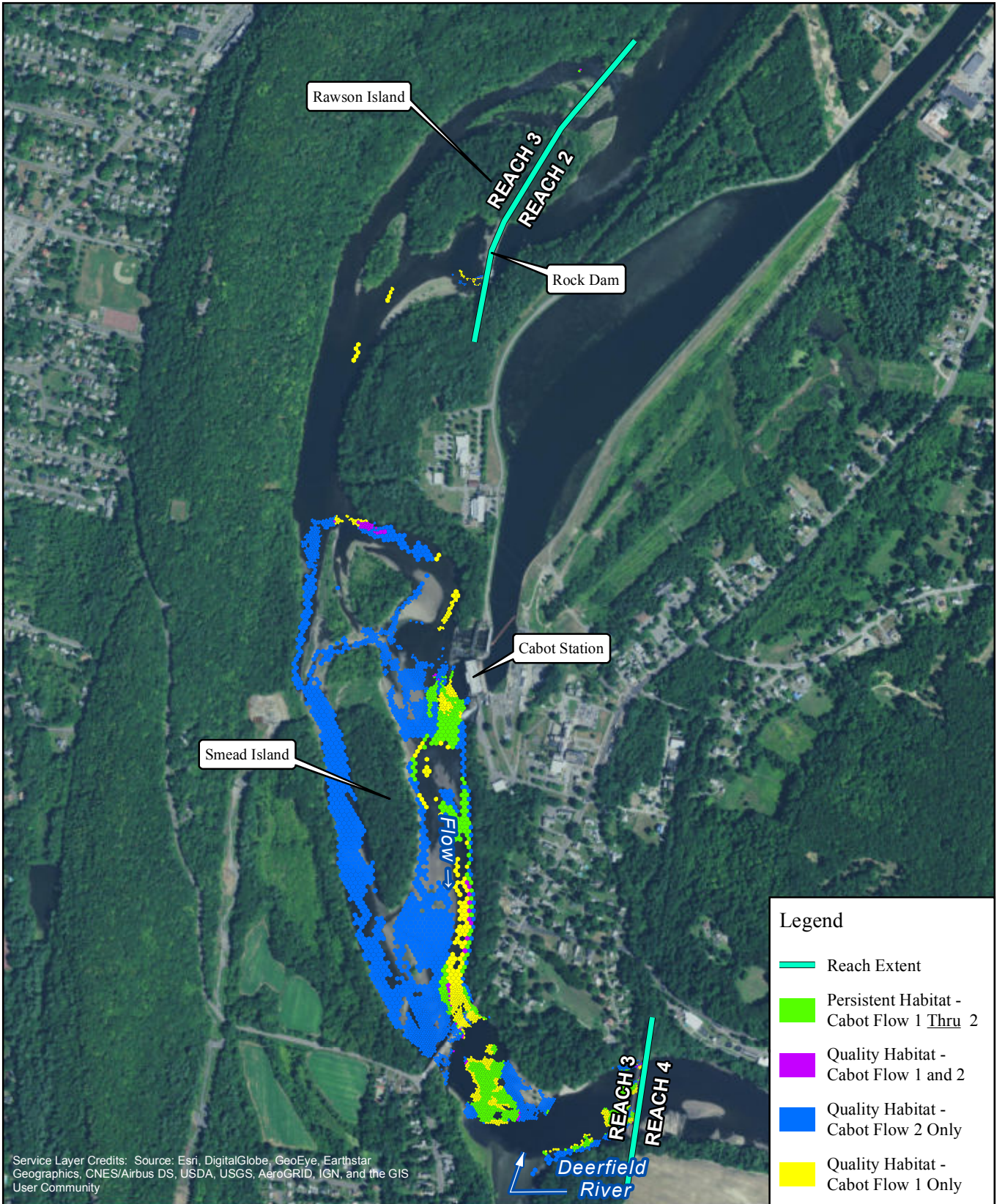
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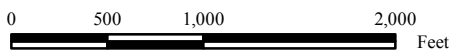
Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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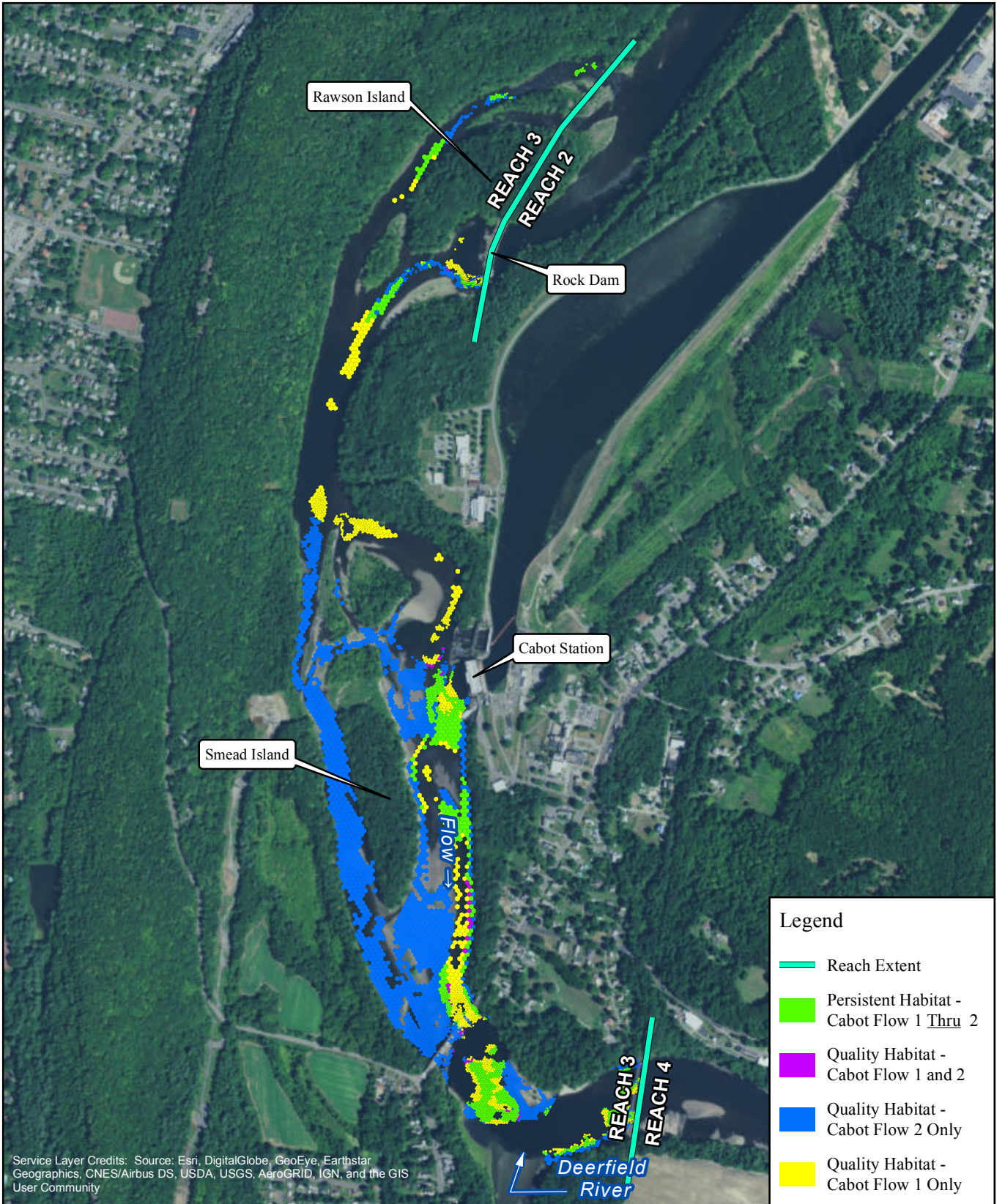
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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
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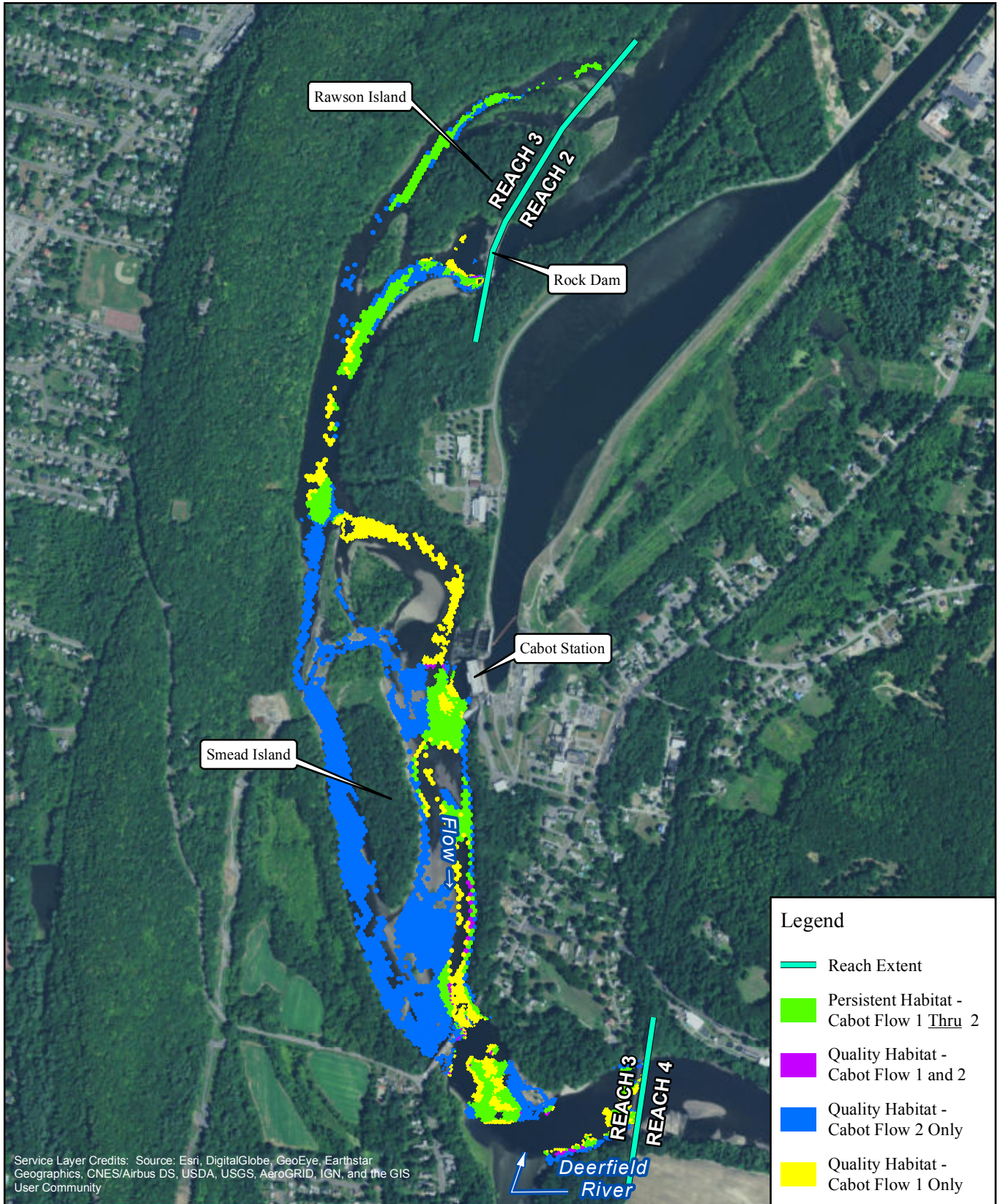
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RELICENSING STUDY 3.3.1

Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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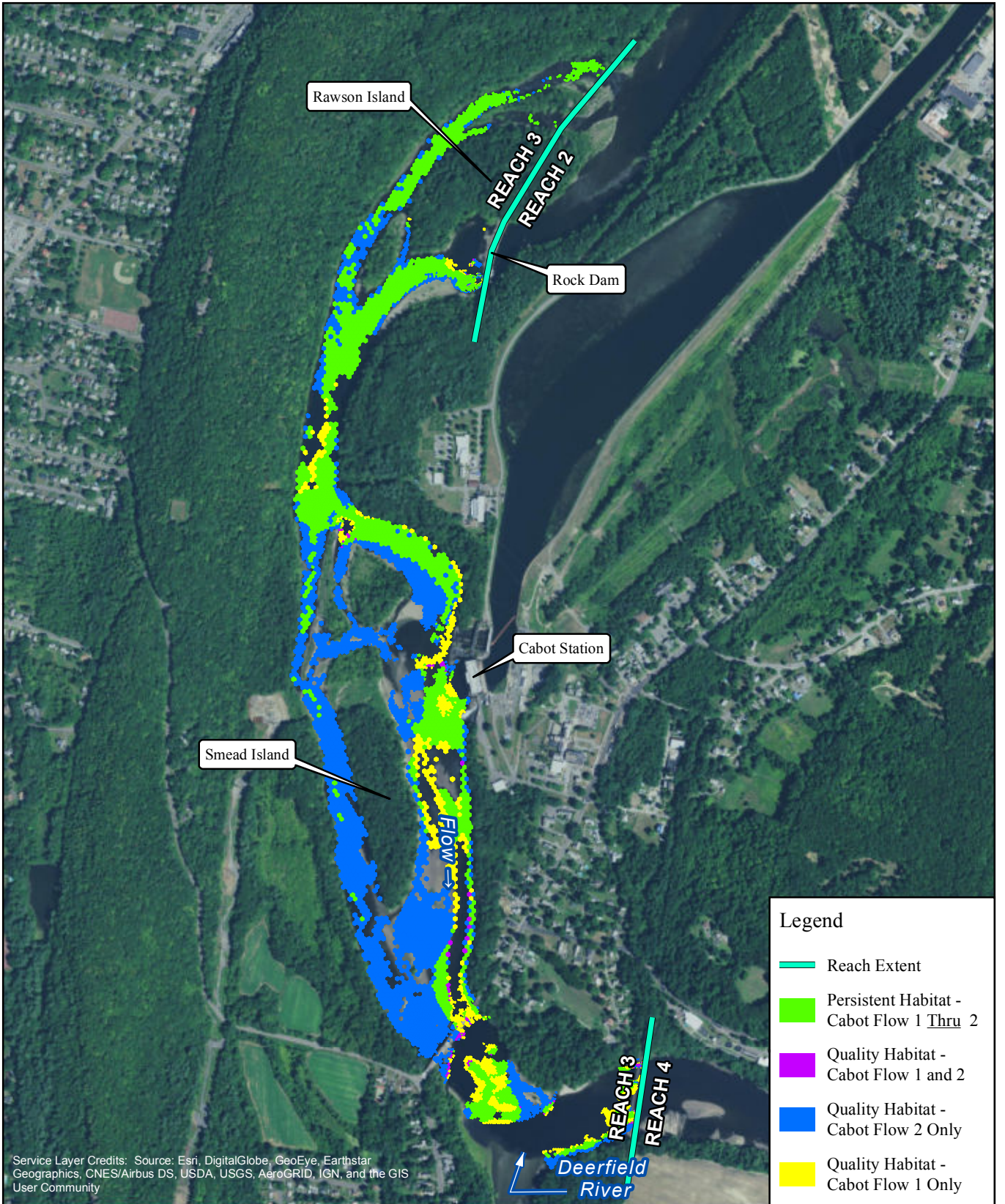
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 2500 cfs
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0 500 1,000 2,000 Feet

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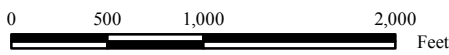
Legend

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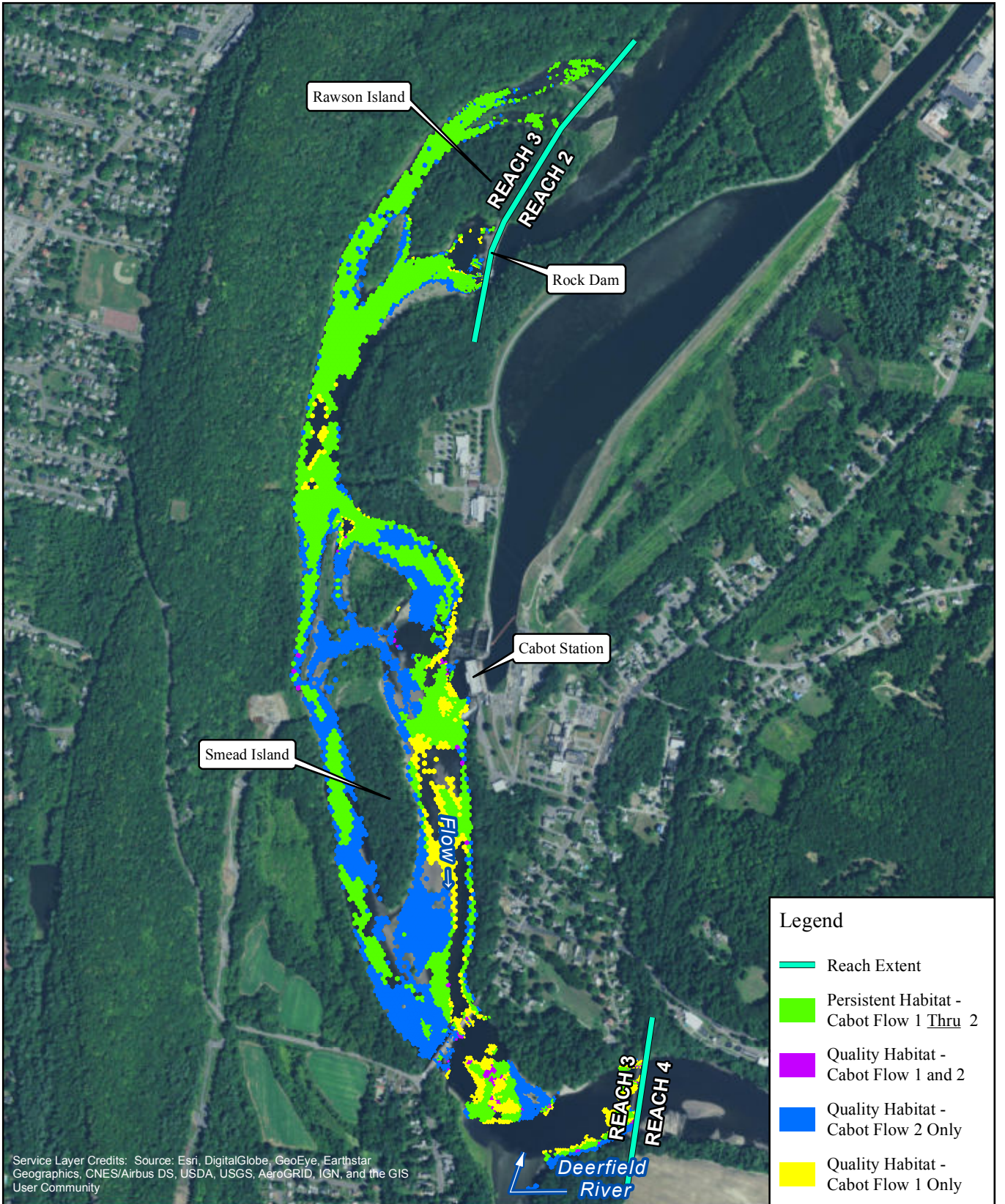
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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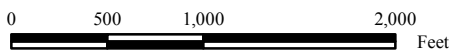
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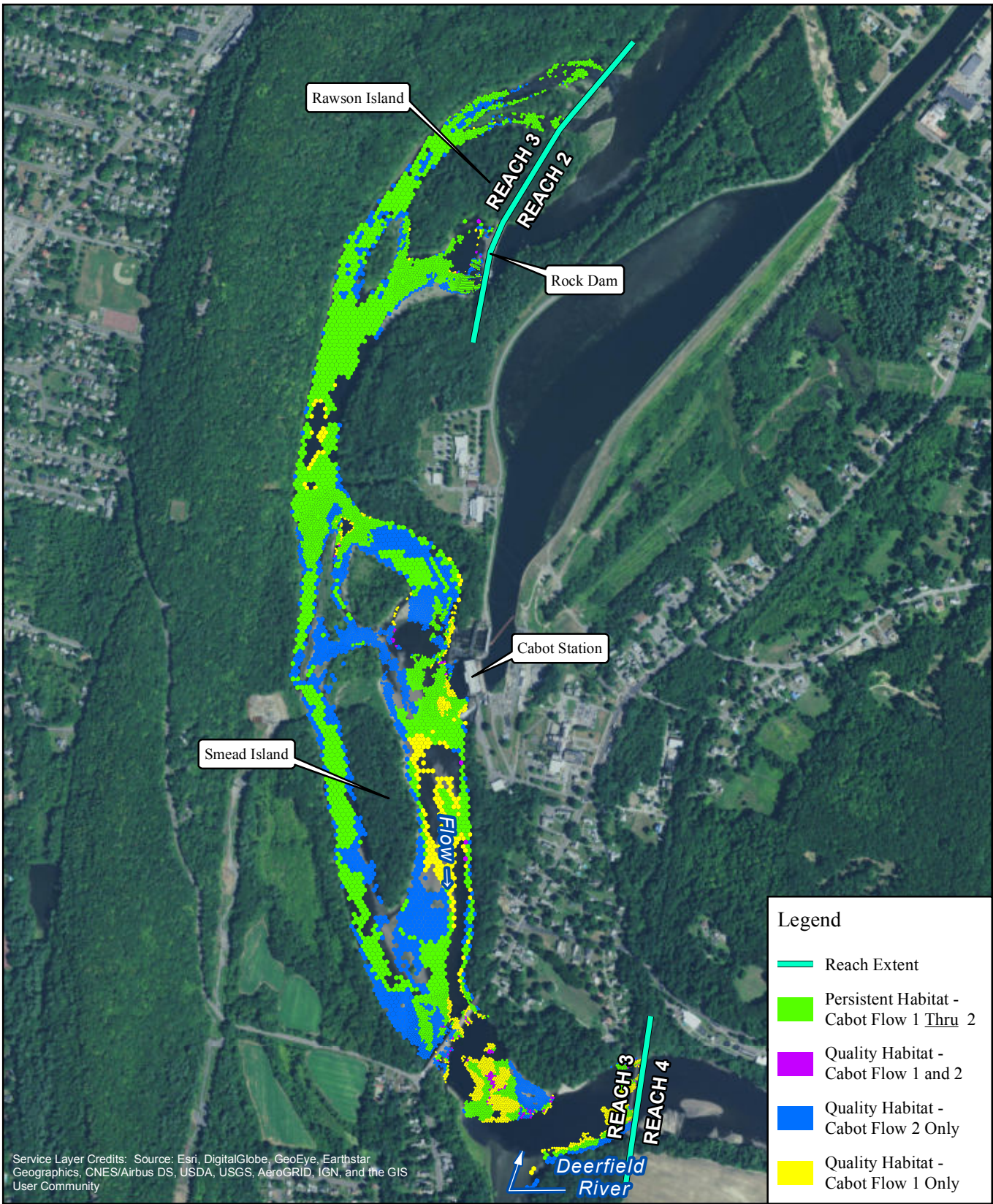
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs


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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

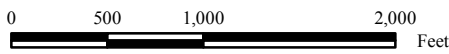


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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

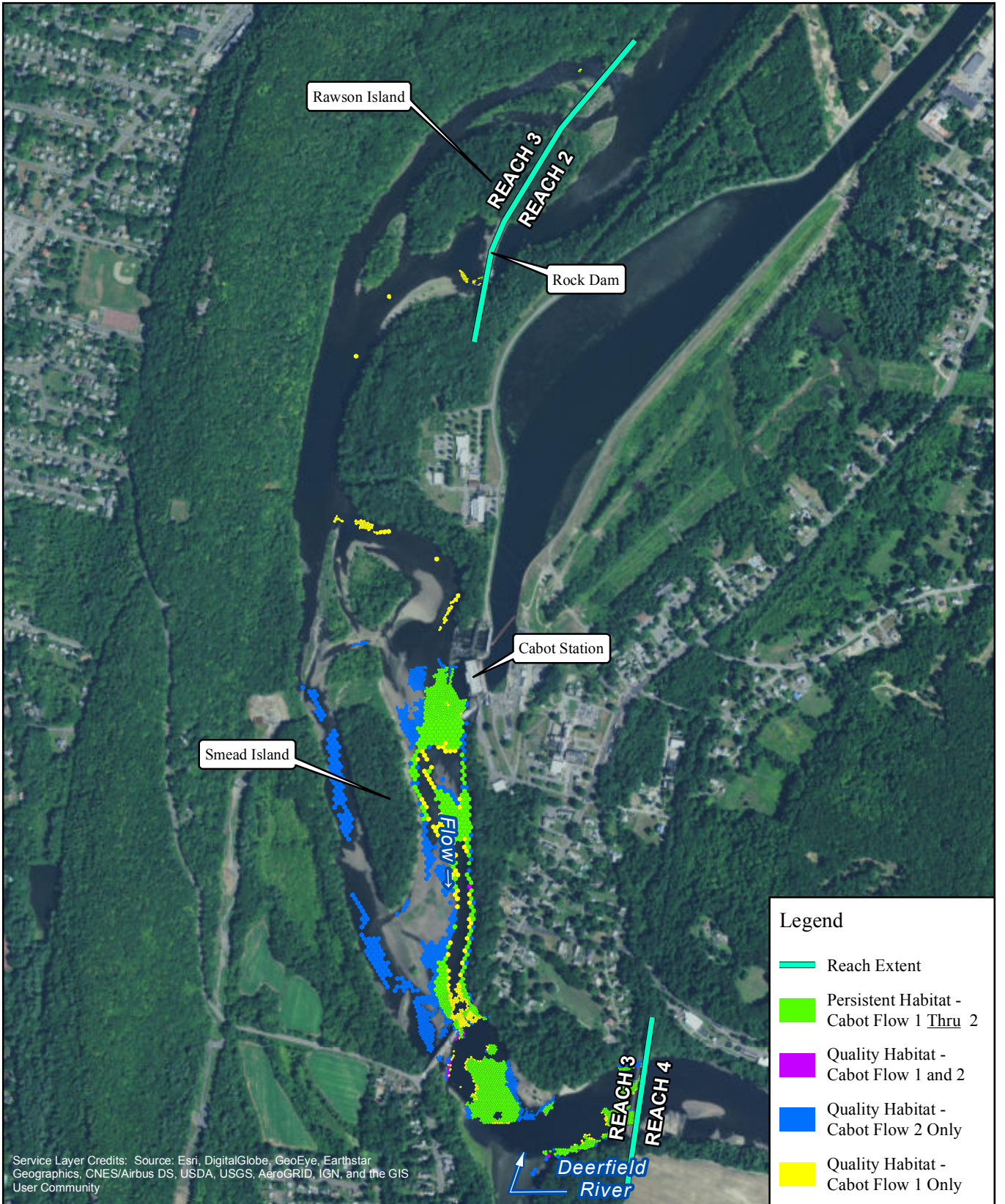
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0 500 1,000 2,000 Feet

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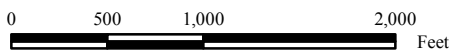
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 Turners Falls Hydroelectric Project No. 1889

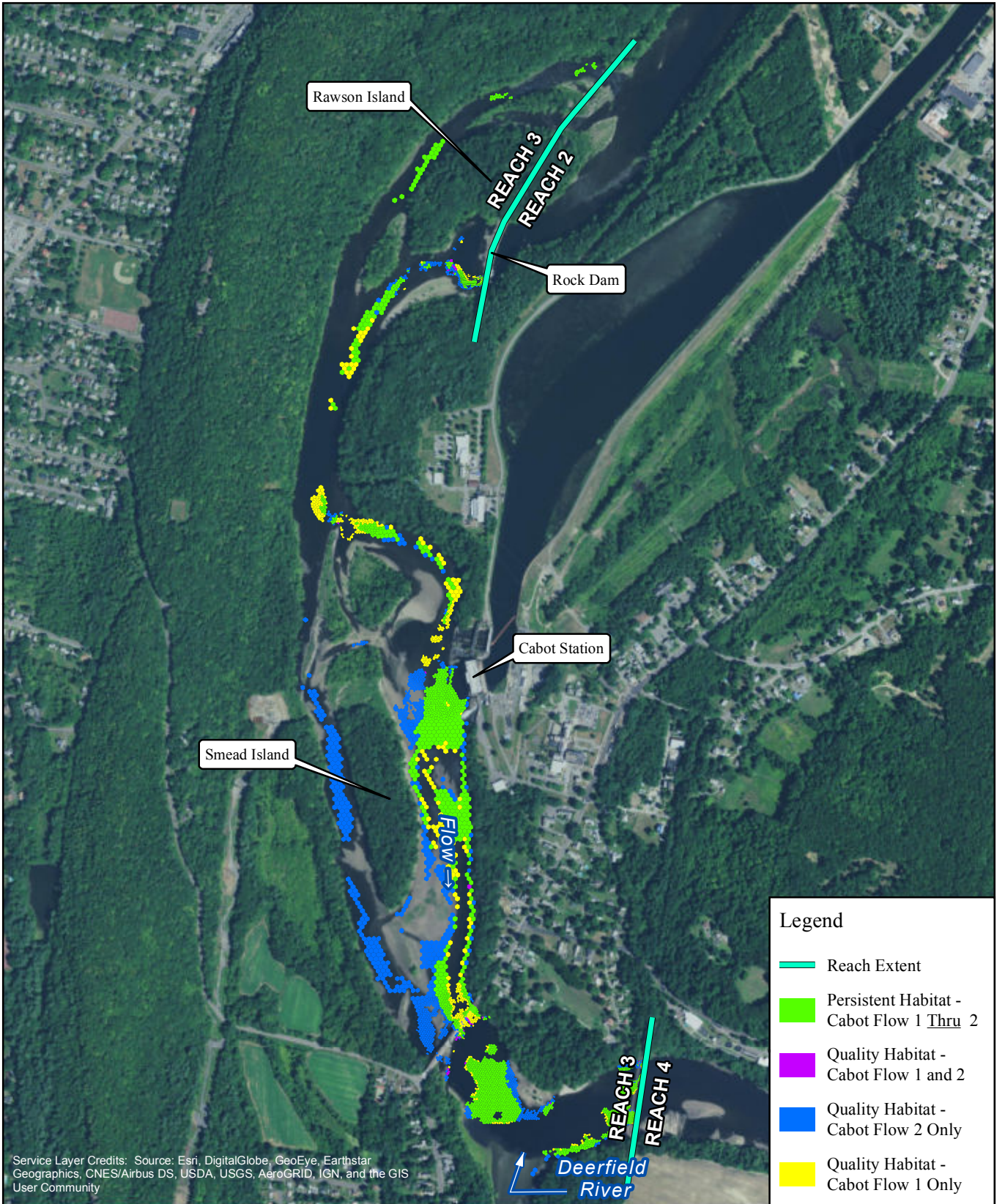
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Persistent Habitat

American Shad-Spawning Bypass Flow:	200 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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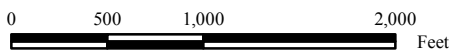
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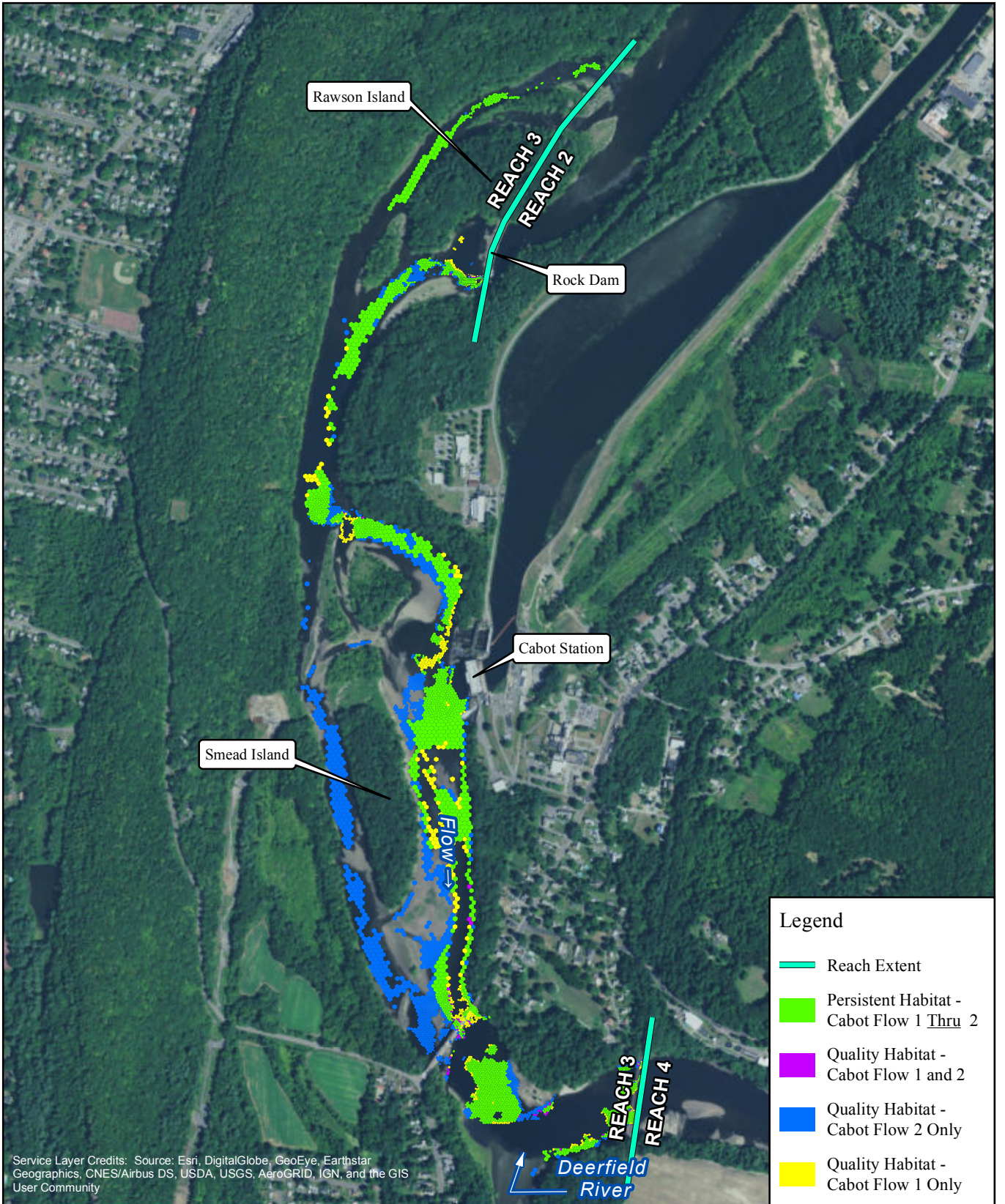


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RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 500 cfs
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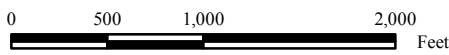
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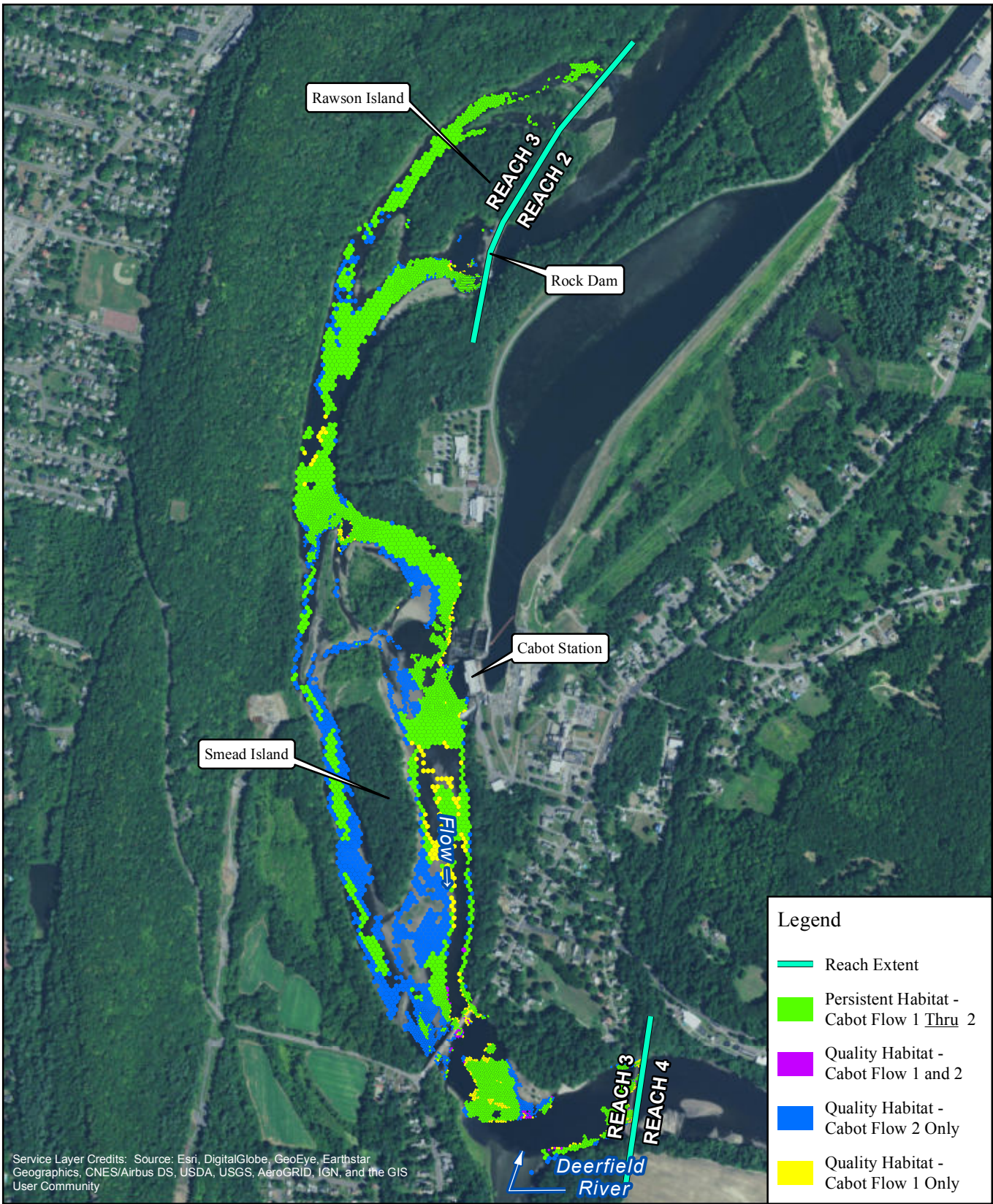
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Persistent Habitat

American Shad-Spawning Bypass Flow:	1000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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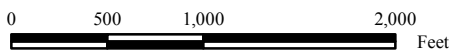
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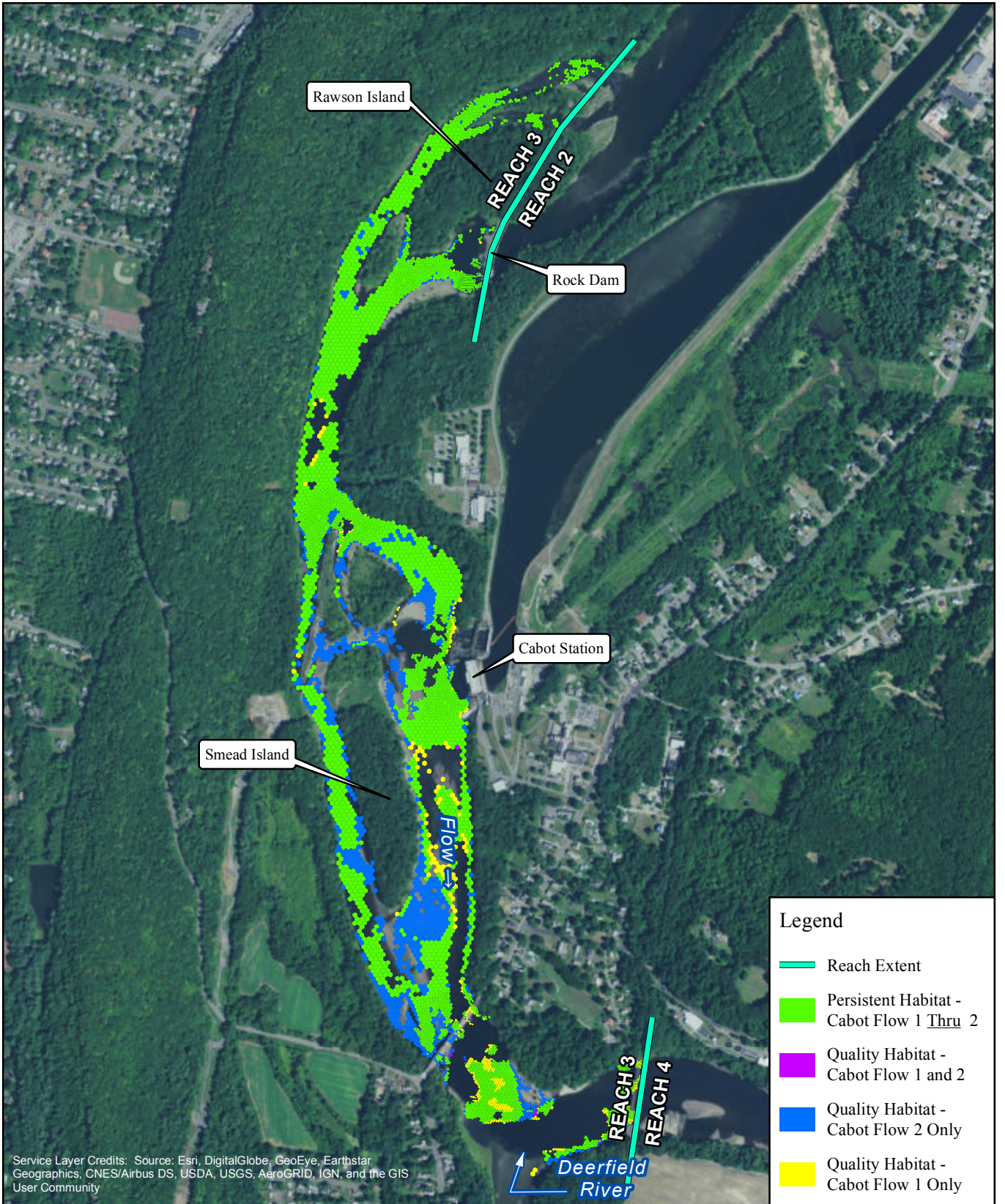
RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning

Bypass Flow:	3000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

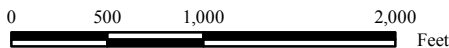
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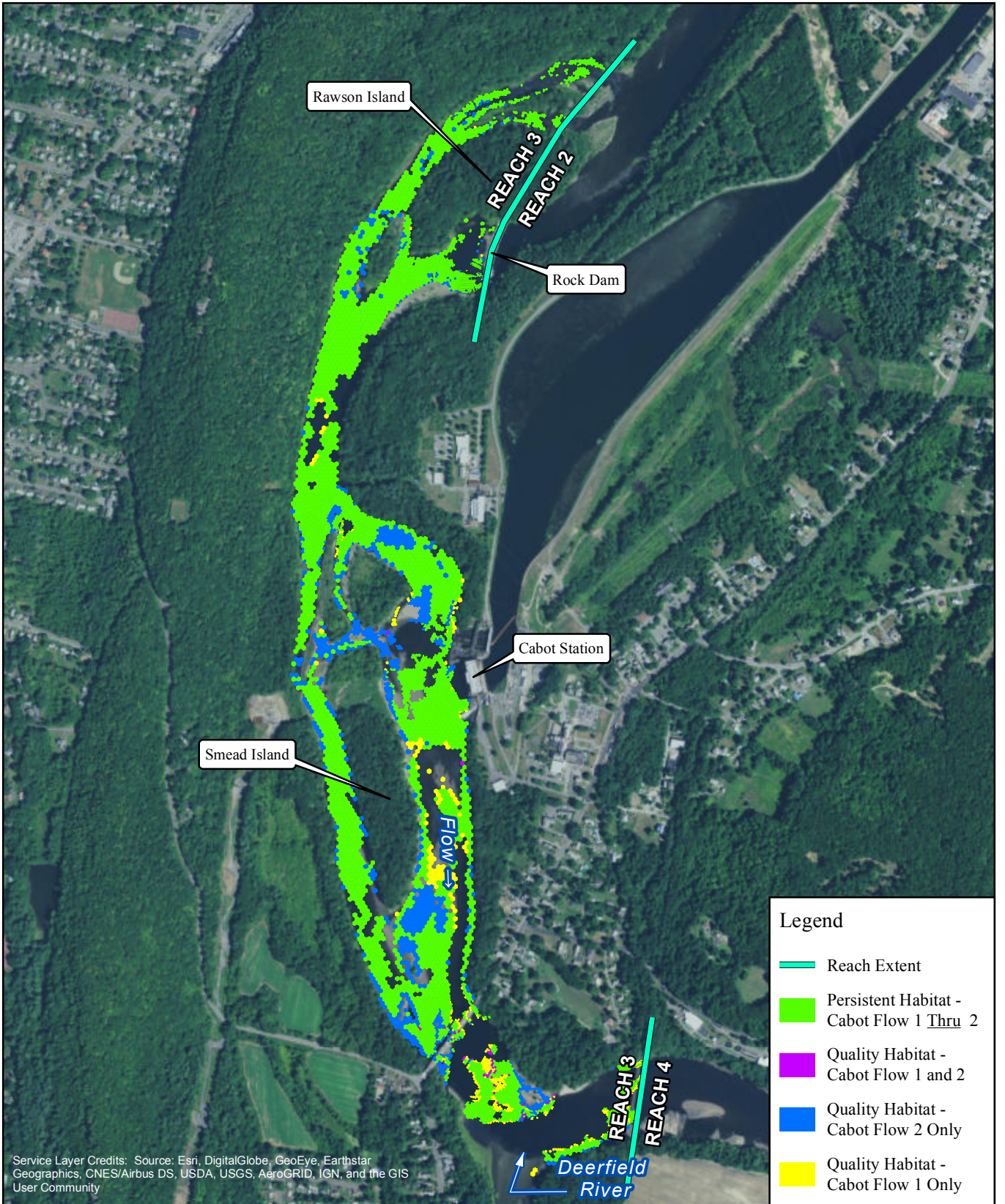


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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1



Persistent Habitat	
American Shad-Spawning Bypass Flow:	5000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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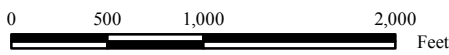
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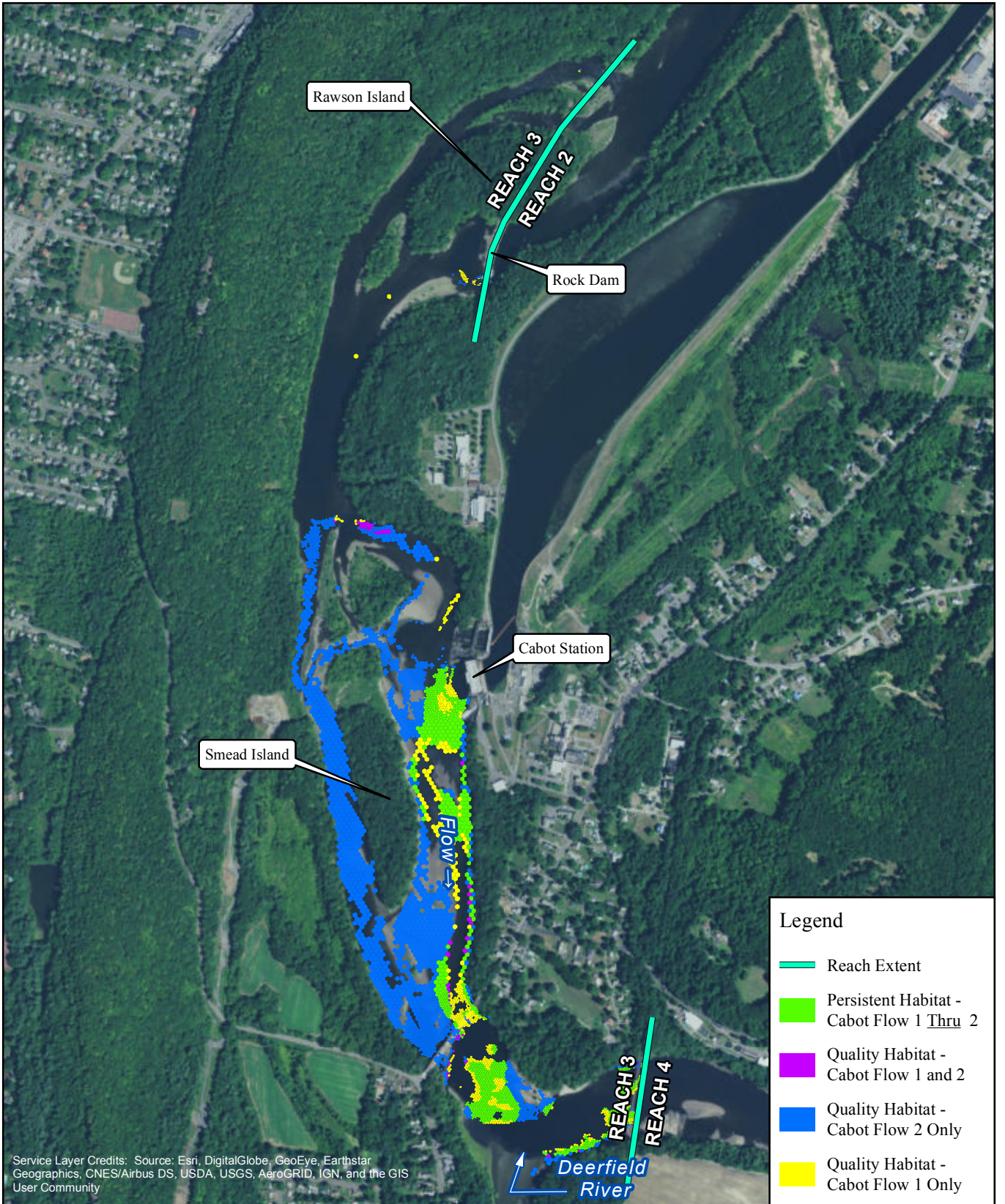
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs


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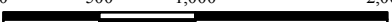
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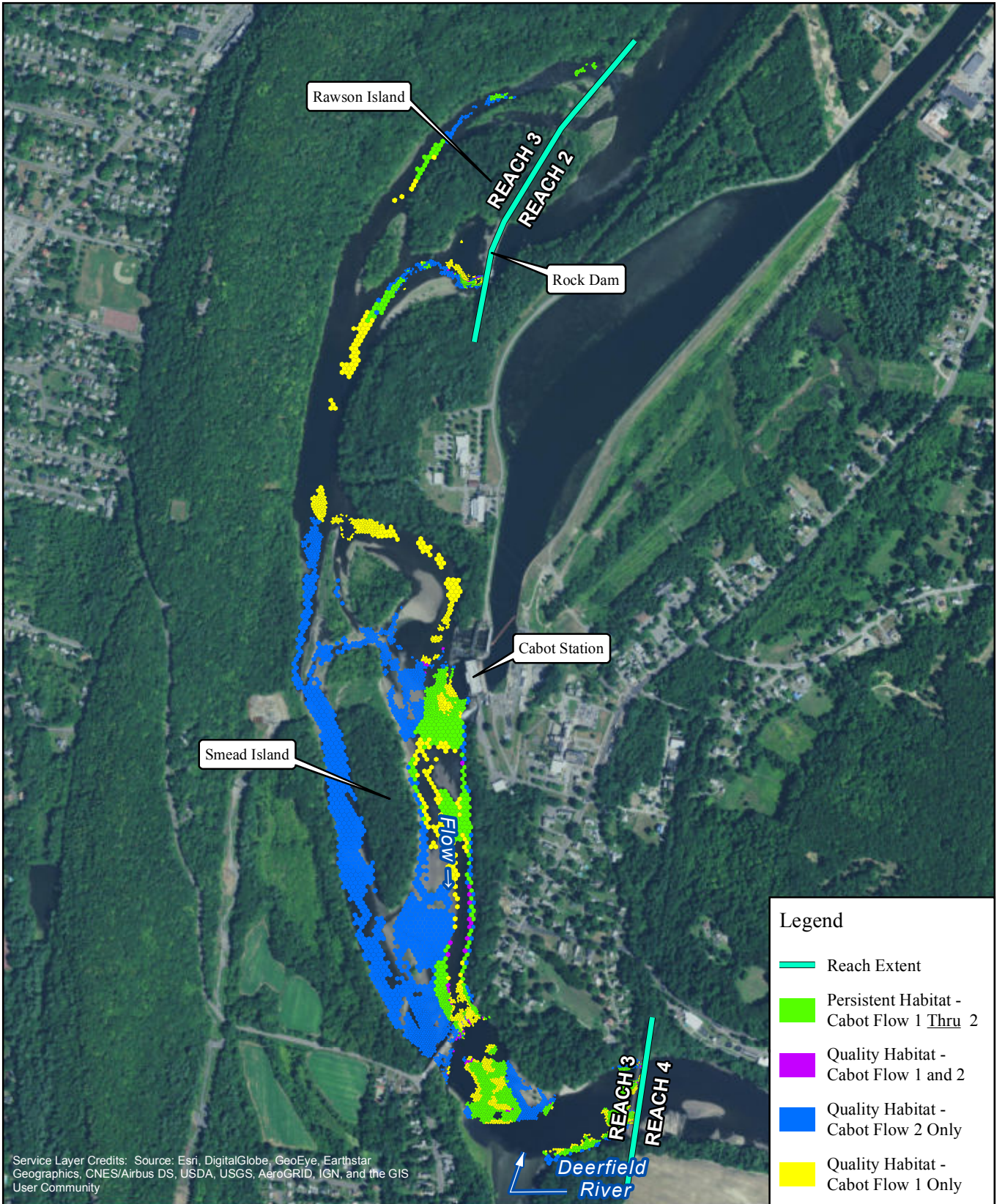
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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet



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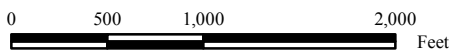
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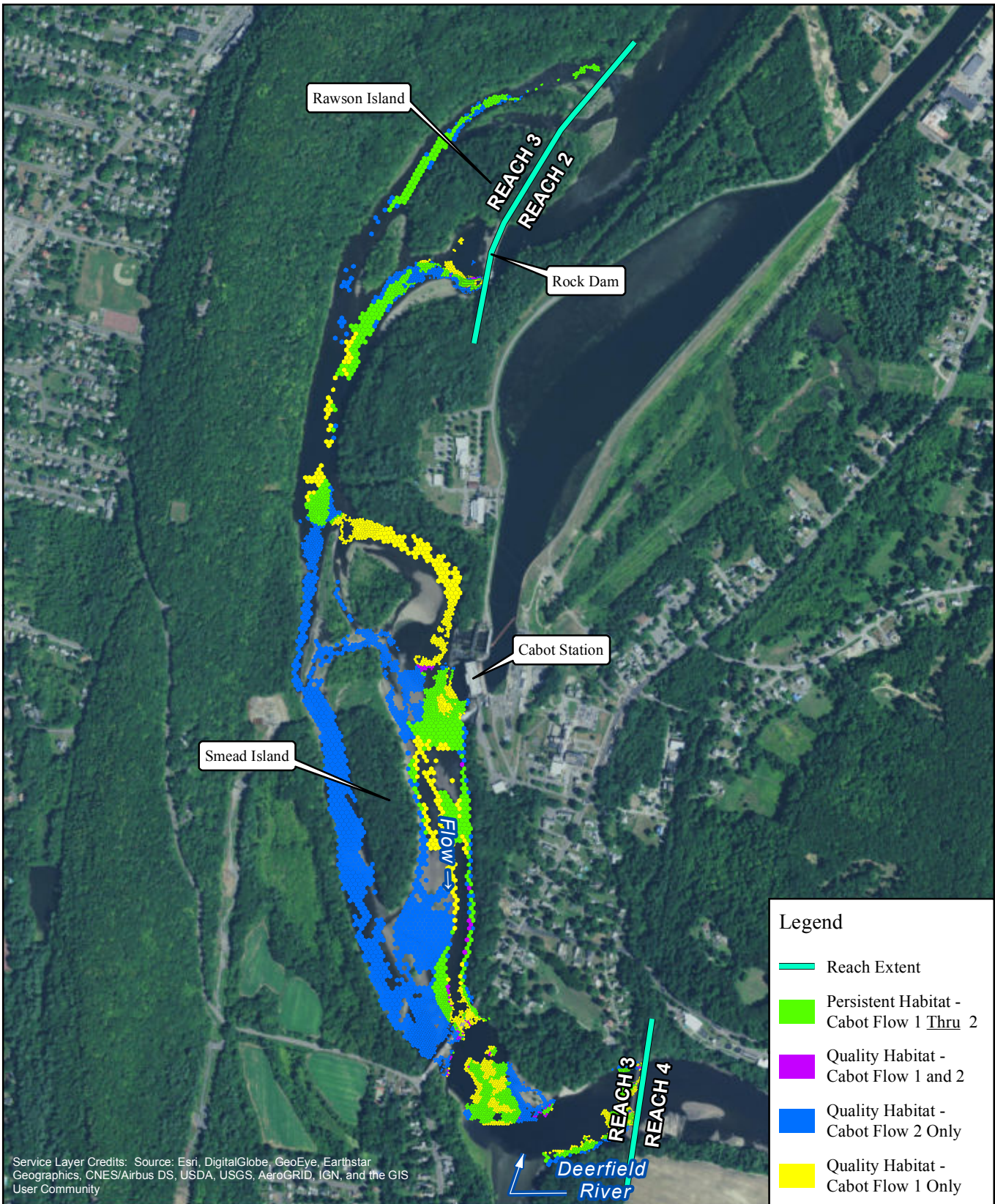
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Persistent Habitat
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 Bypass Flow: 500 cfs
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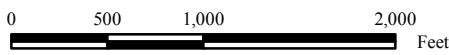
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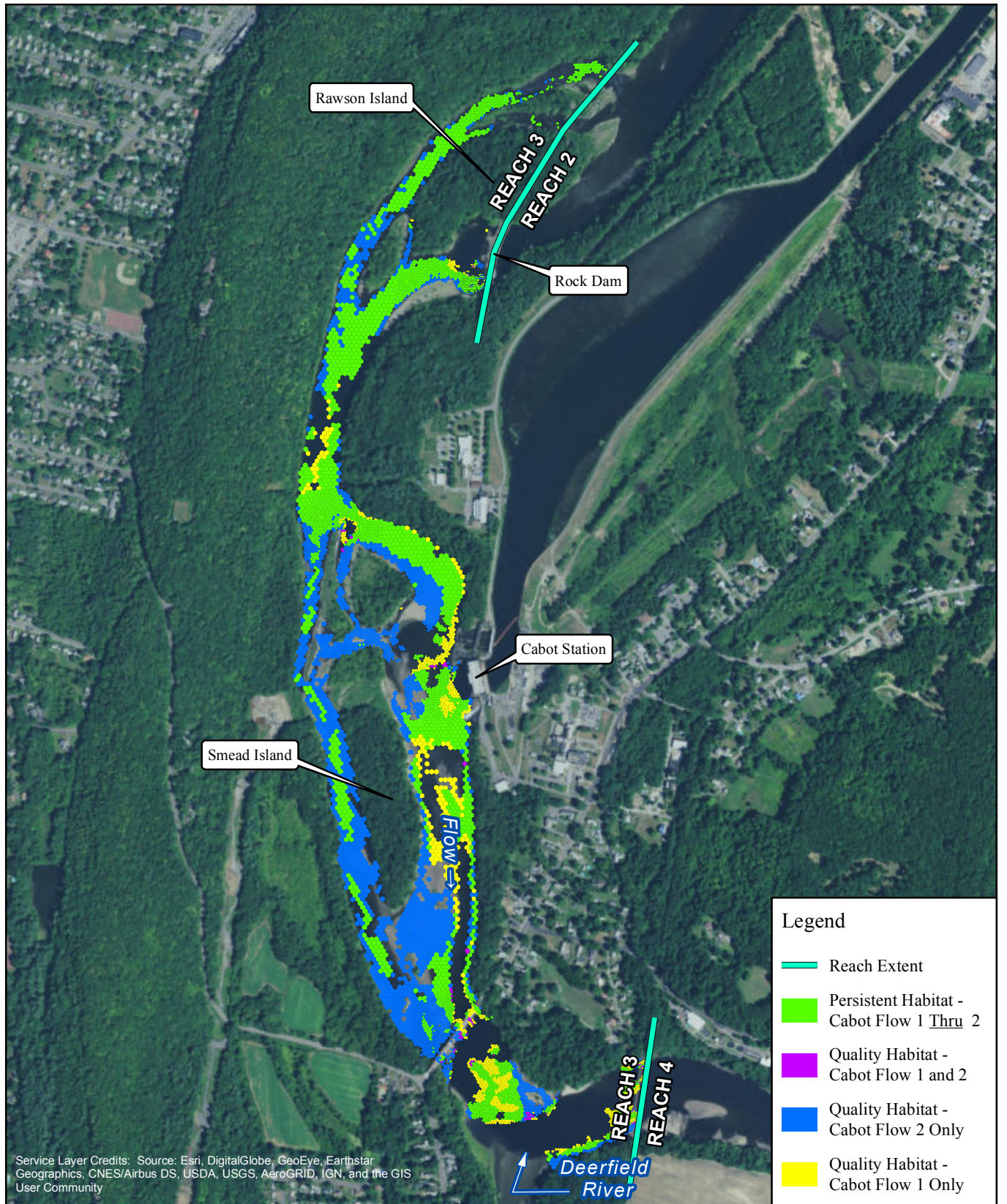
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Persistent Habitat

American Shad-Spawning Bypass Flow:	1000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	14000 cfs

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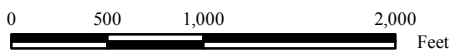
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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

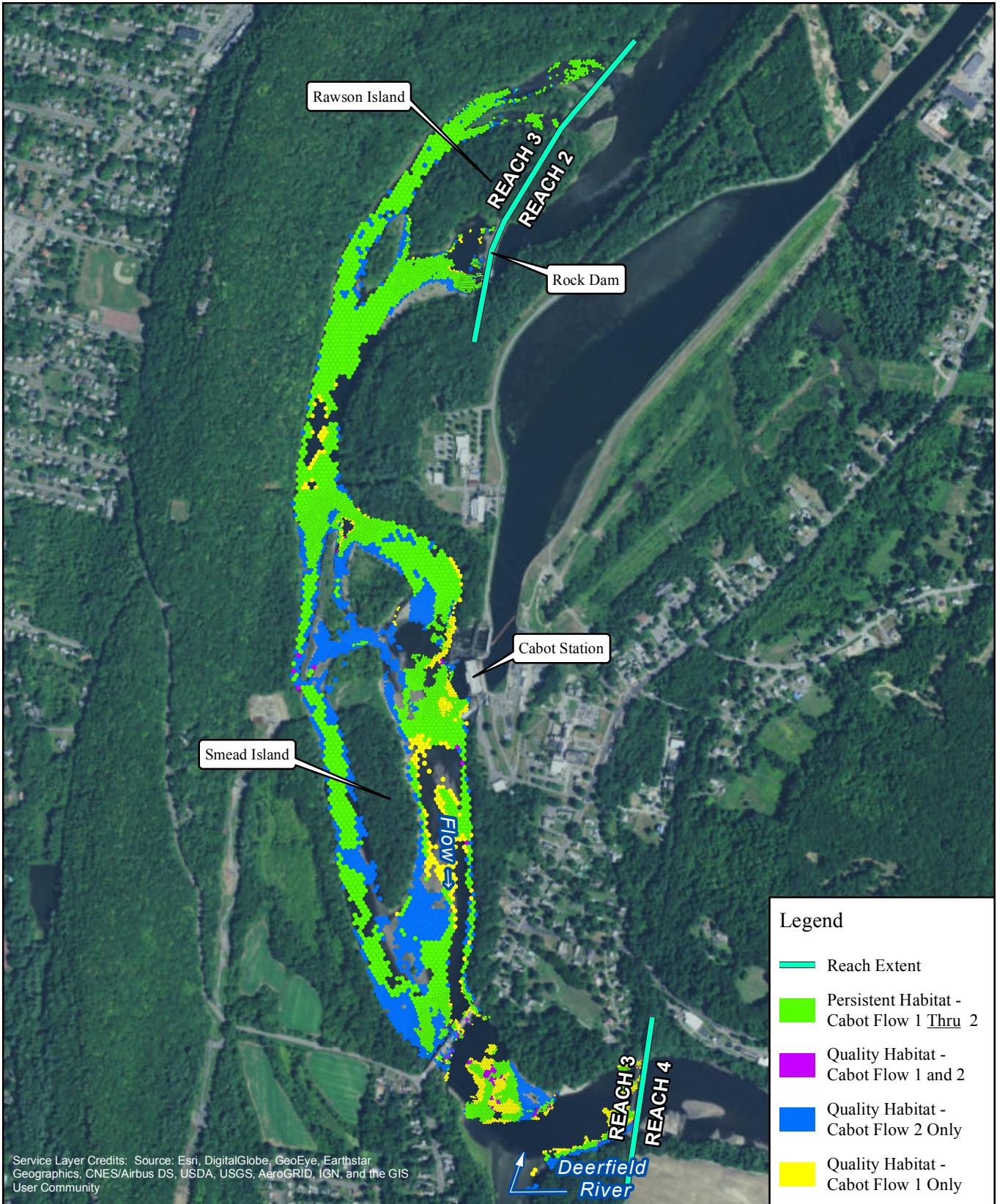


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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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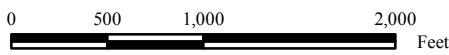
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



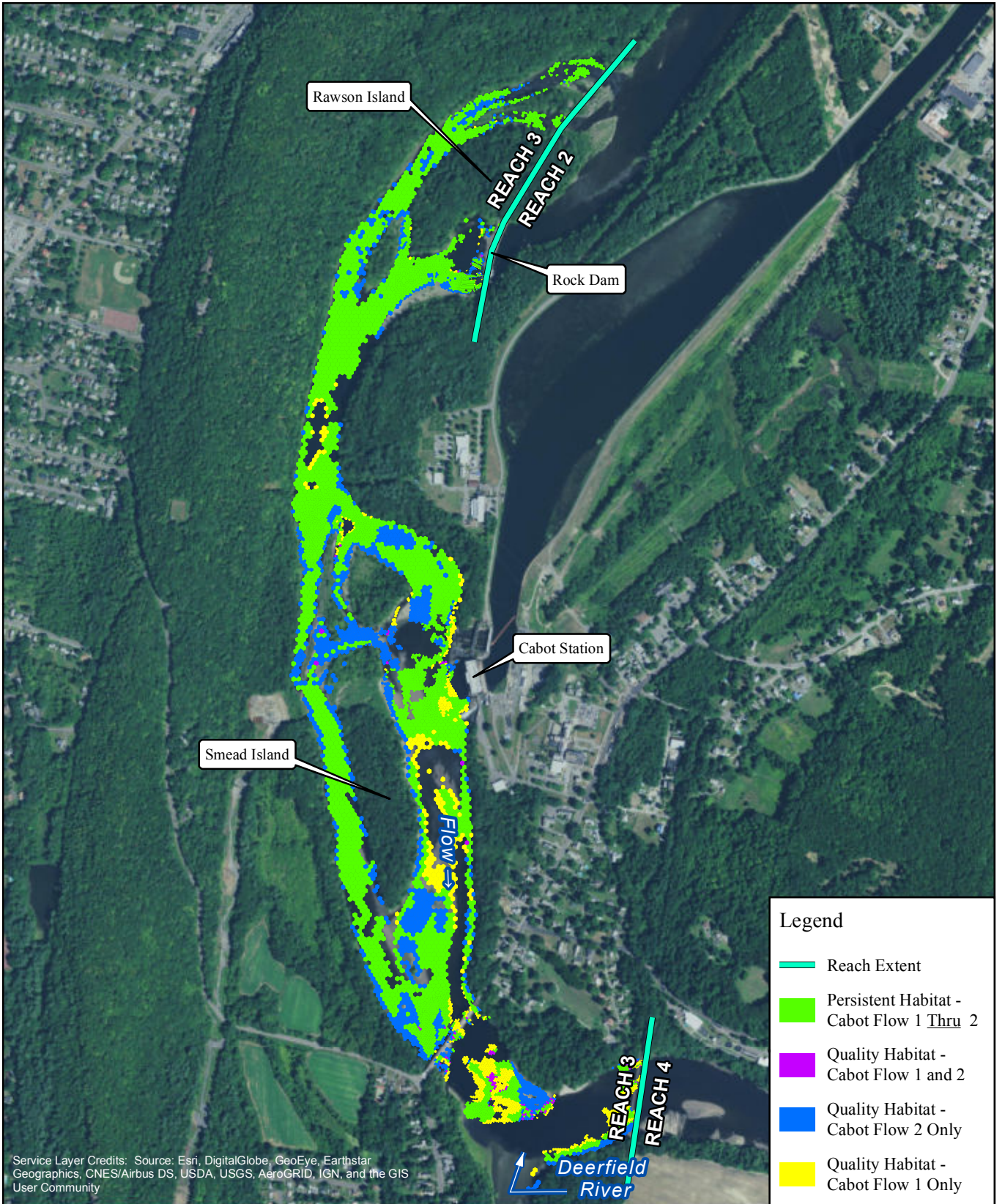
FIRSTLIGHT HYDRO GENERATING COMPANY
 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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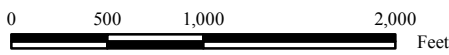
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



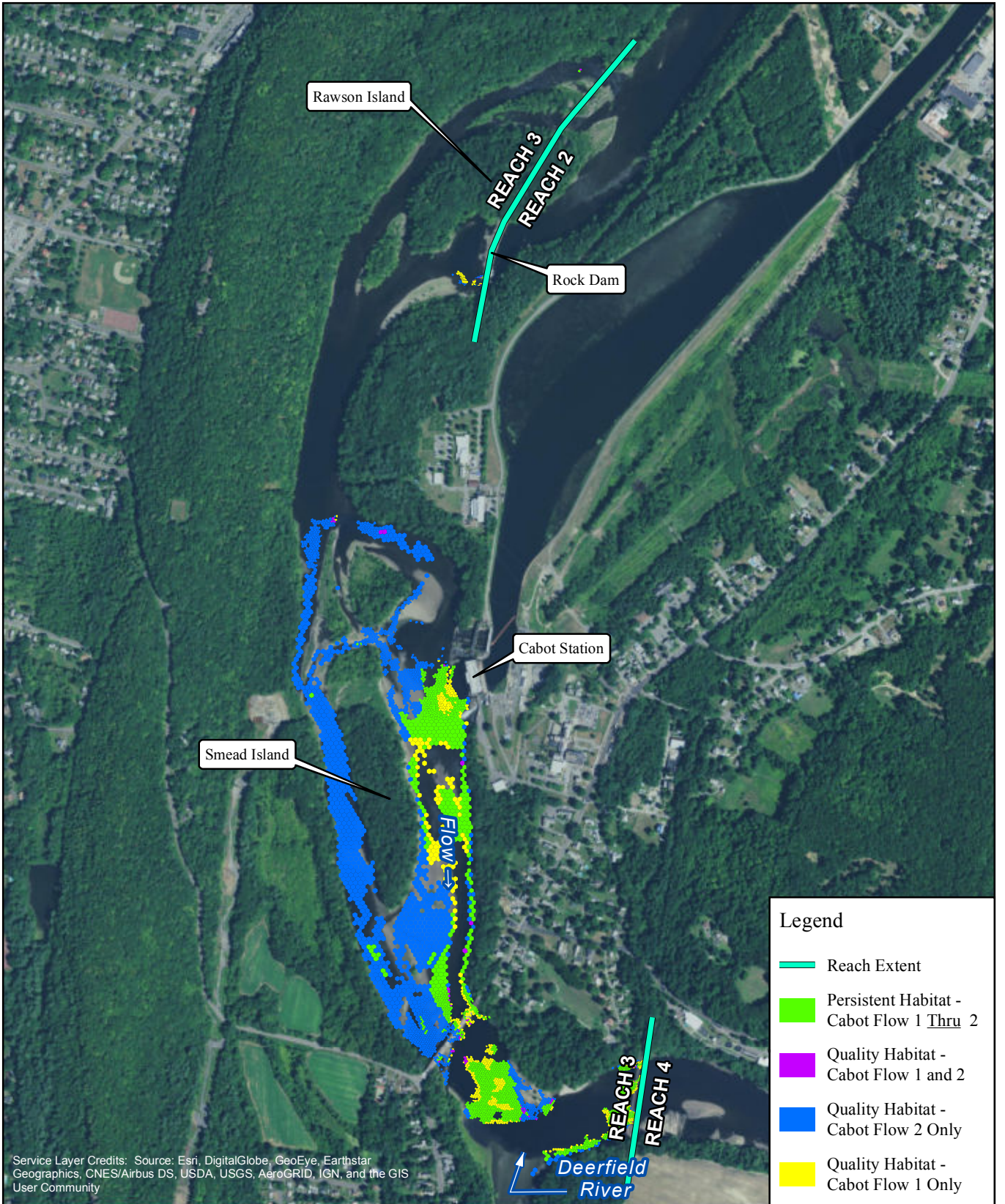
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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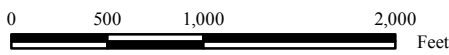
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



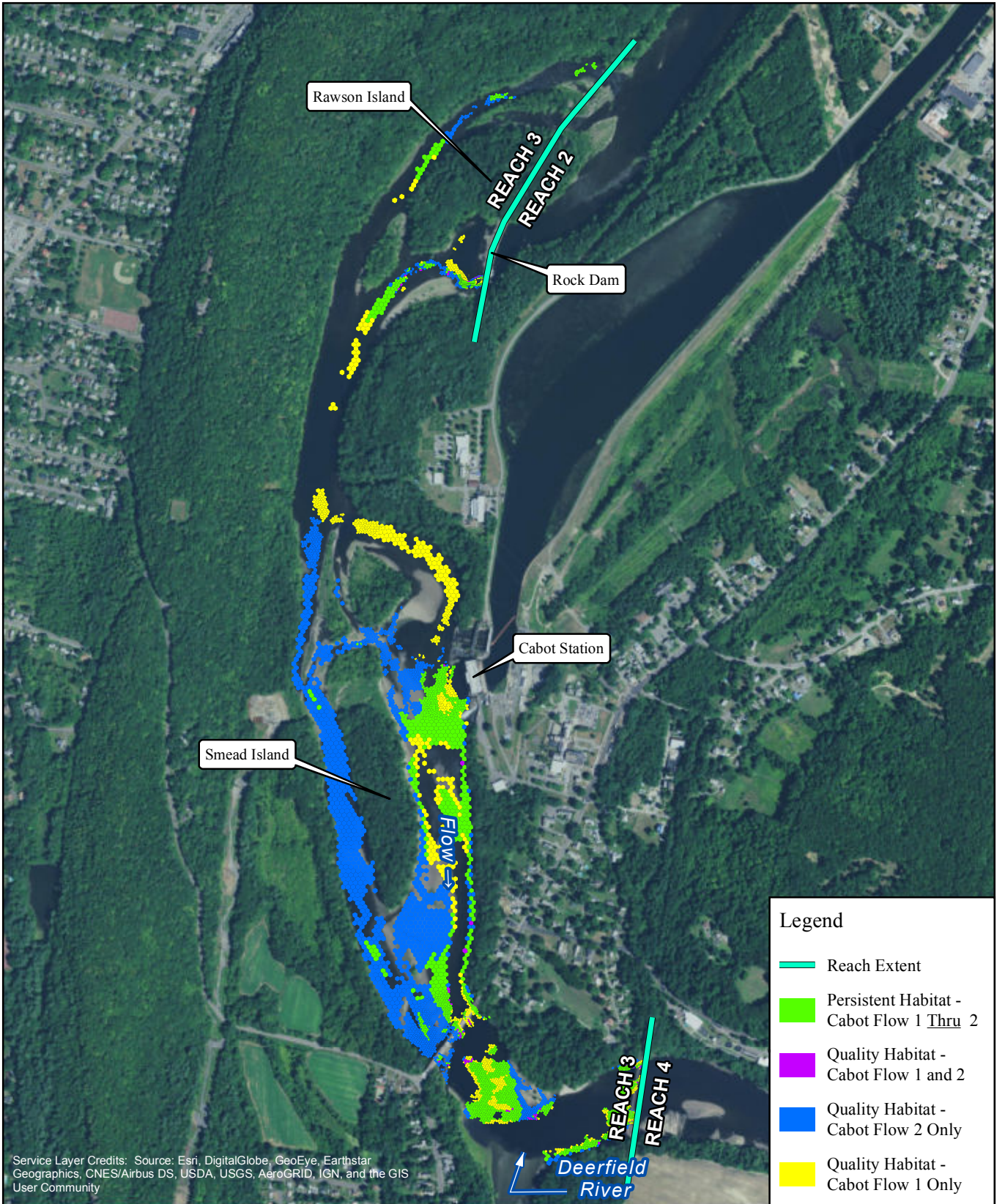
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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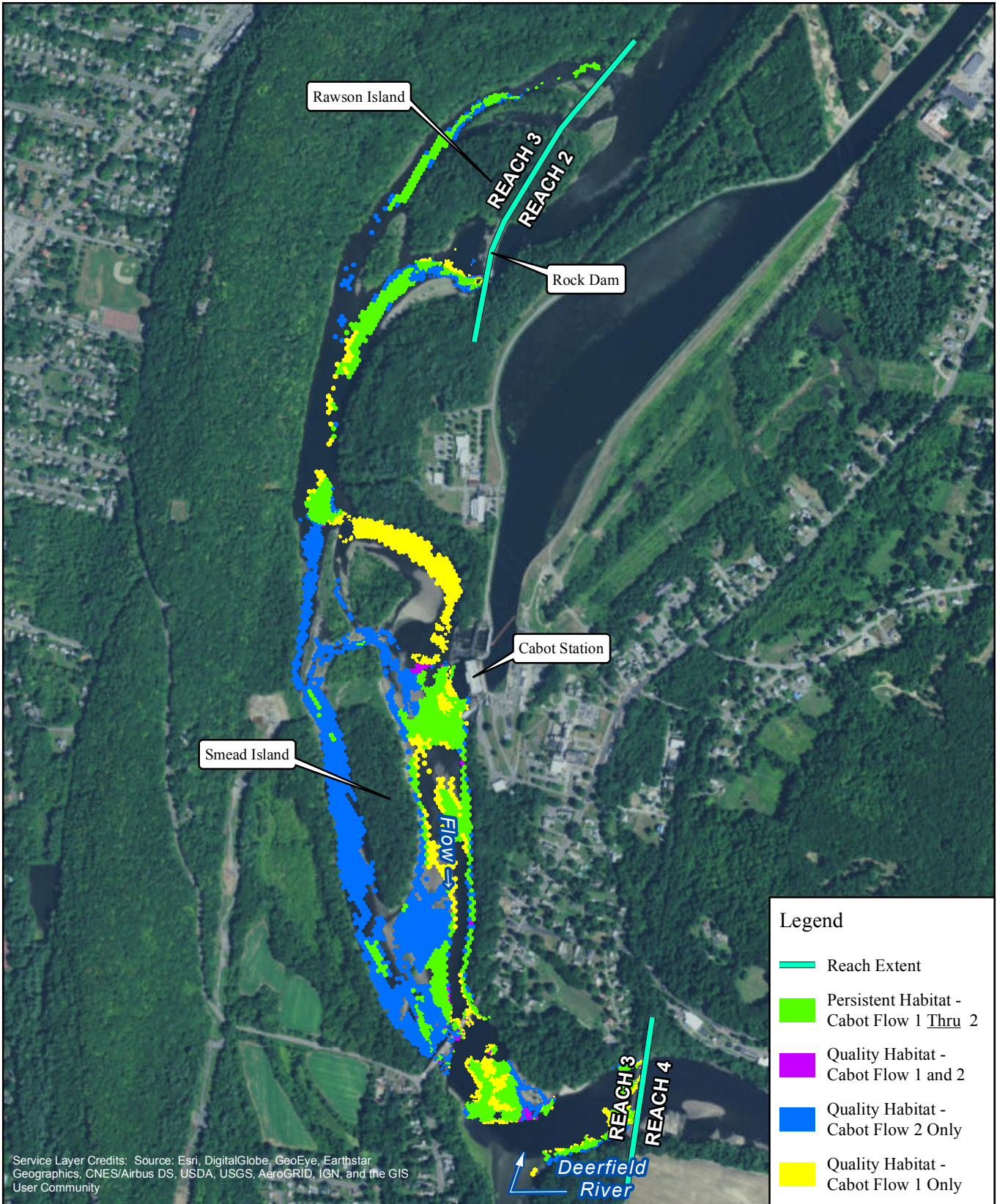
FIRSTLIGHT HYDRO GENERATING COMPANY
 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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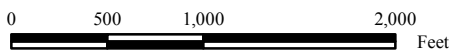
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



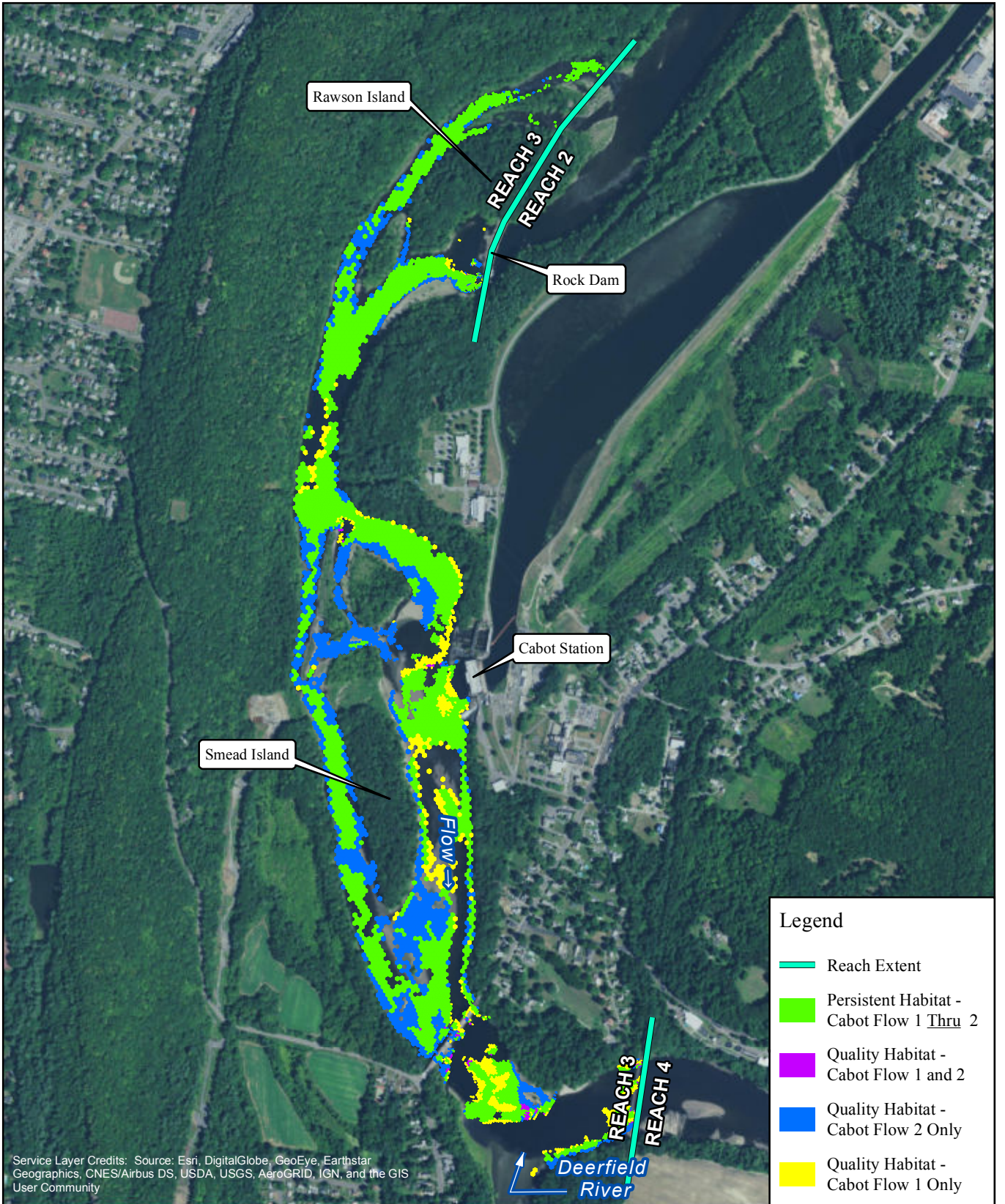
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

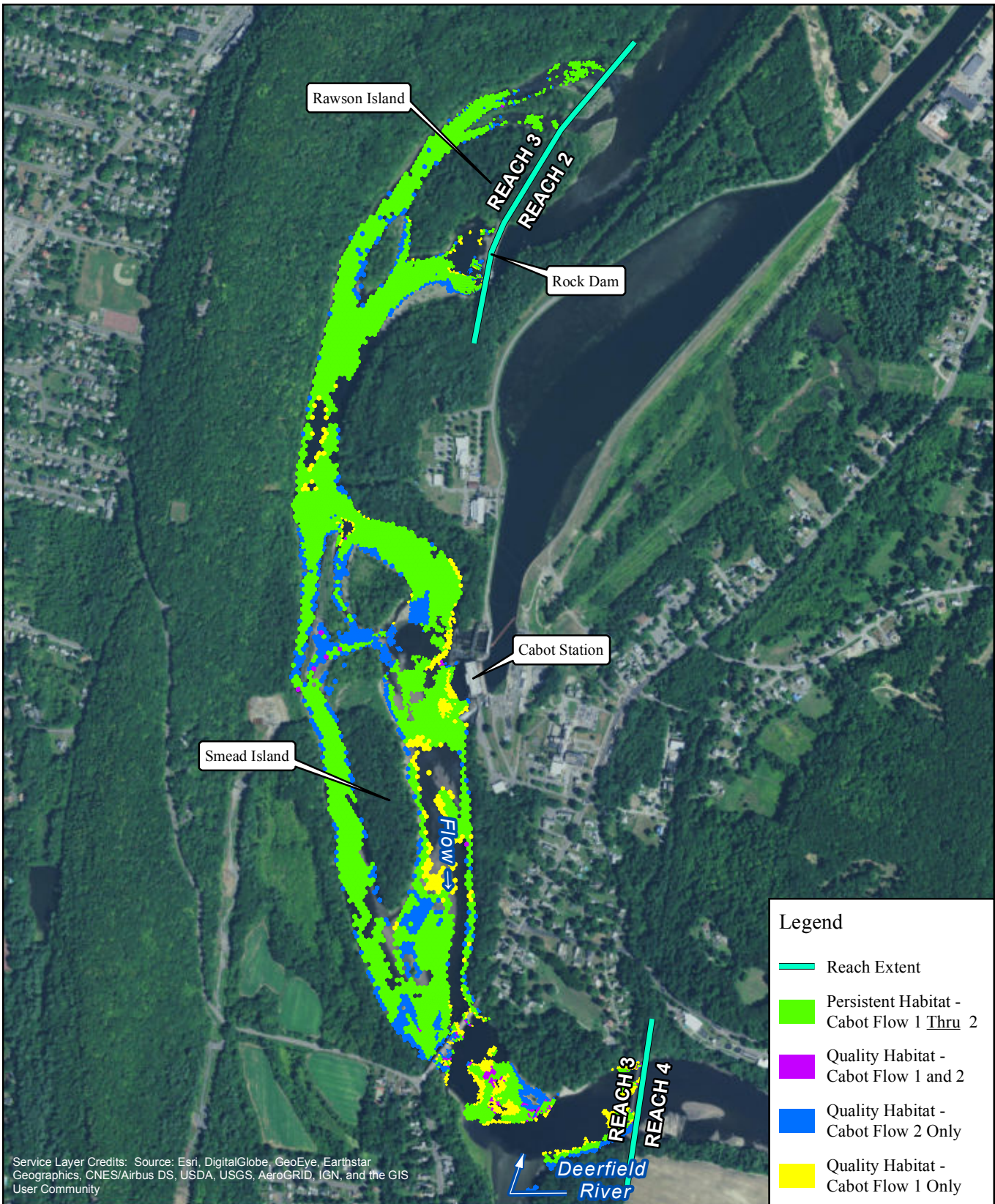
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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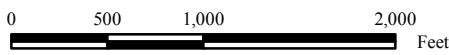
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
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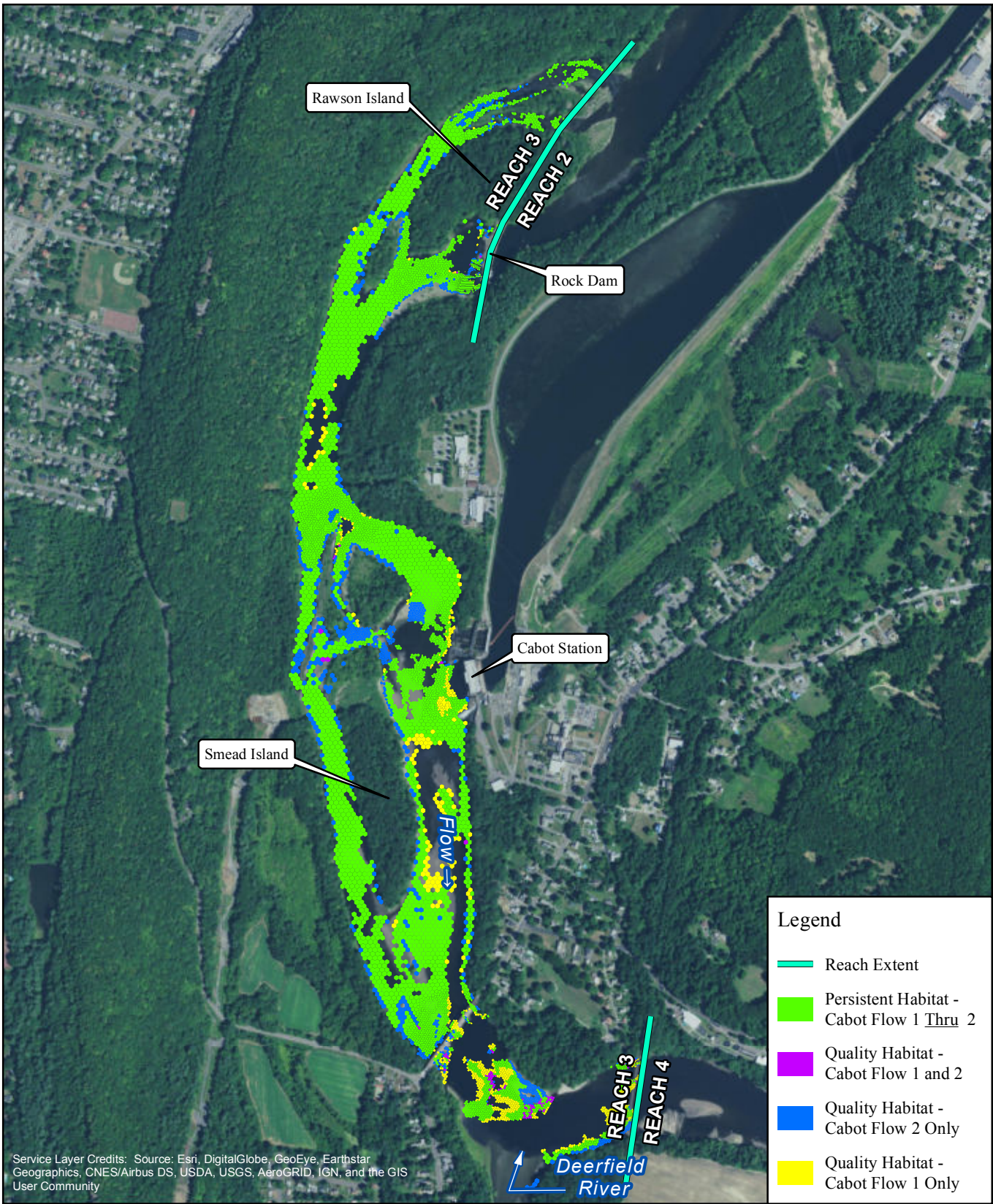
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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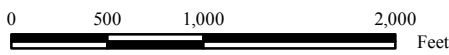
Legend

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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



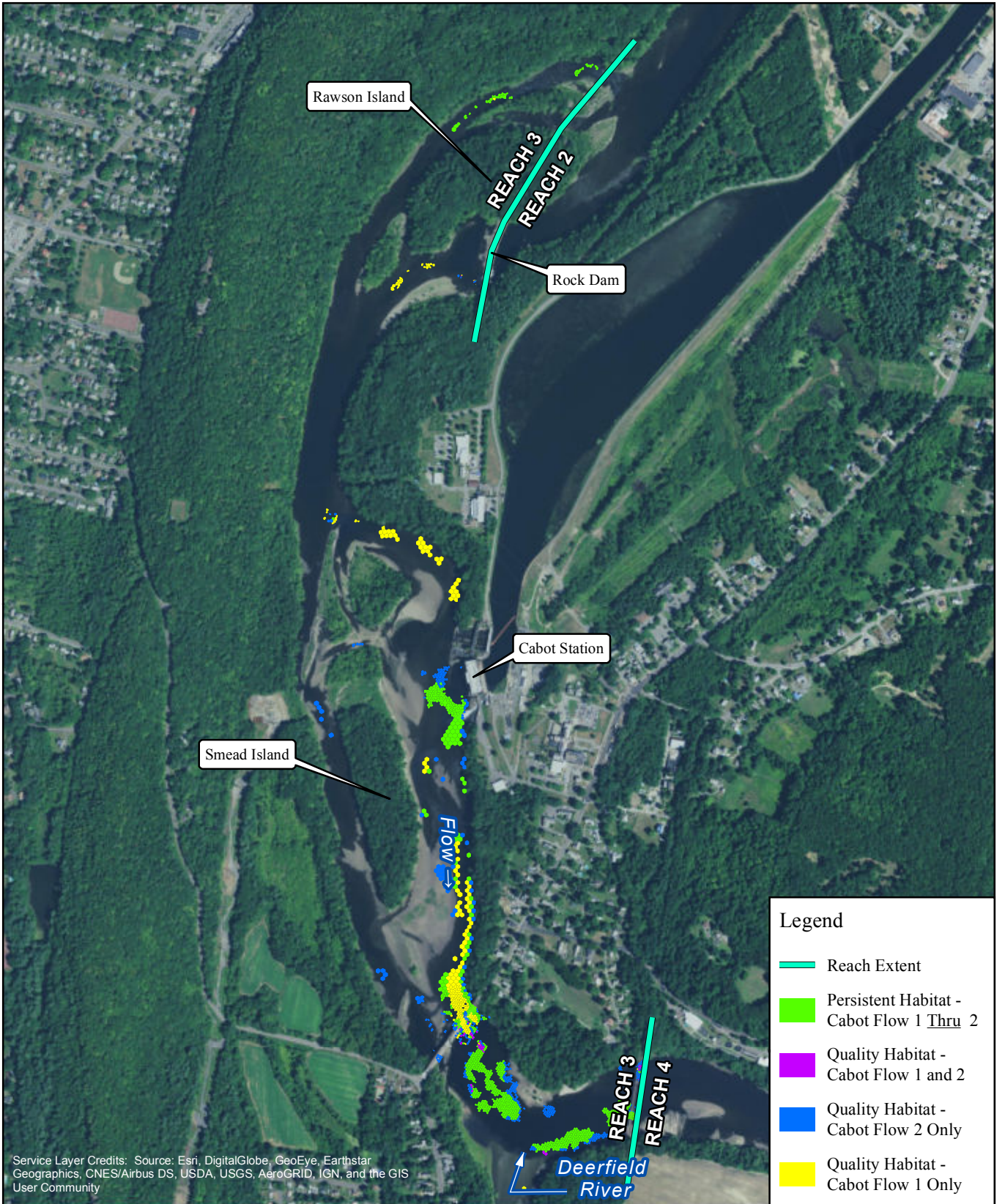
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 American Shad-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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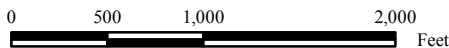


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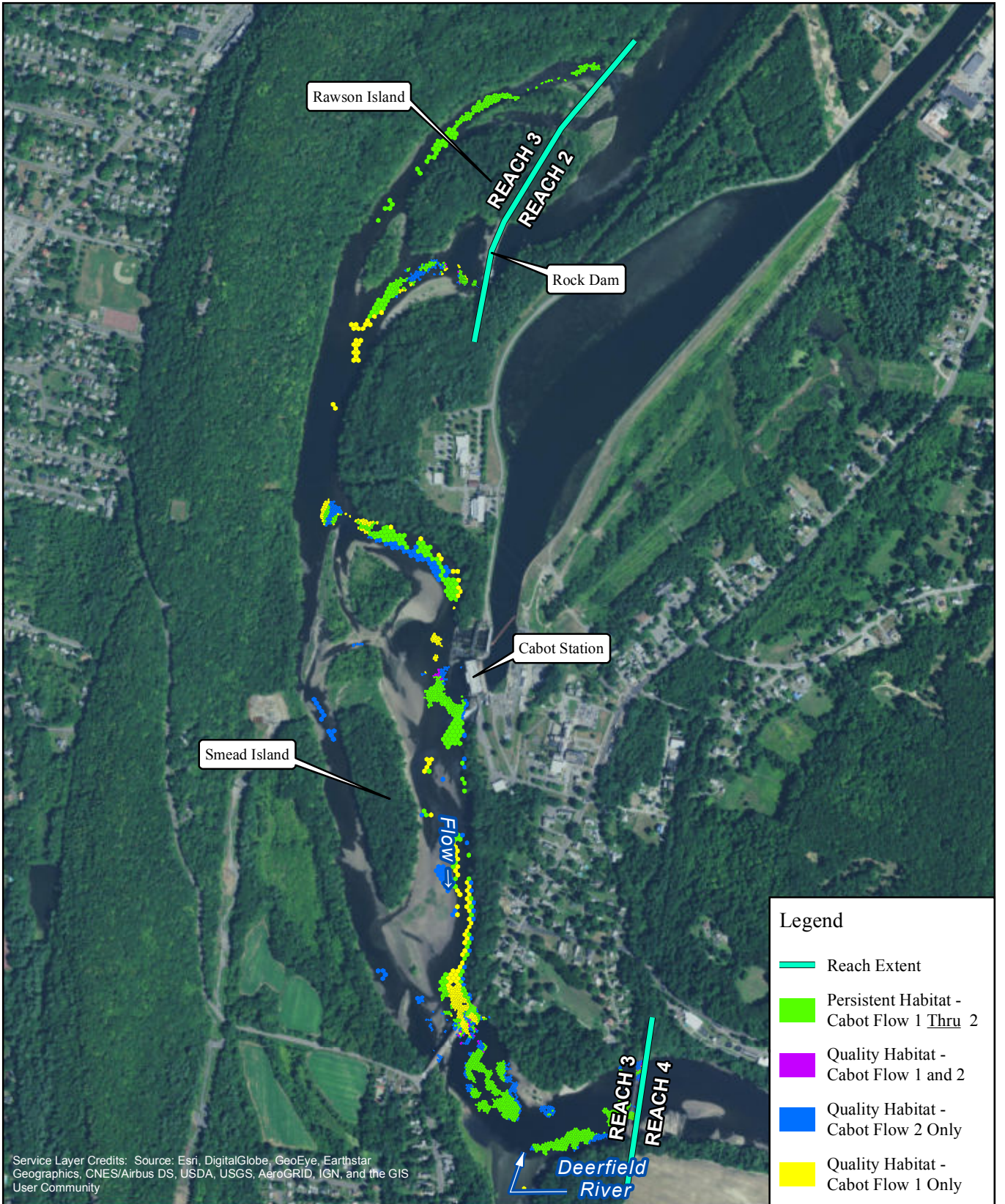
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 Turners Falls Hydroelectric Project No. 1889

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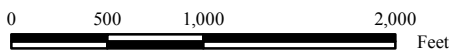
Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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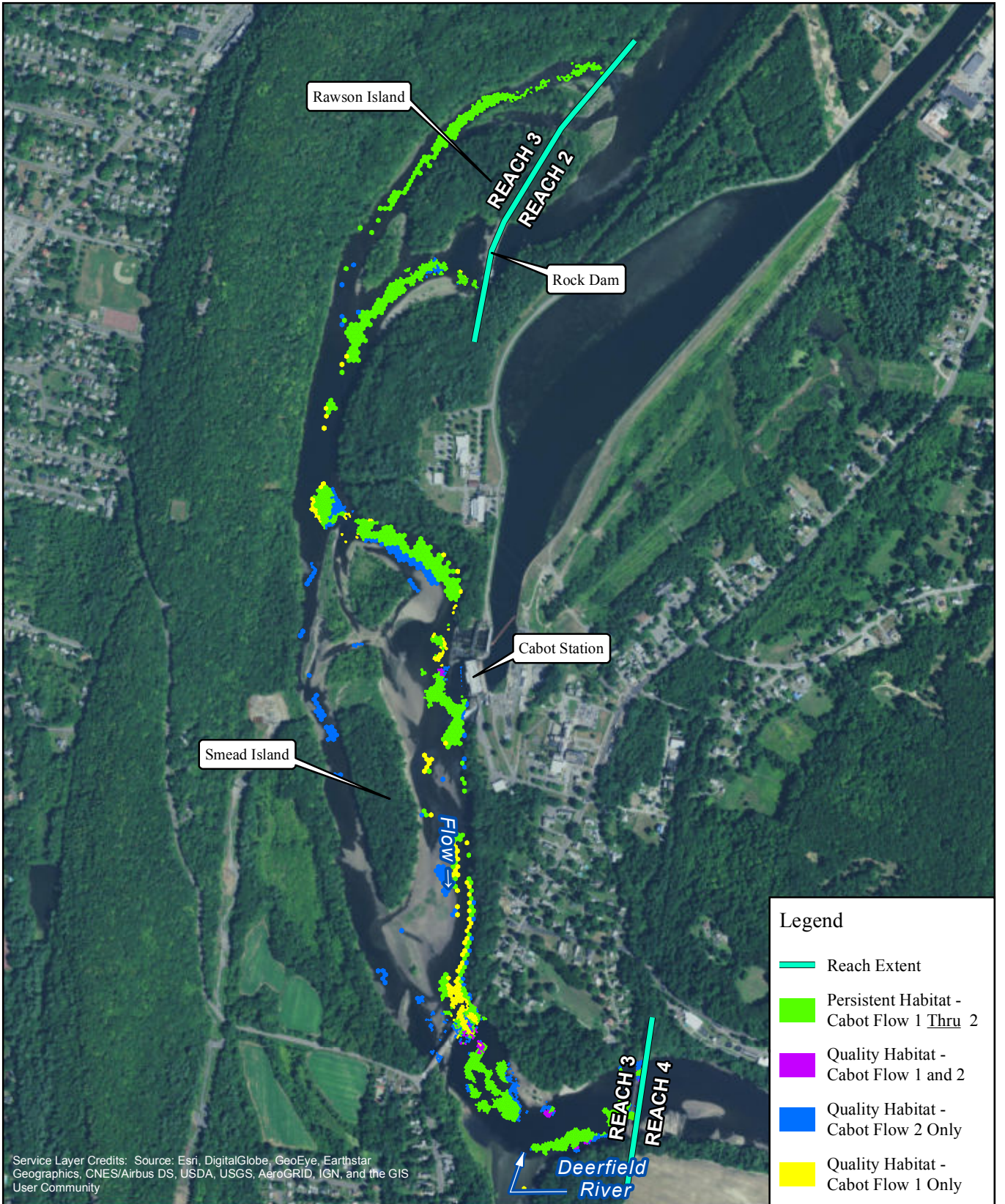
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 Turners Falls Hydroelectric Project No. 1889
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Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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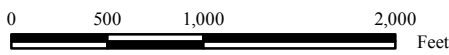
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



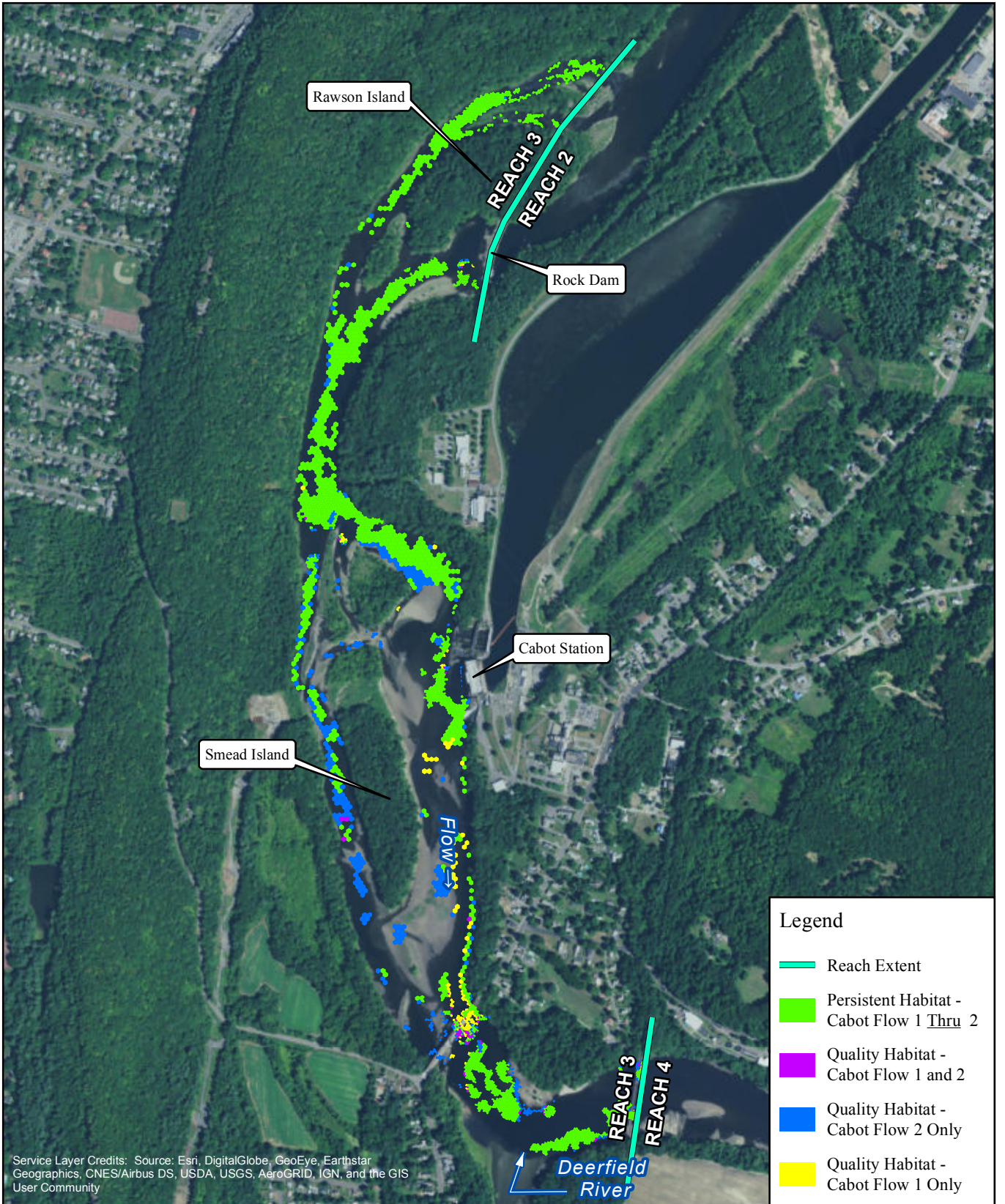
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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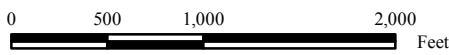
Legend

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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



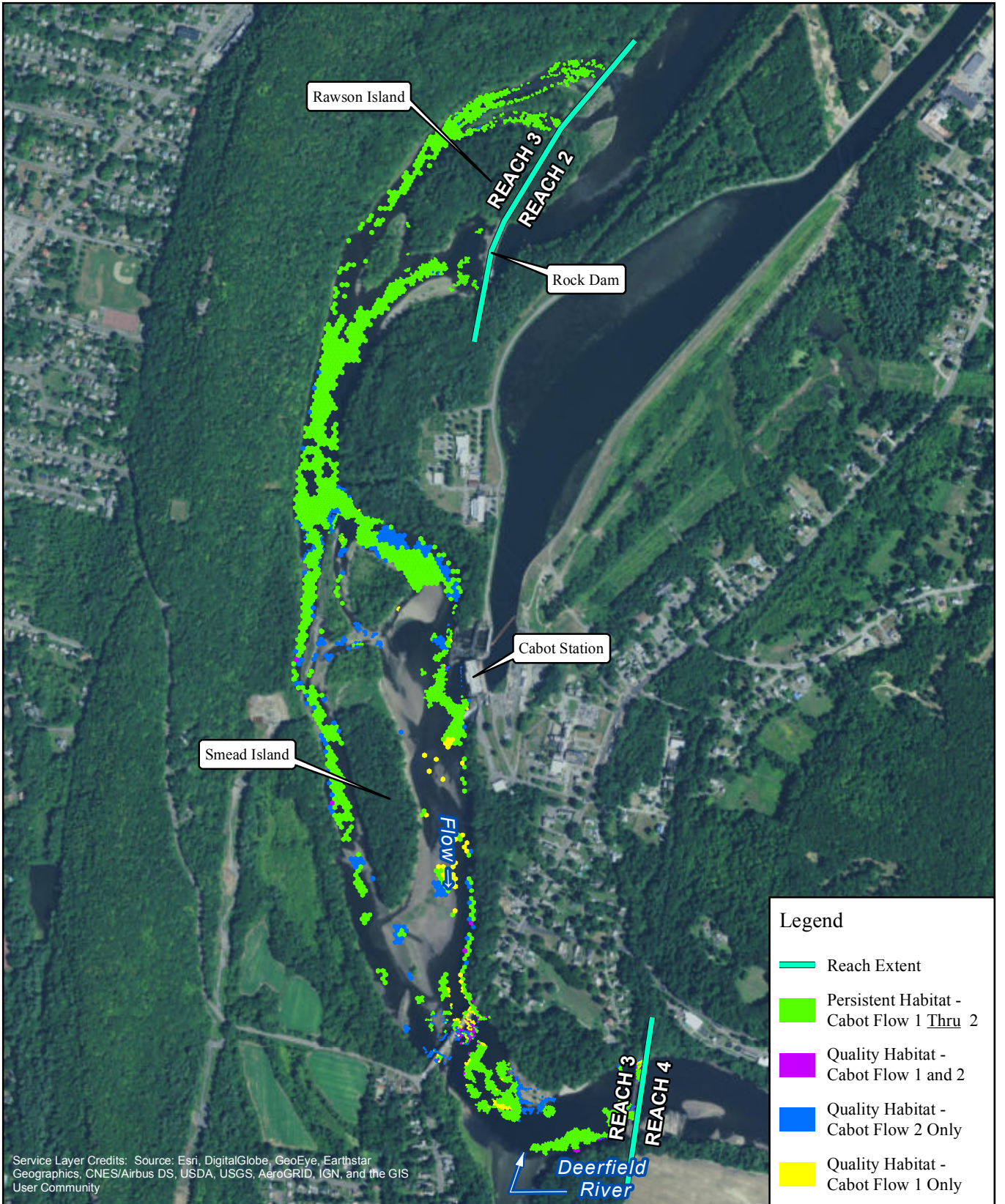
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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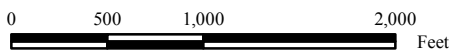
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



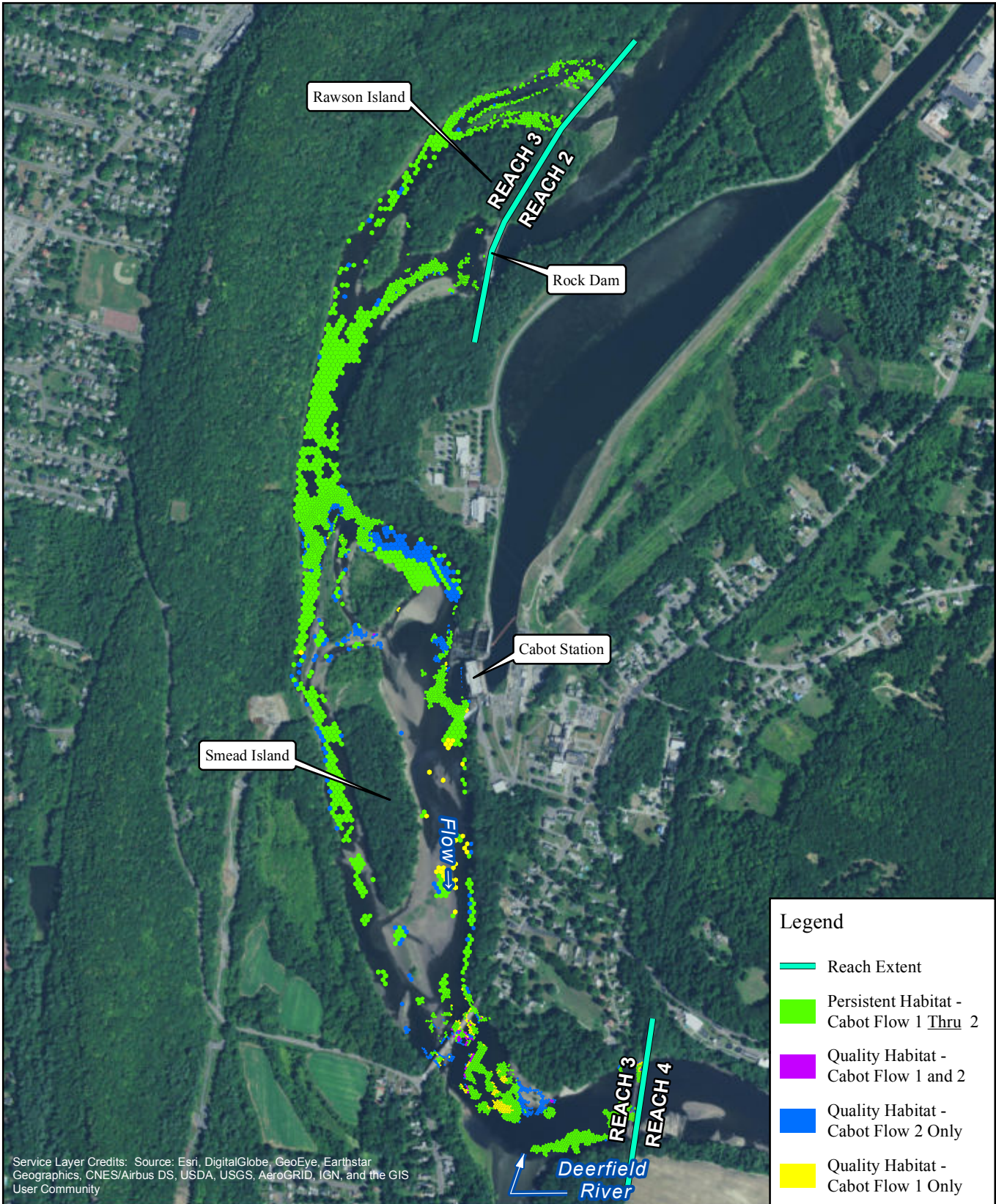
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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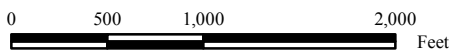
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



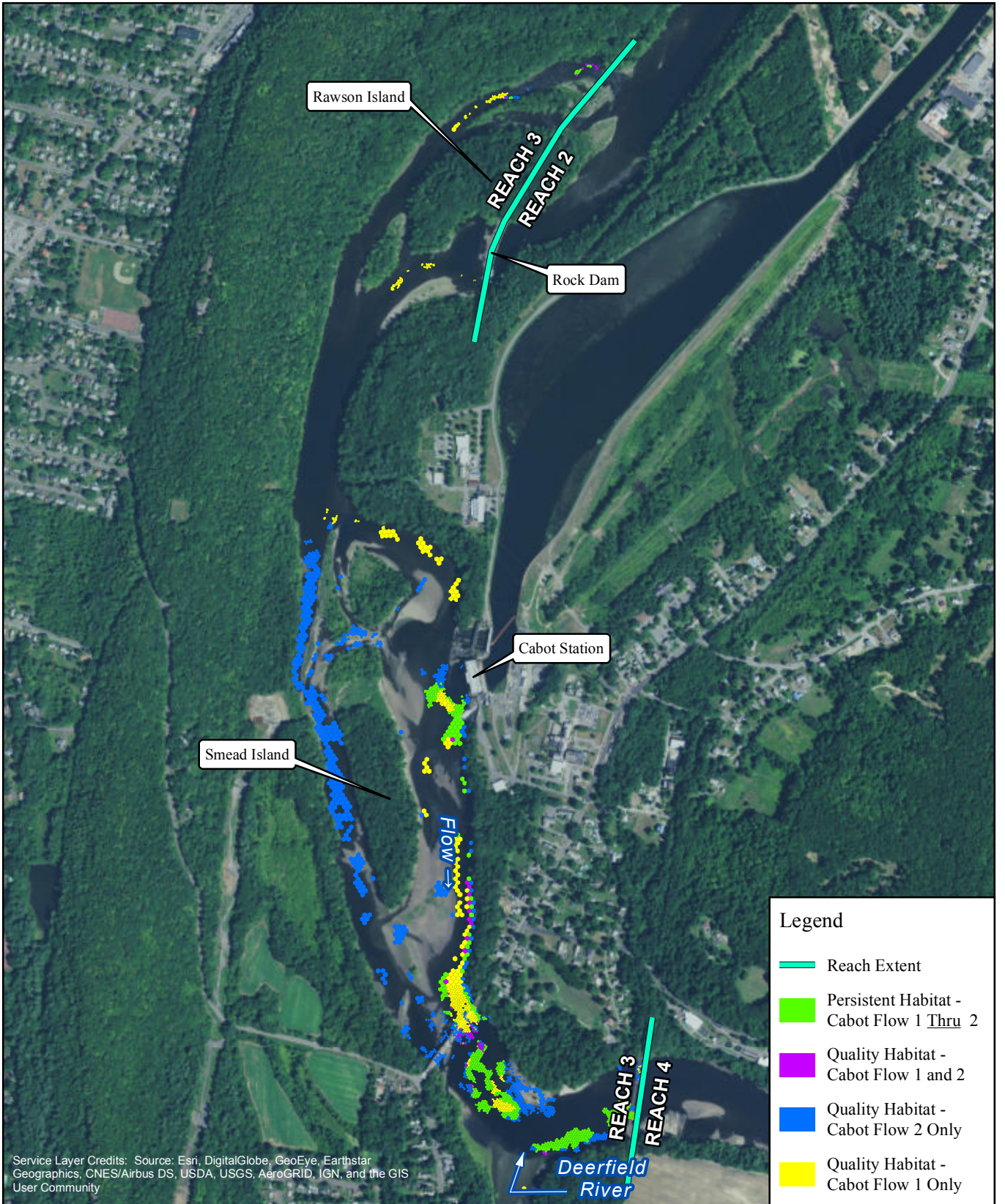
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

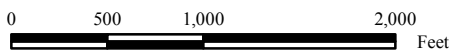
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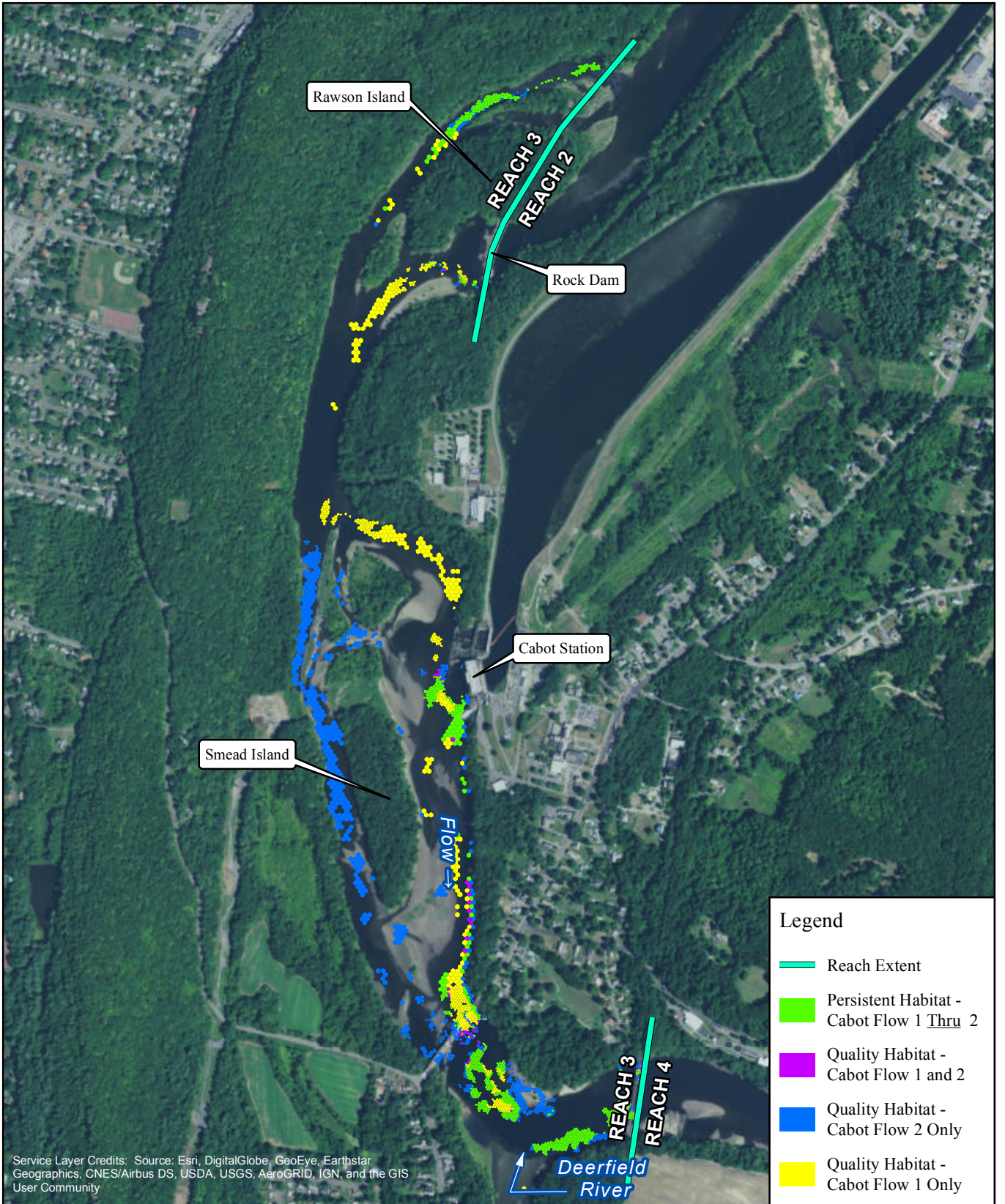
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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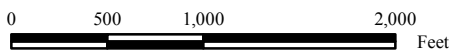
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



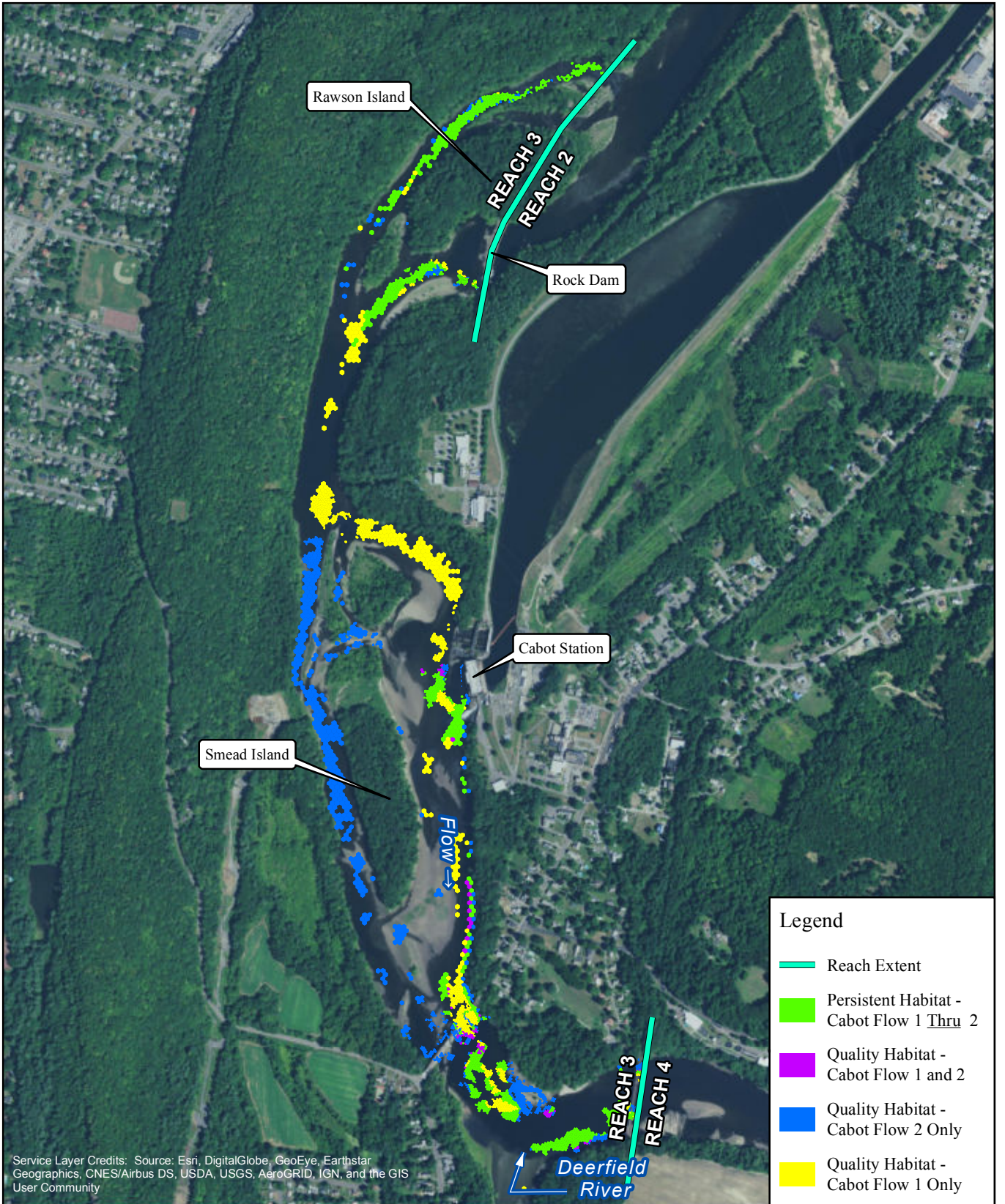
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

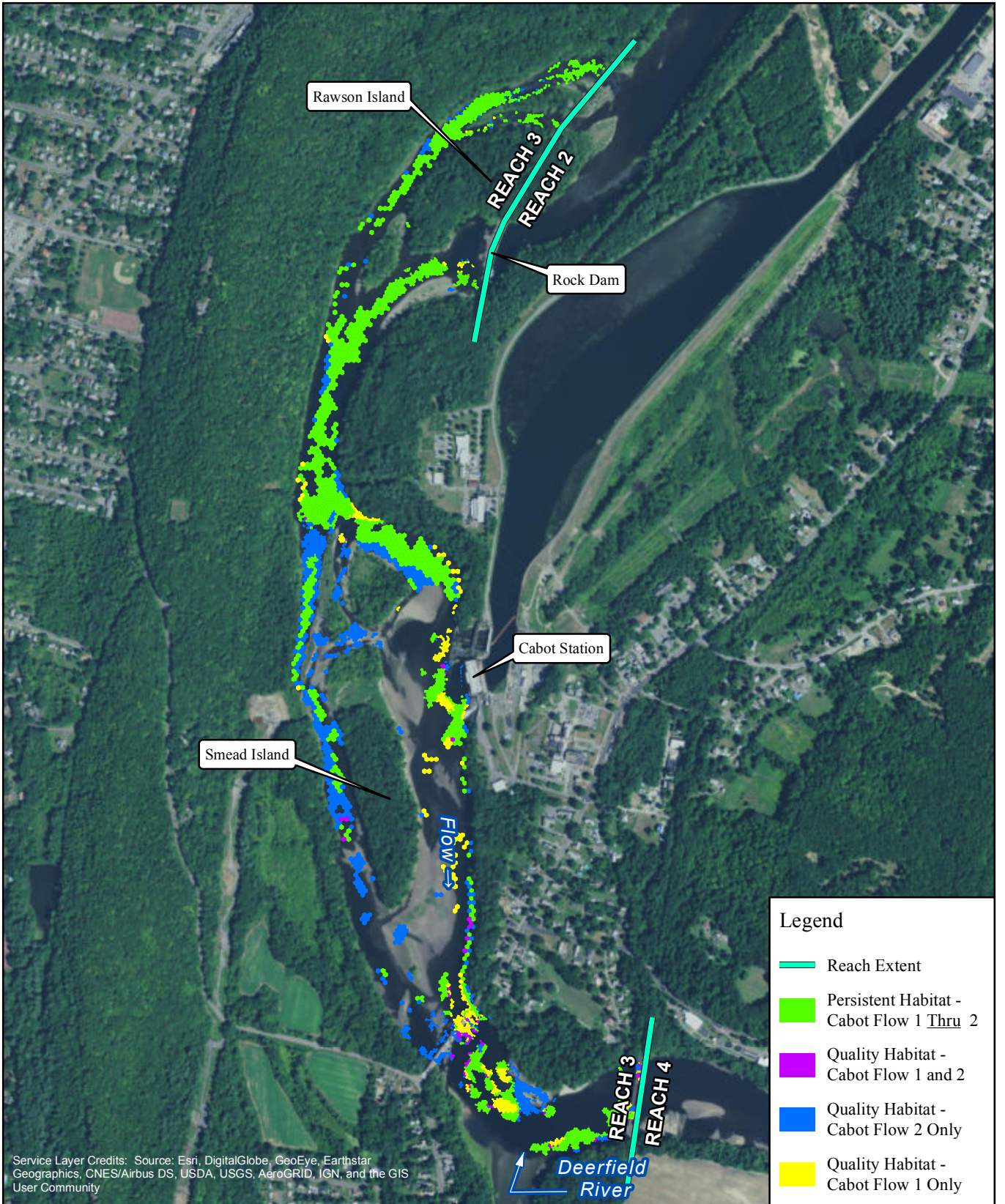
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Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

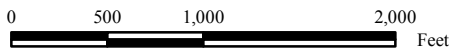
Persistent Habitat
Shortnose Sturgeon-Spawning
Bypass Flow: 1000 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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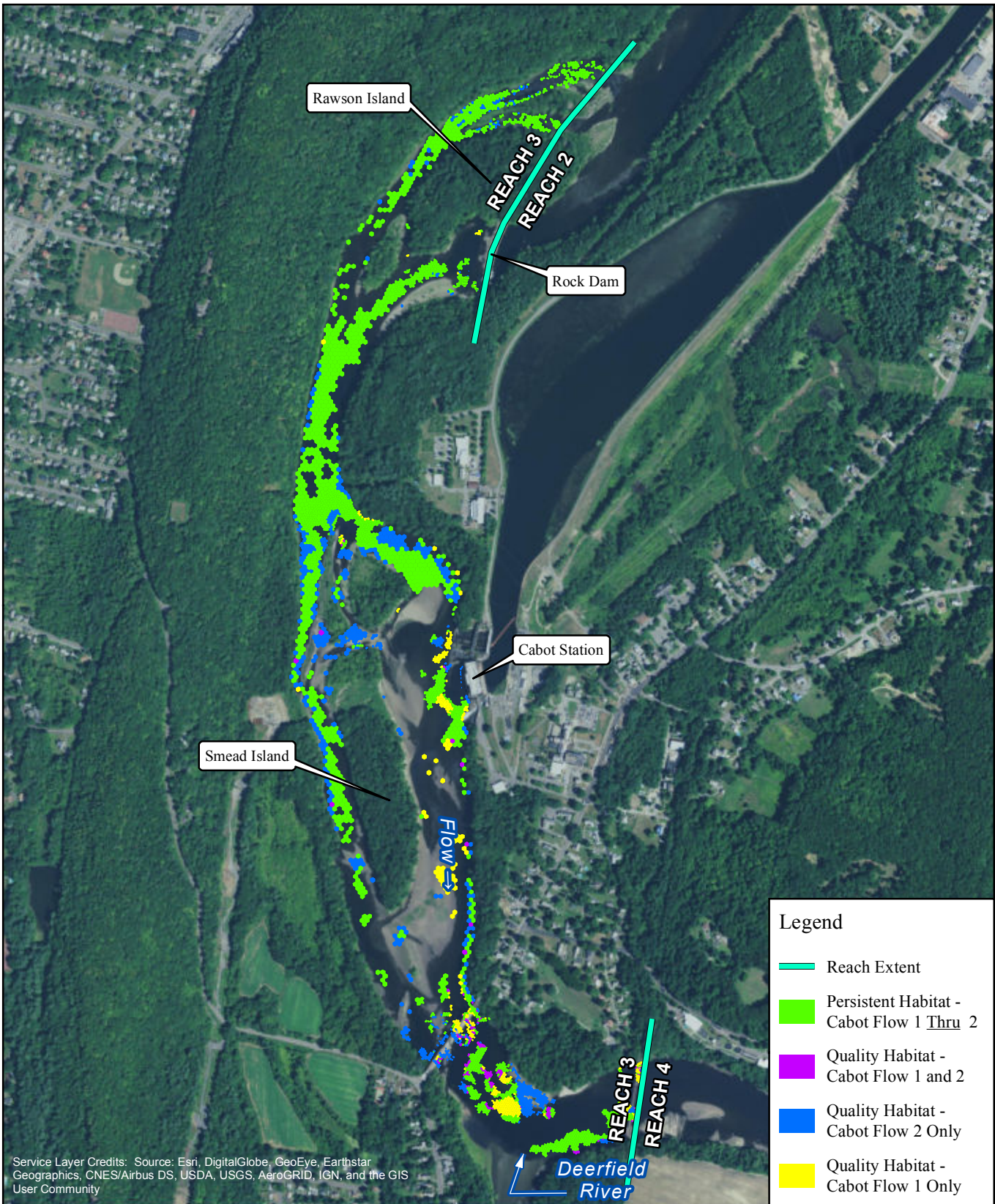


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Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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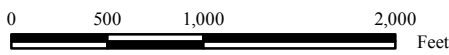
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



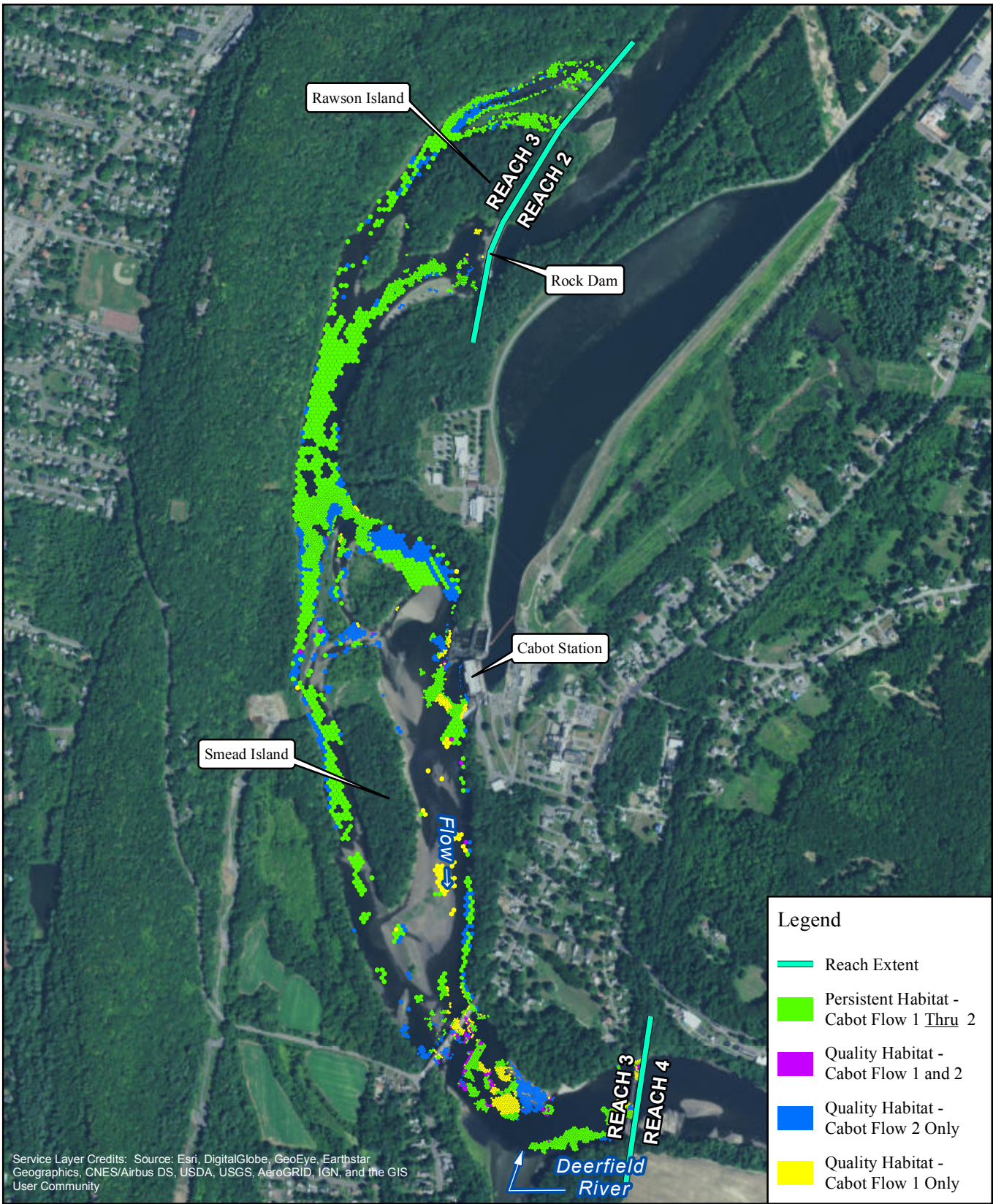
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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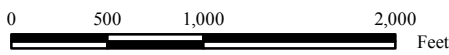
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
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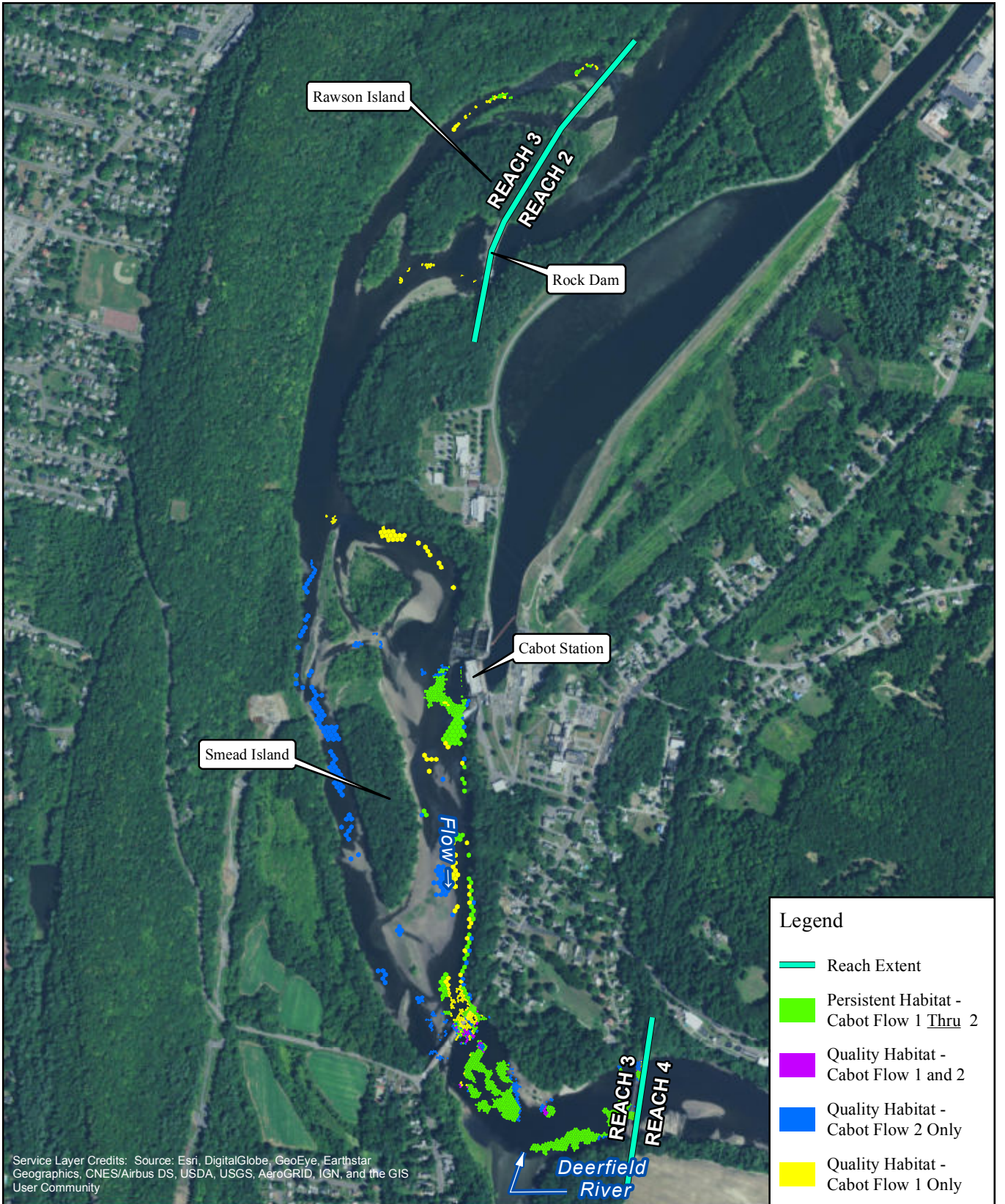
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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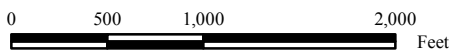
Legend

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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
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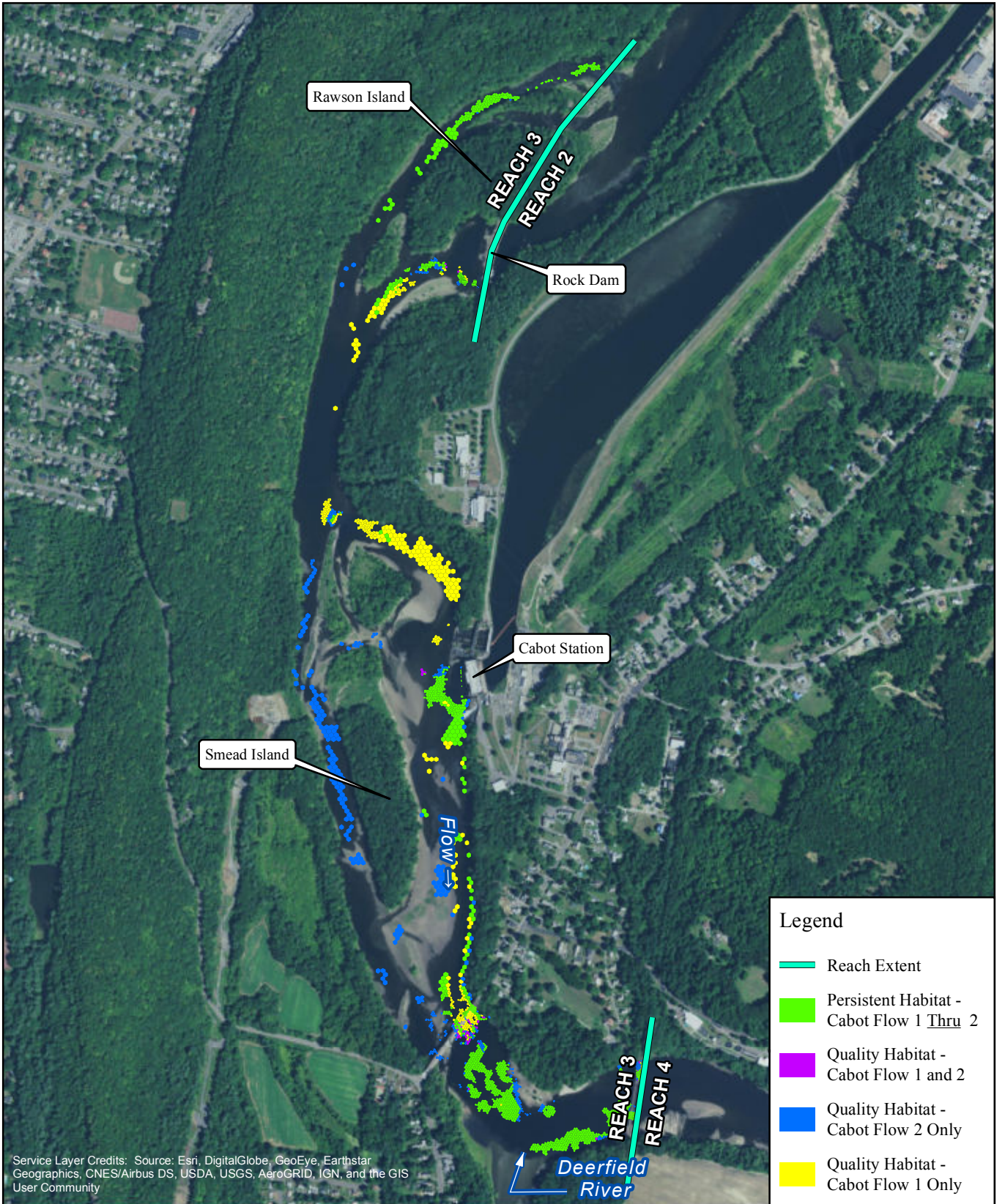
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Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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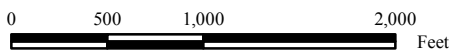
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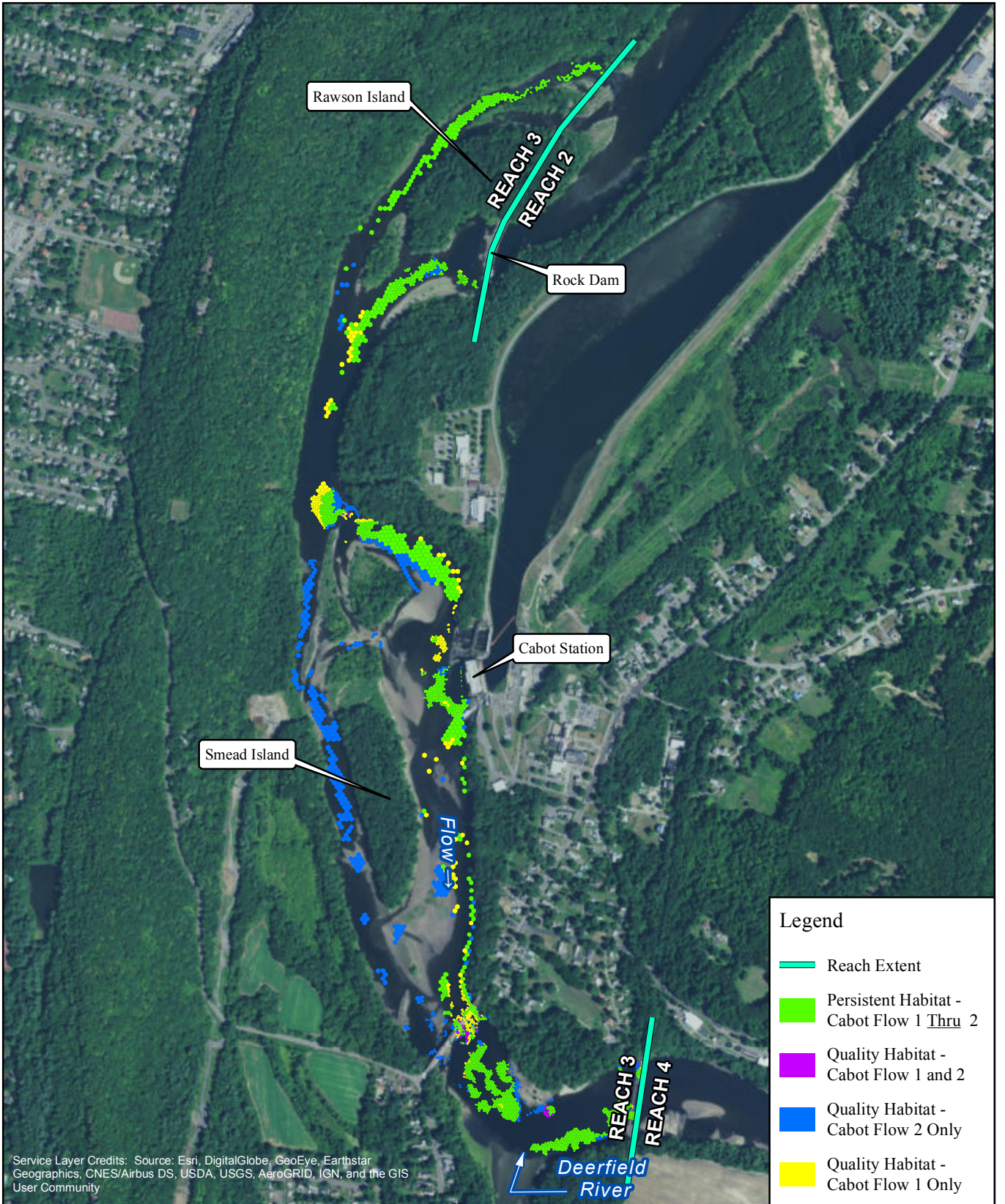
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RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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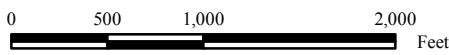
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



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 Turners Falls Hydroelectric Project No. 1889

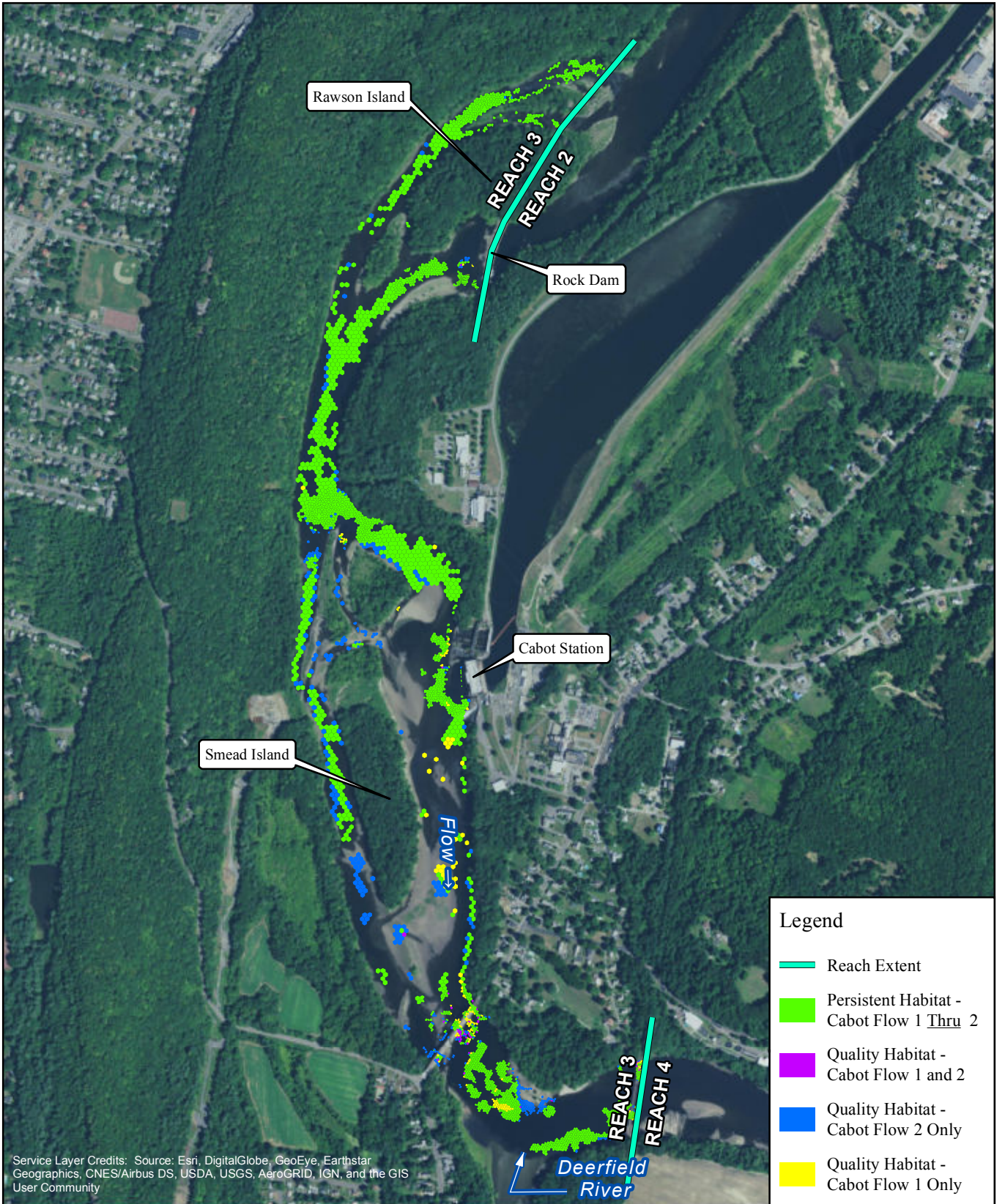
RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning

Bypass Flow:	1000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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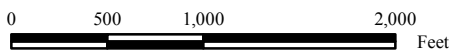
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



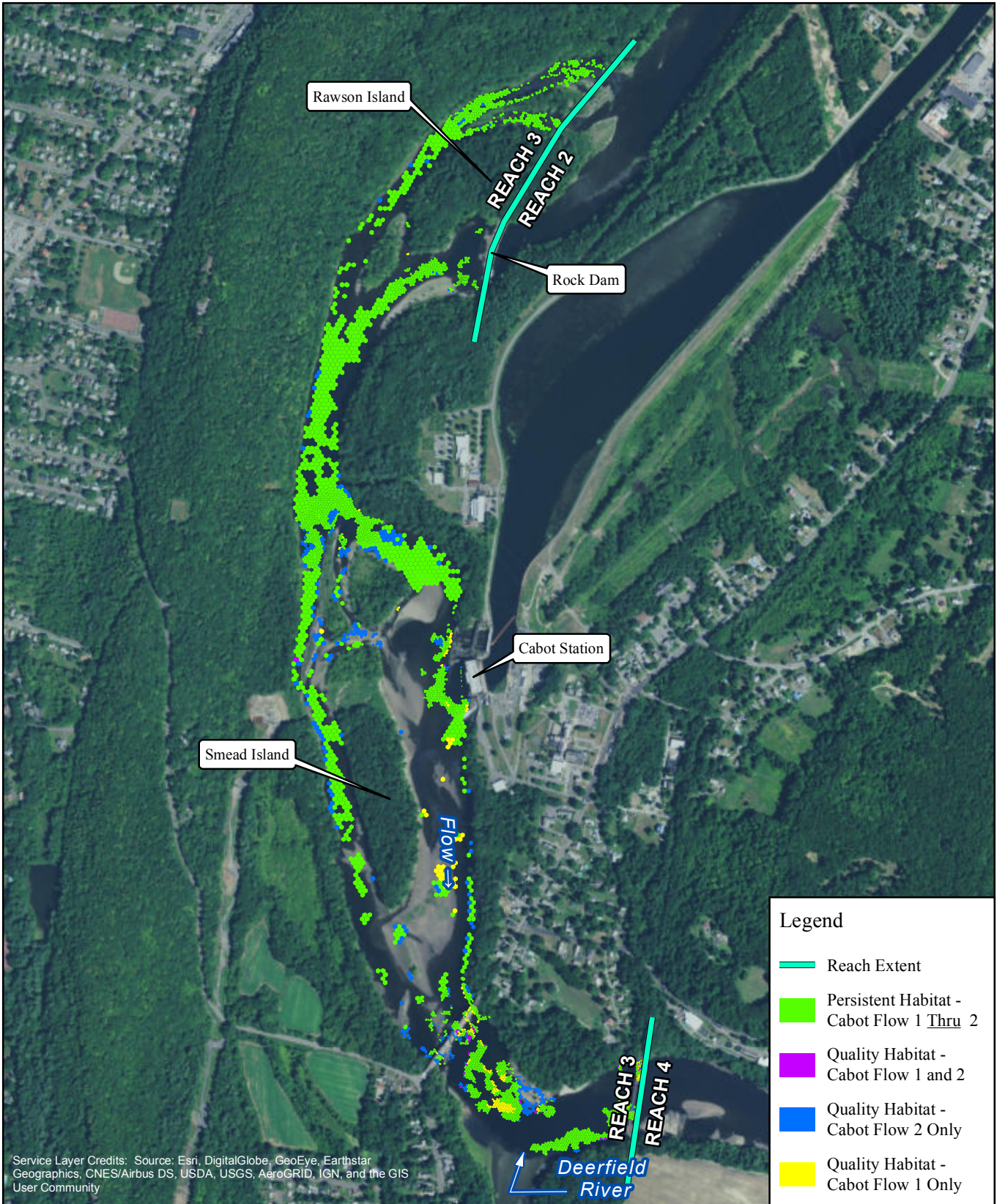
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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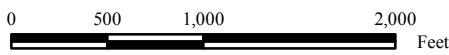
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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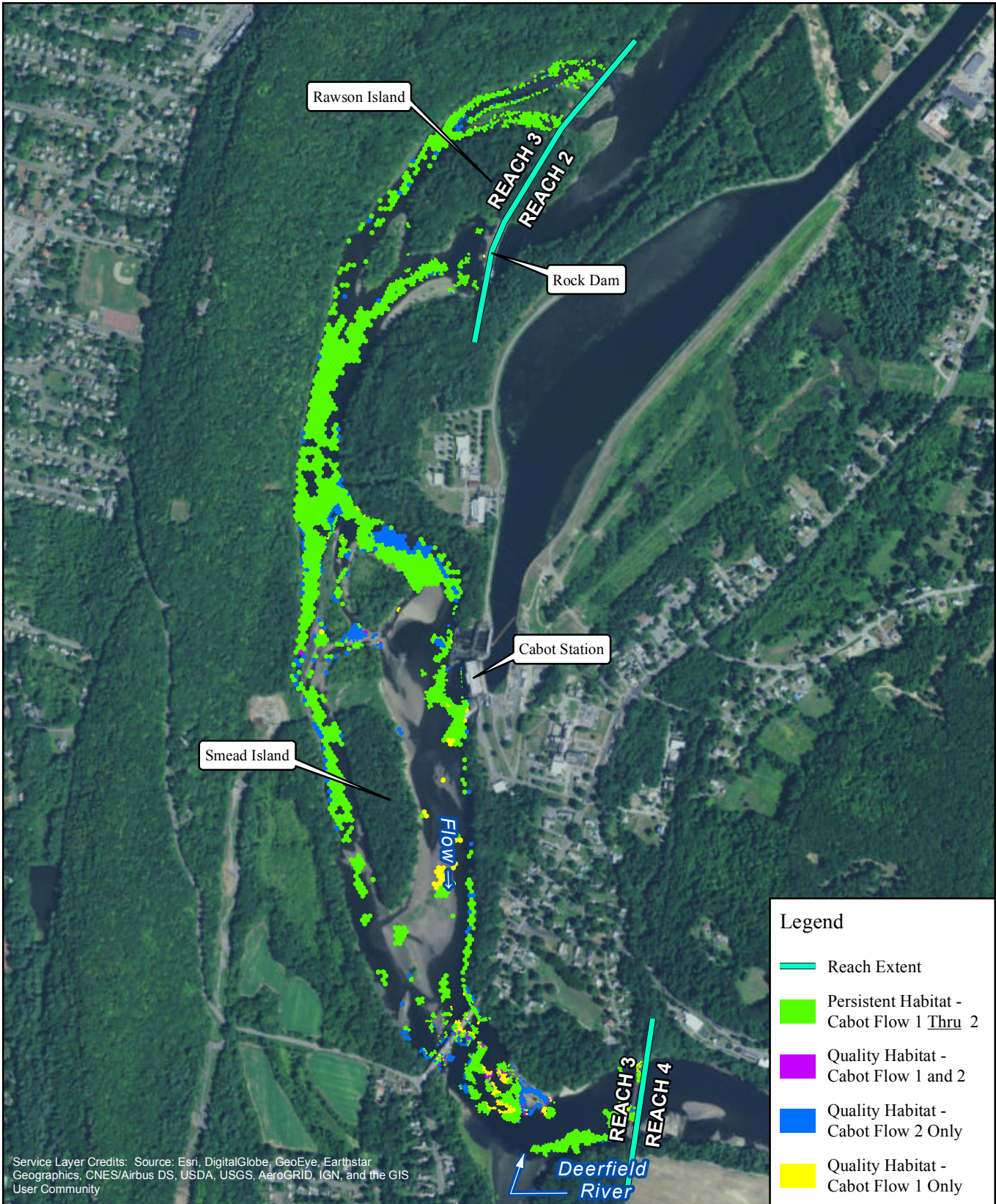
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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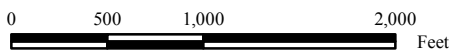
Legend

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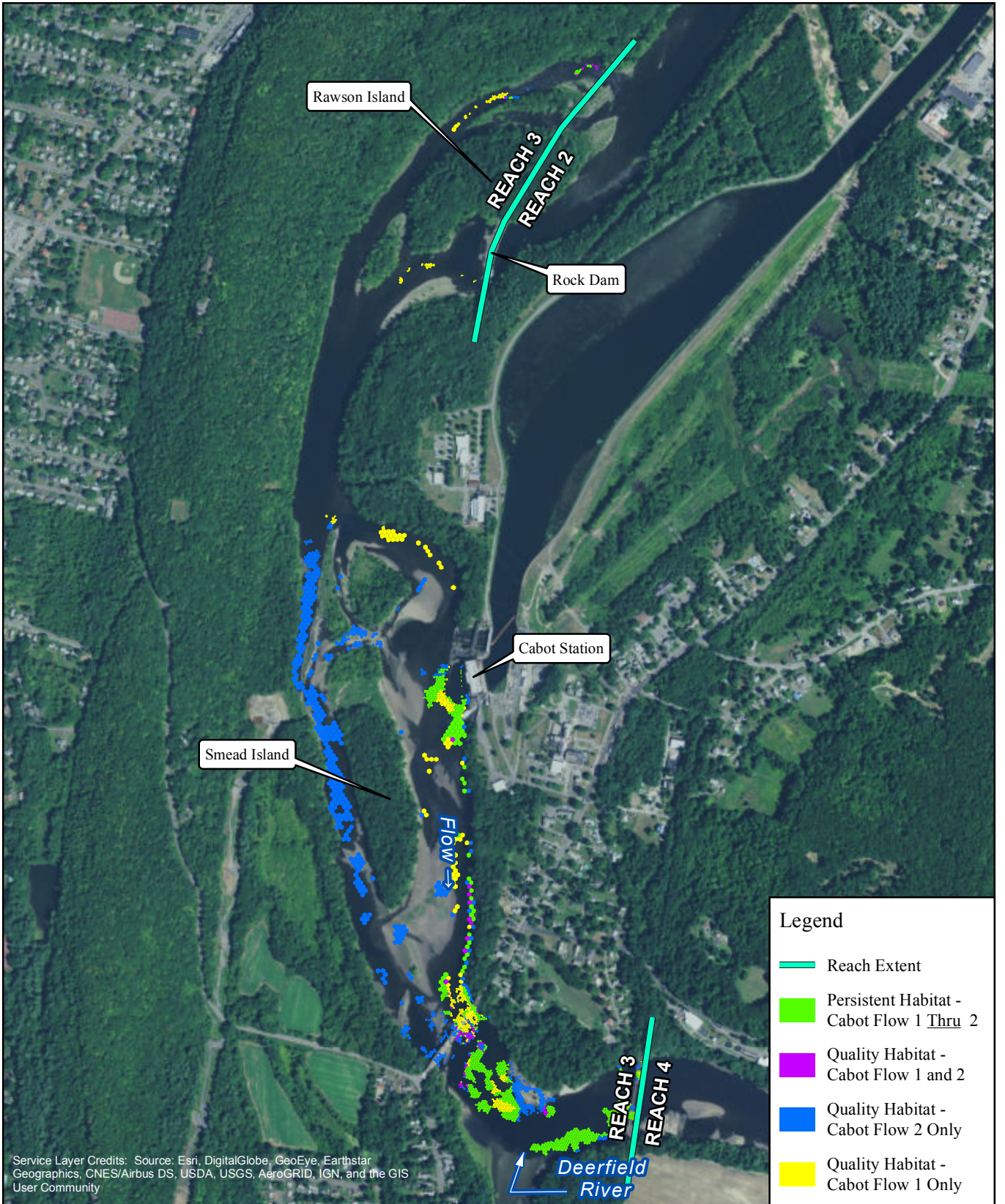
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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Legend

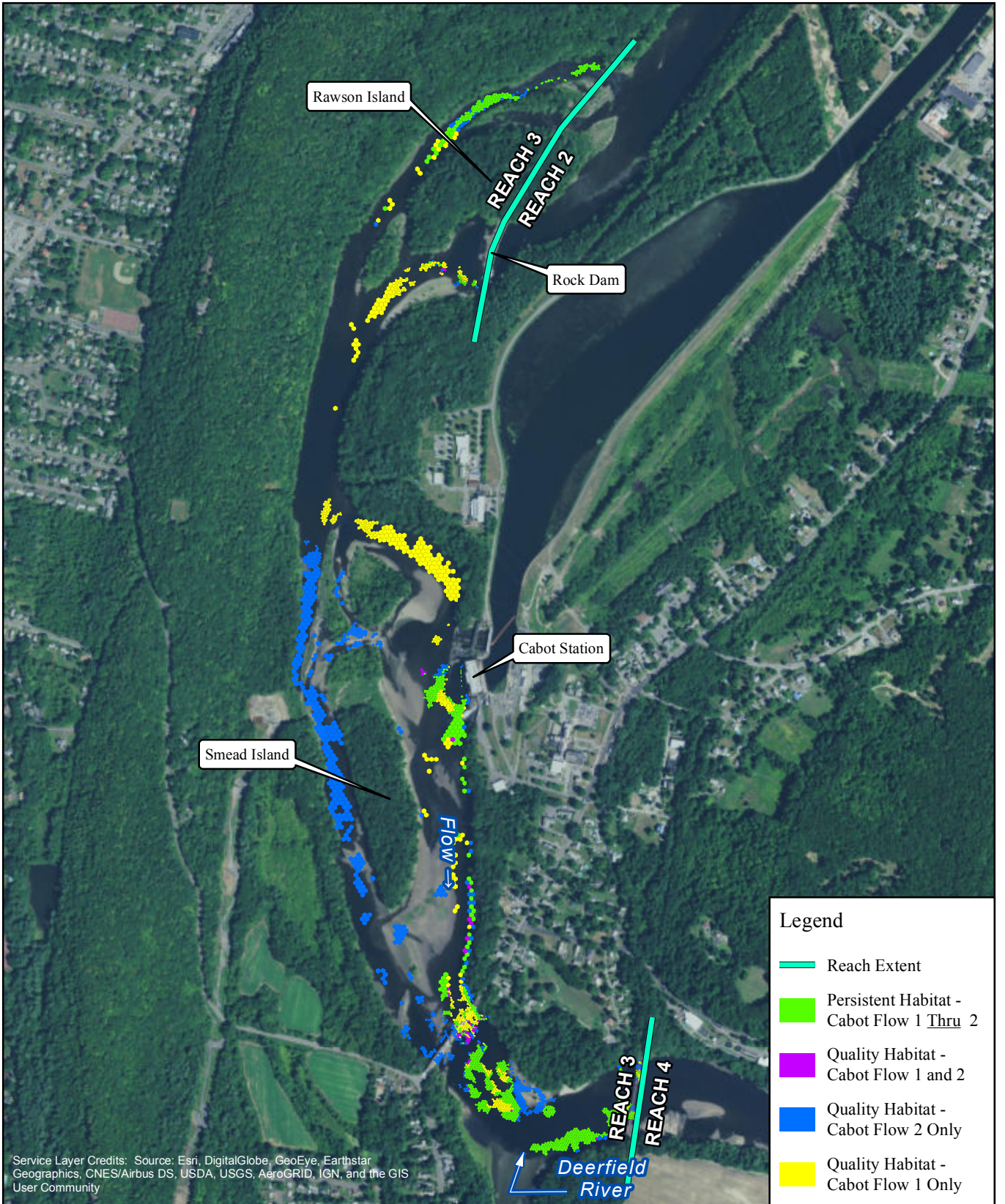
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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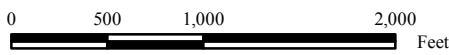
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- Quality Habitat - Cabot Flow 1 Only



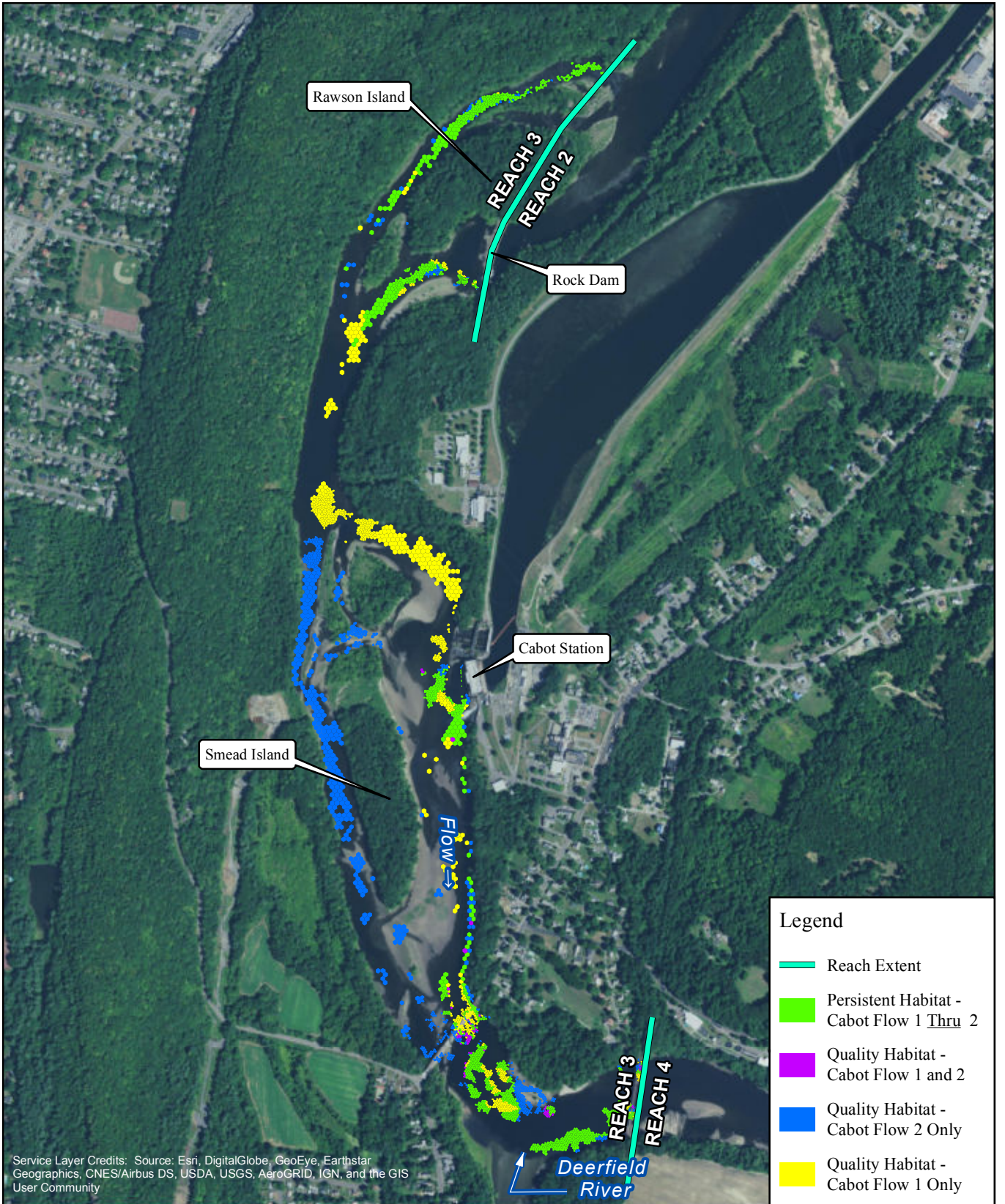
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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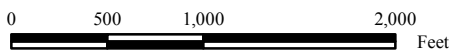
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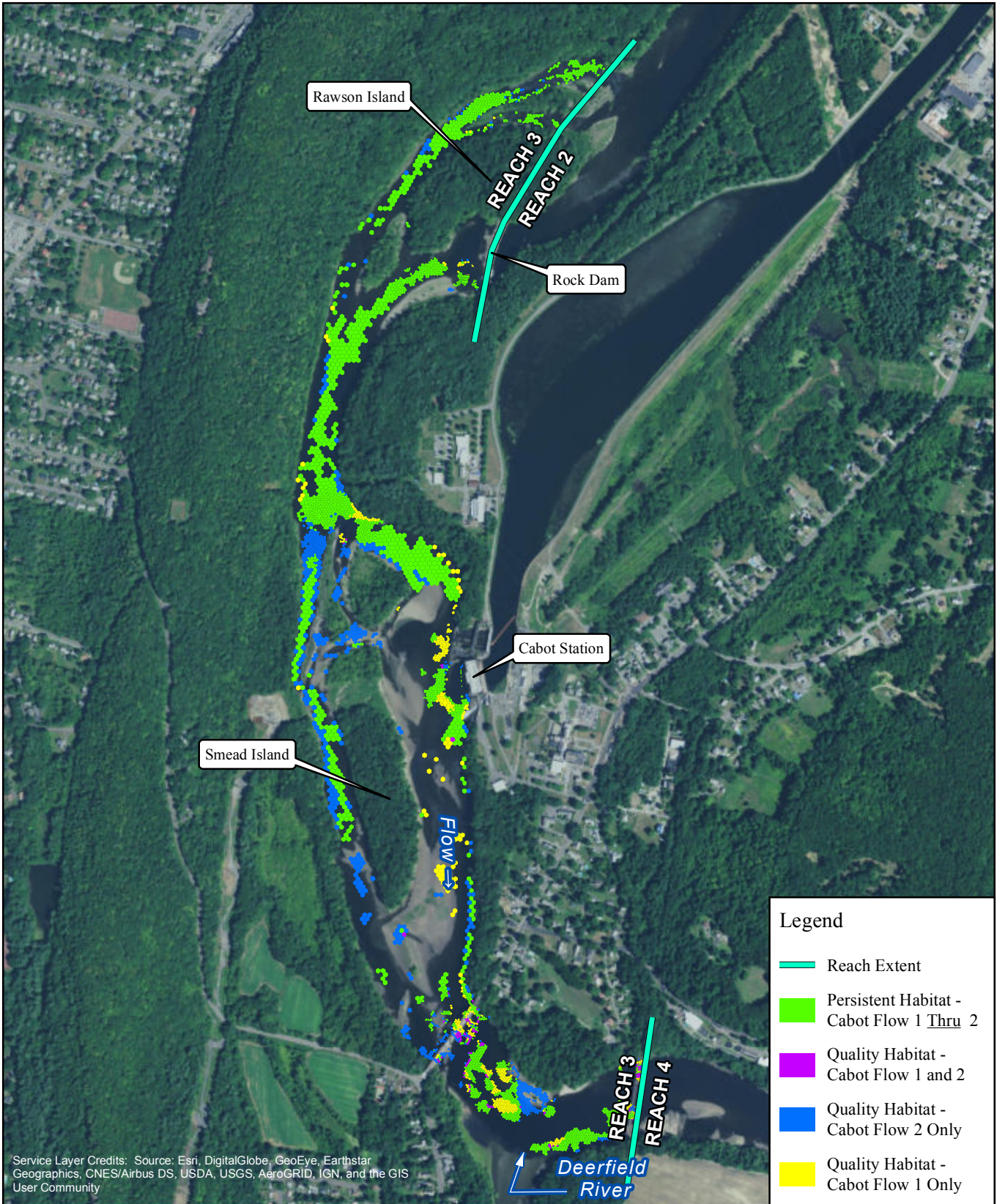
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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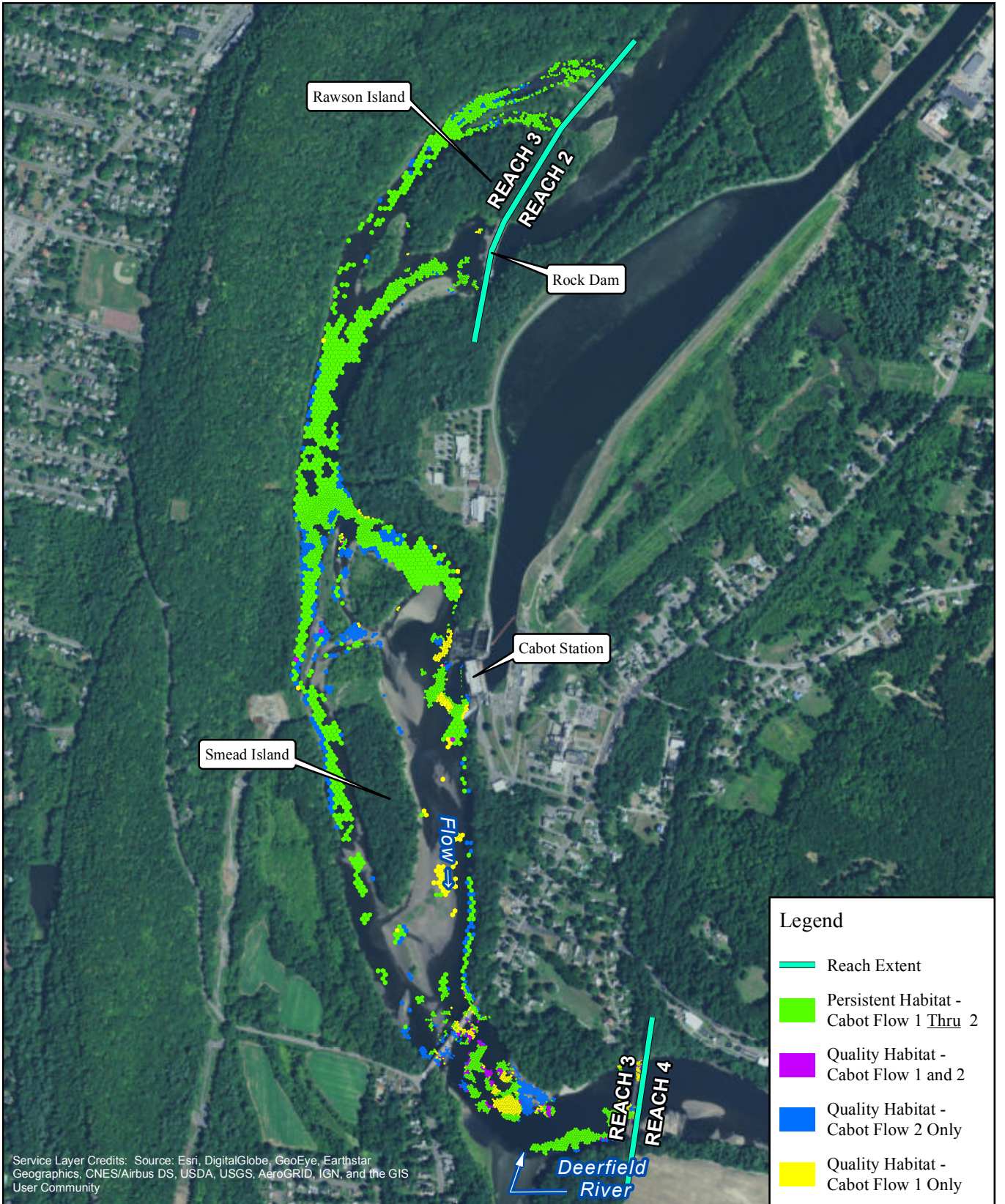
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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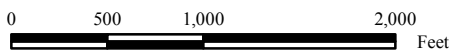
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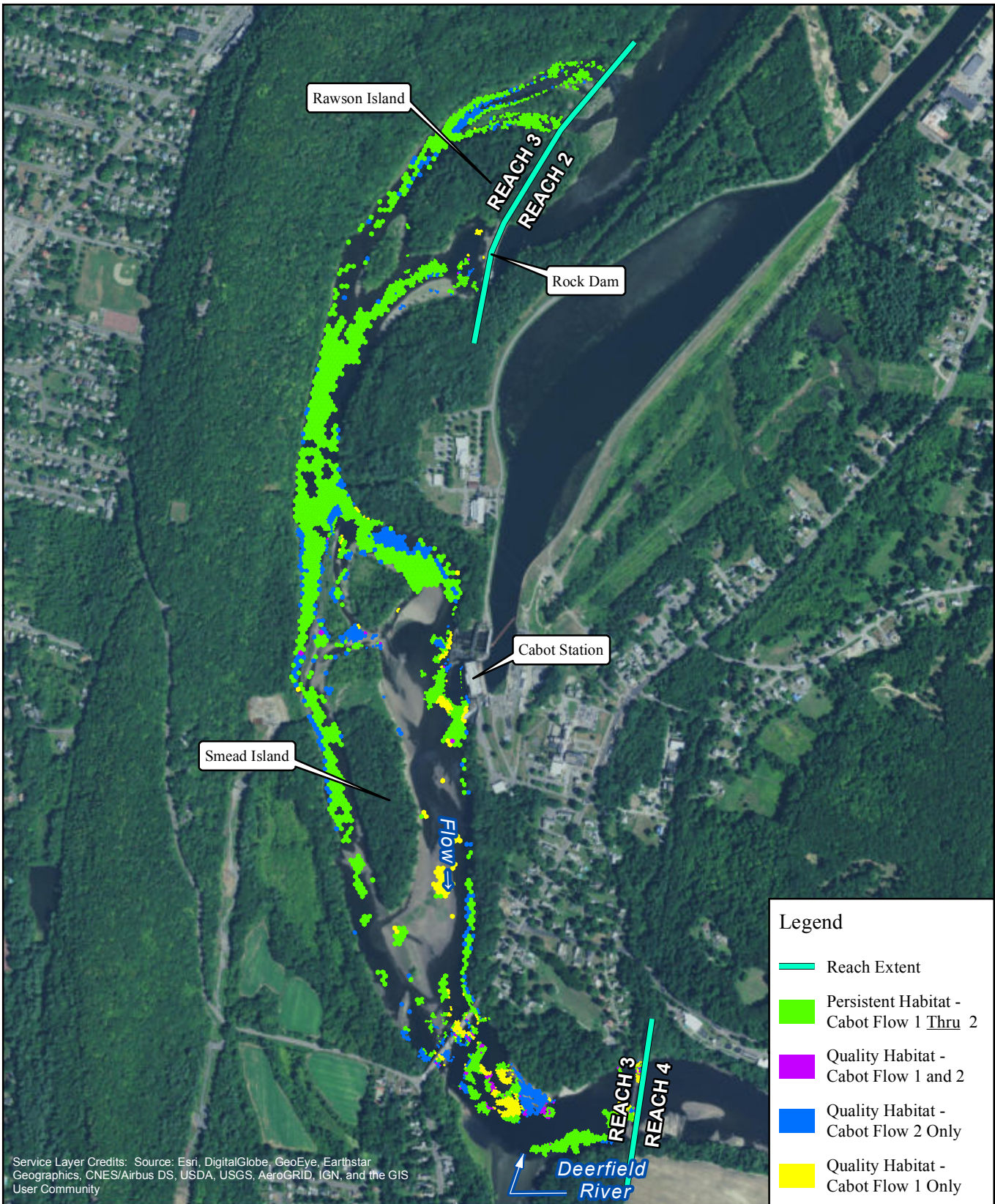
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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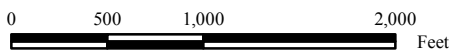
Legend

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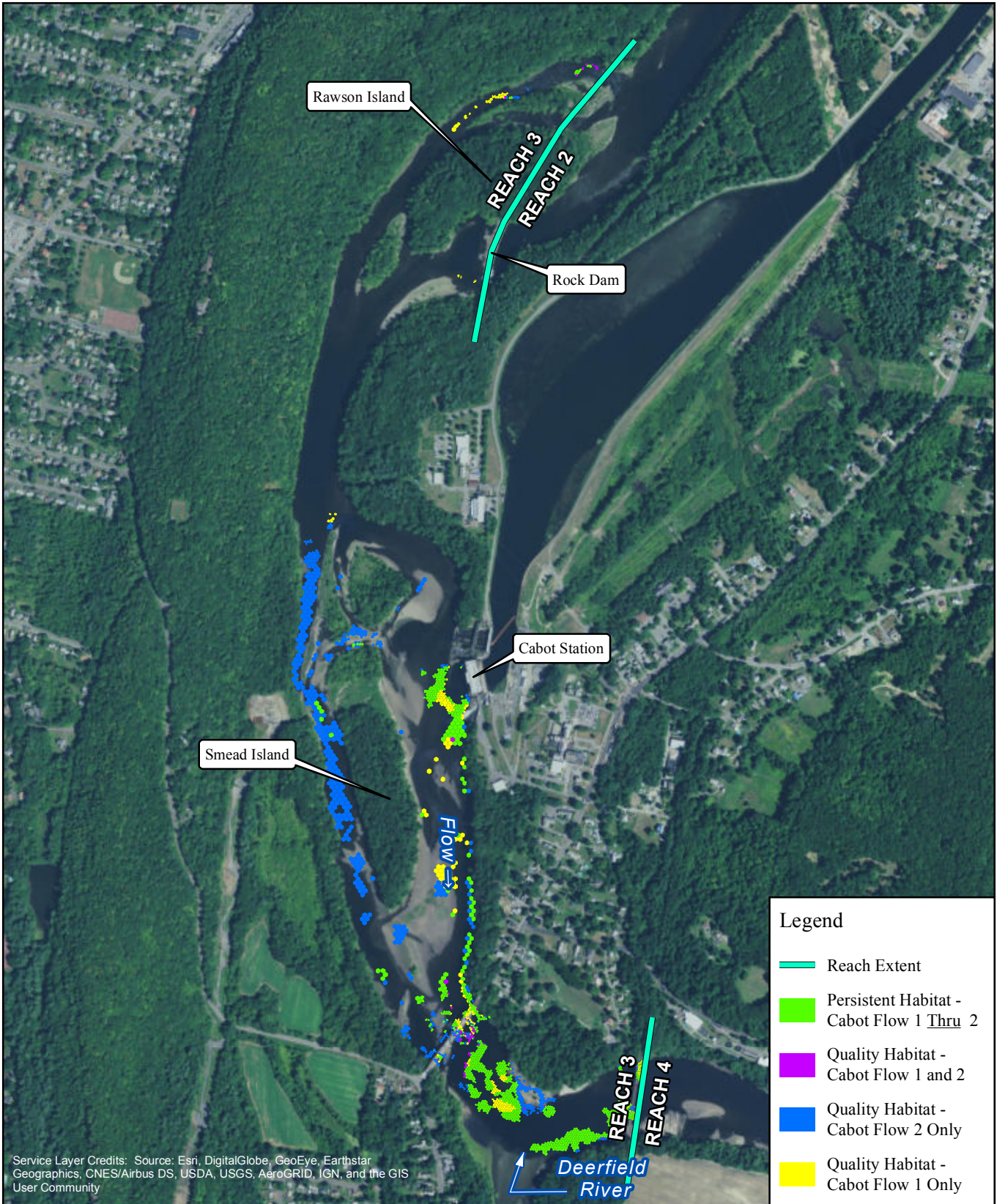
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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Legend

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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

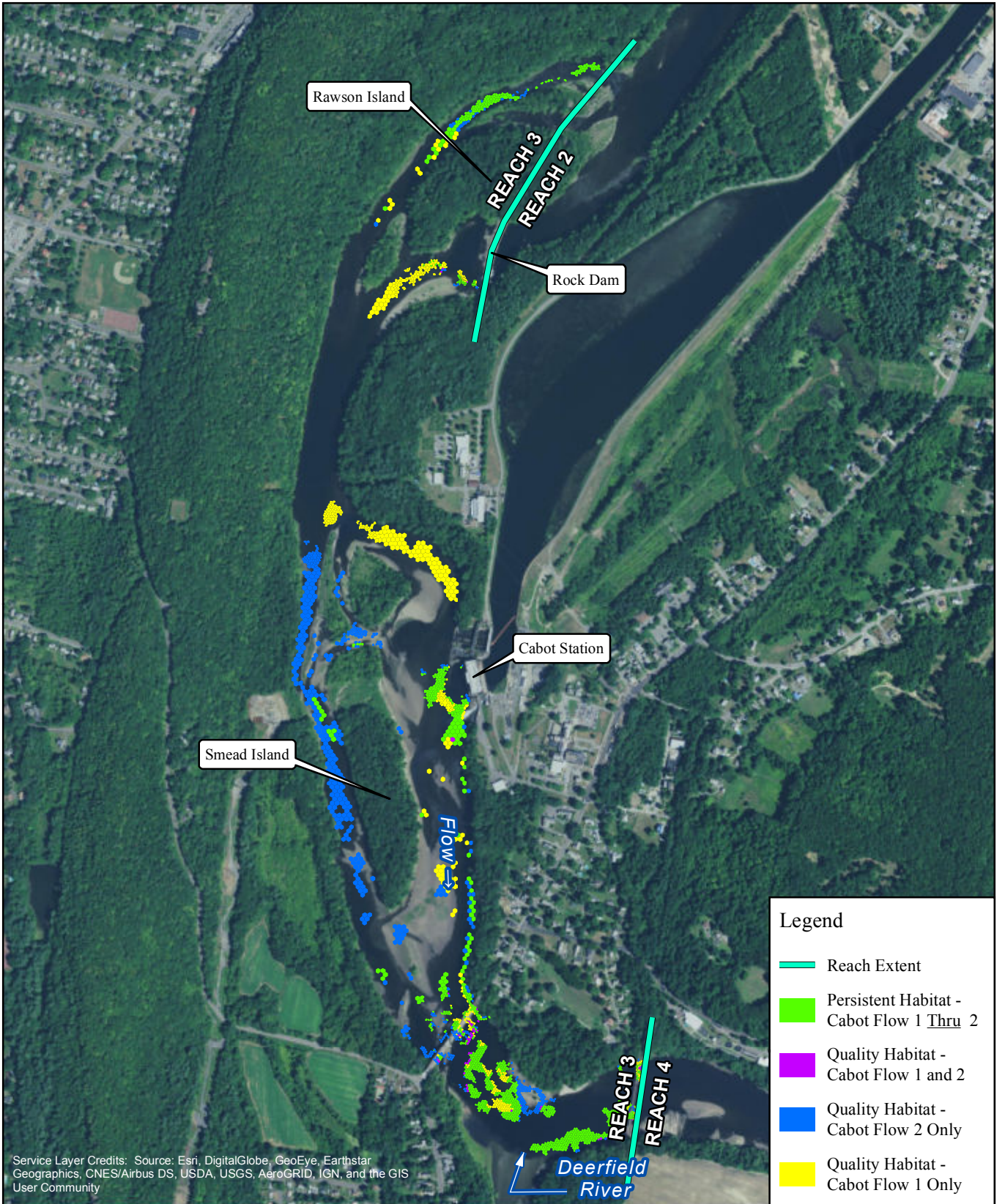
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 200 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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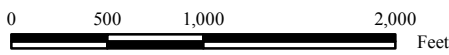
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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



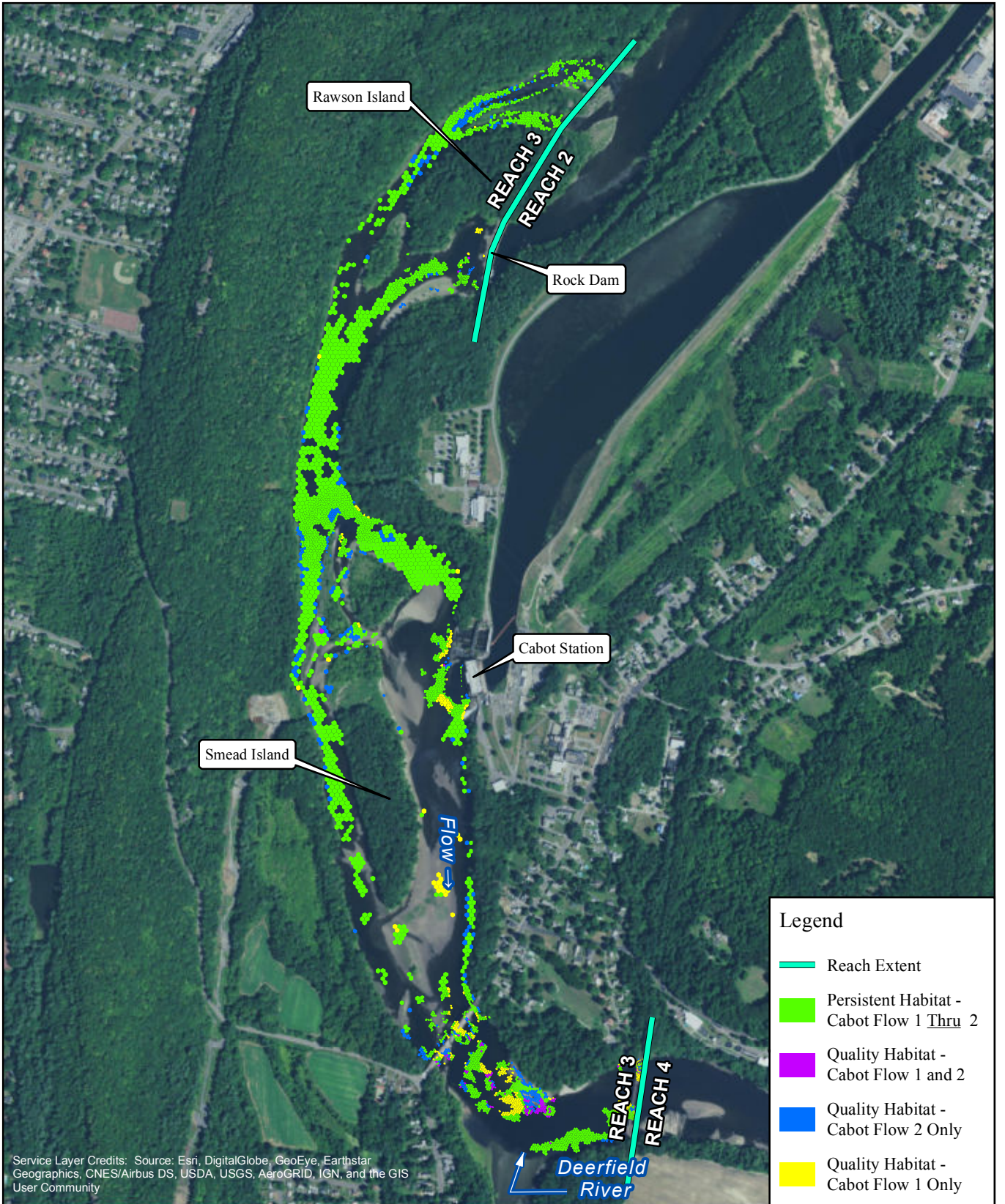
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RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 500 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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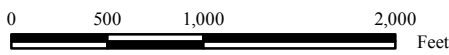
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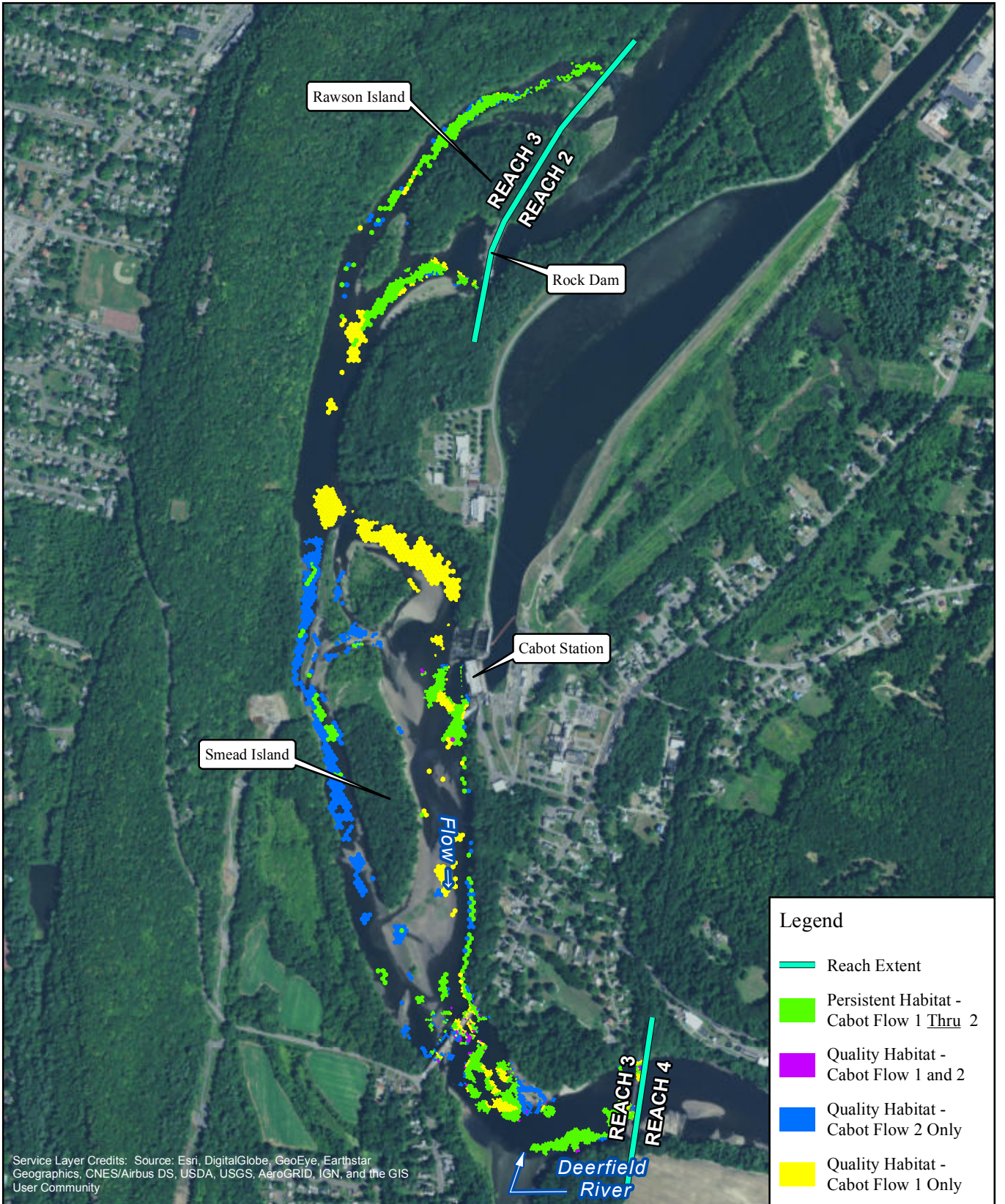
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
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Legend

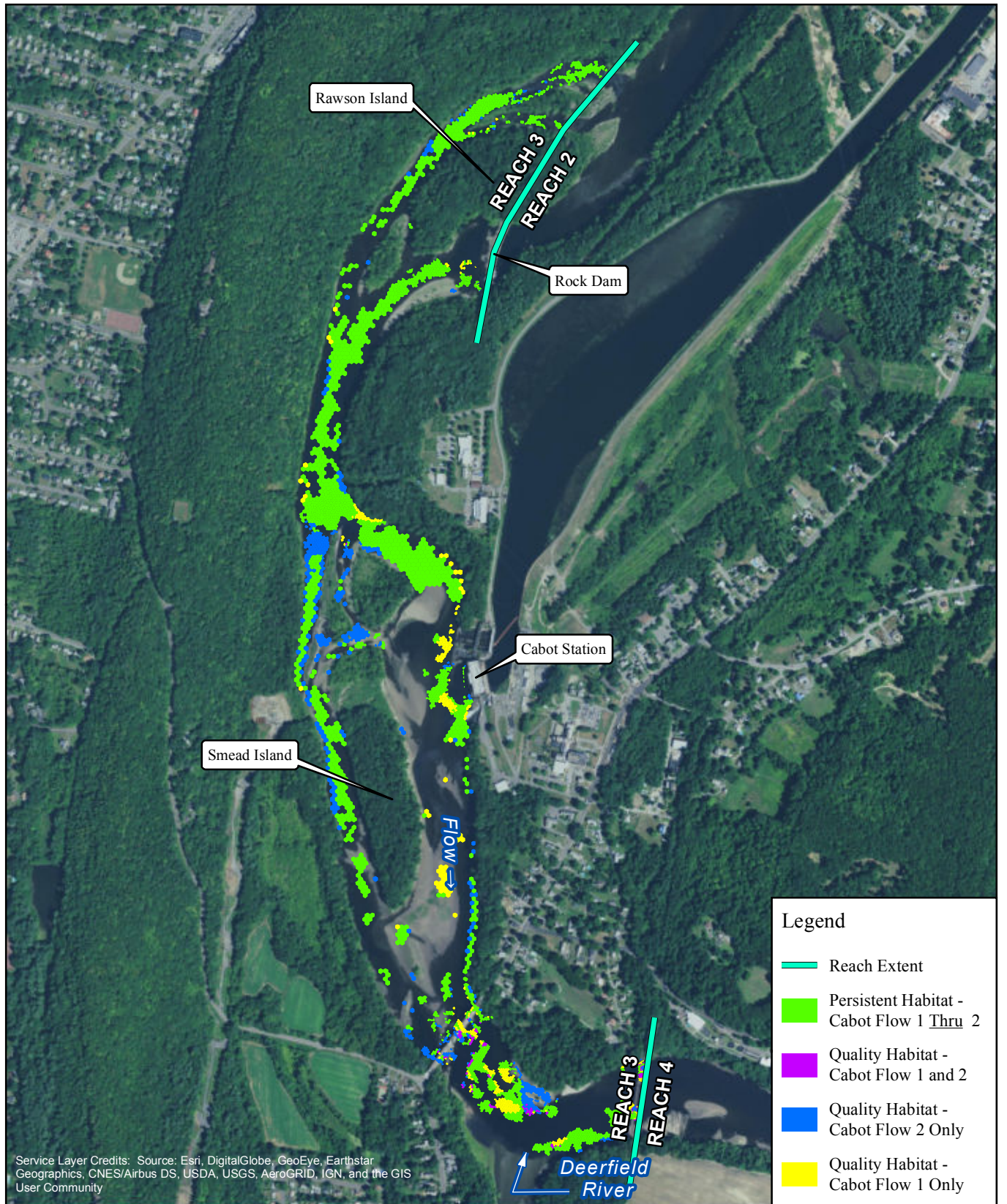
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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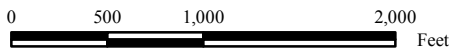
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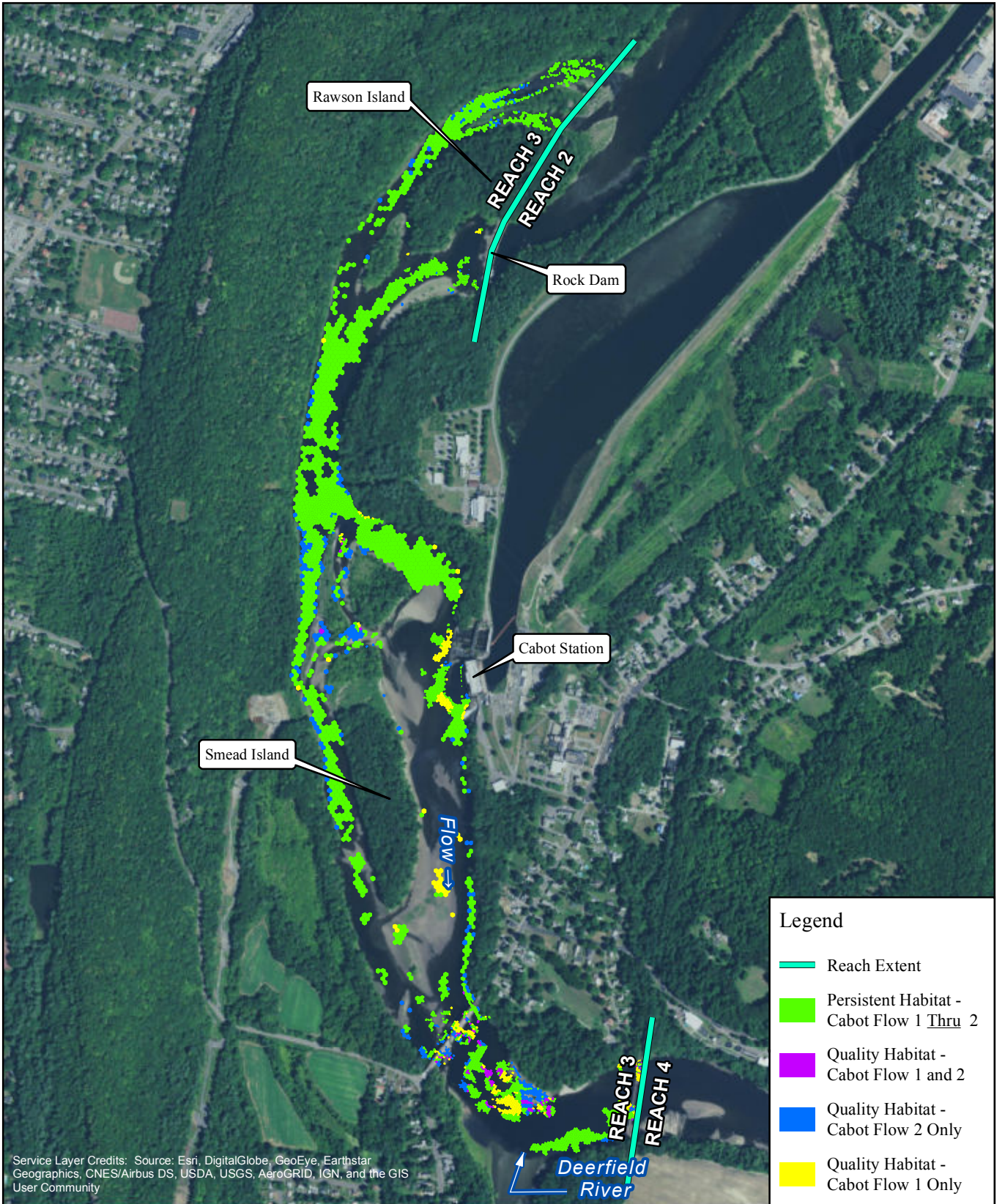


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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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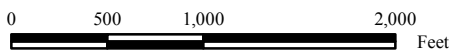
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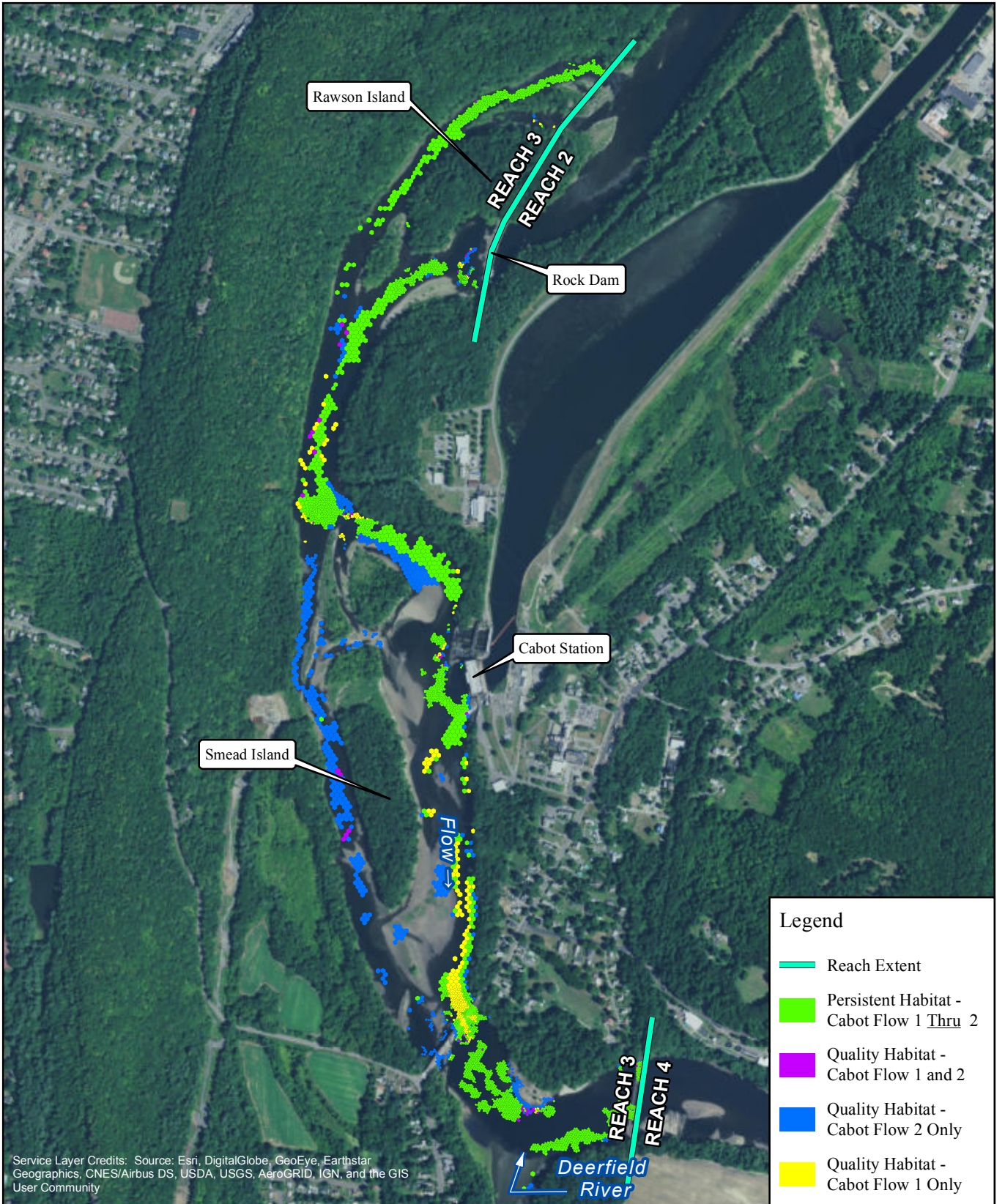
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Spawning
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 7000 cfs
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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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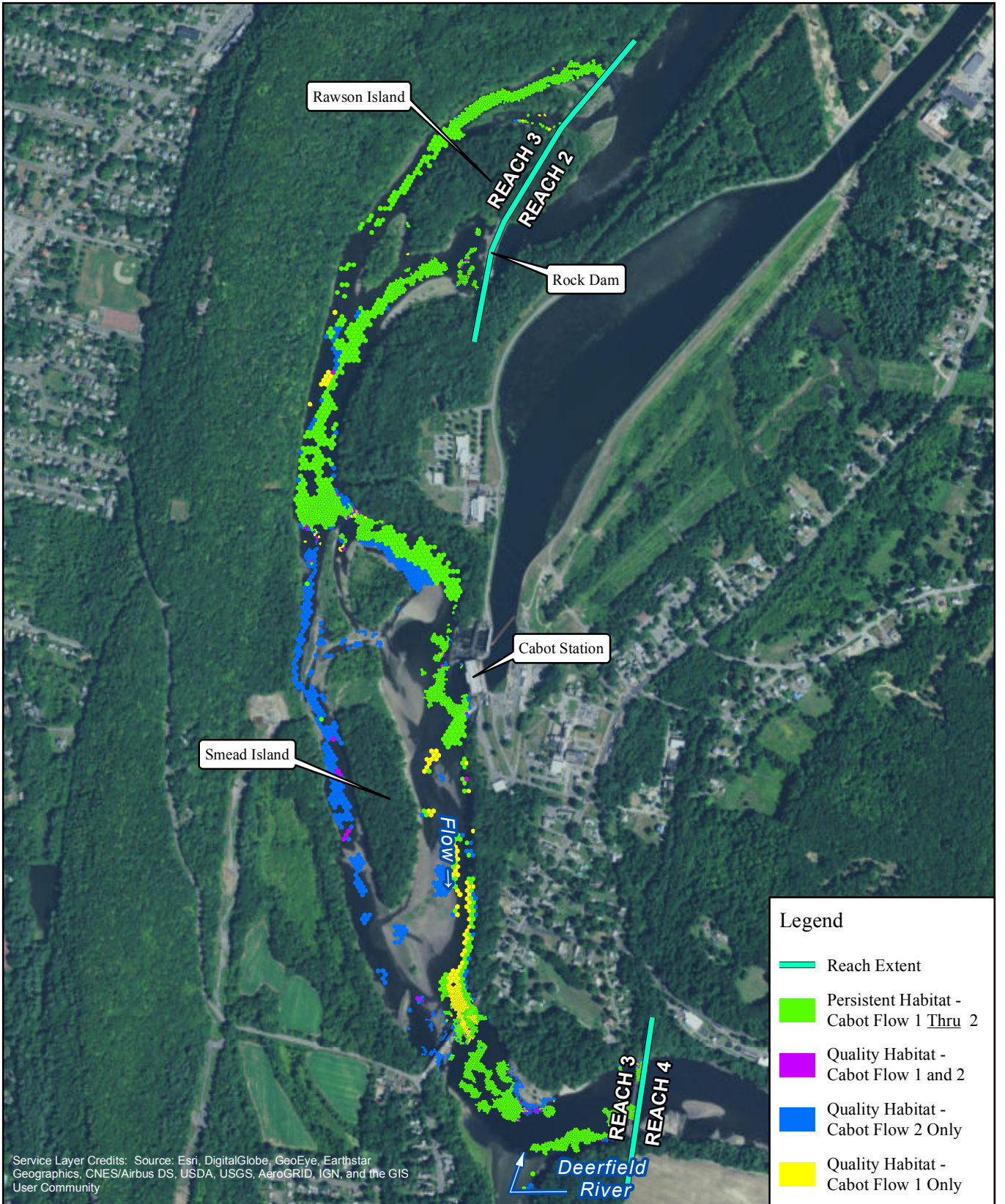
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Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 200 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 7000 cfs

0 500 1,000 2,000 Feet

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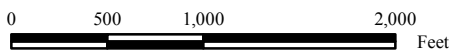
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Legend

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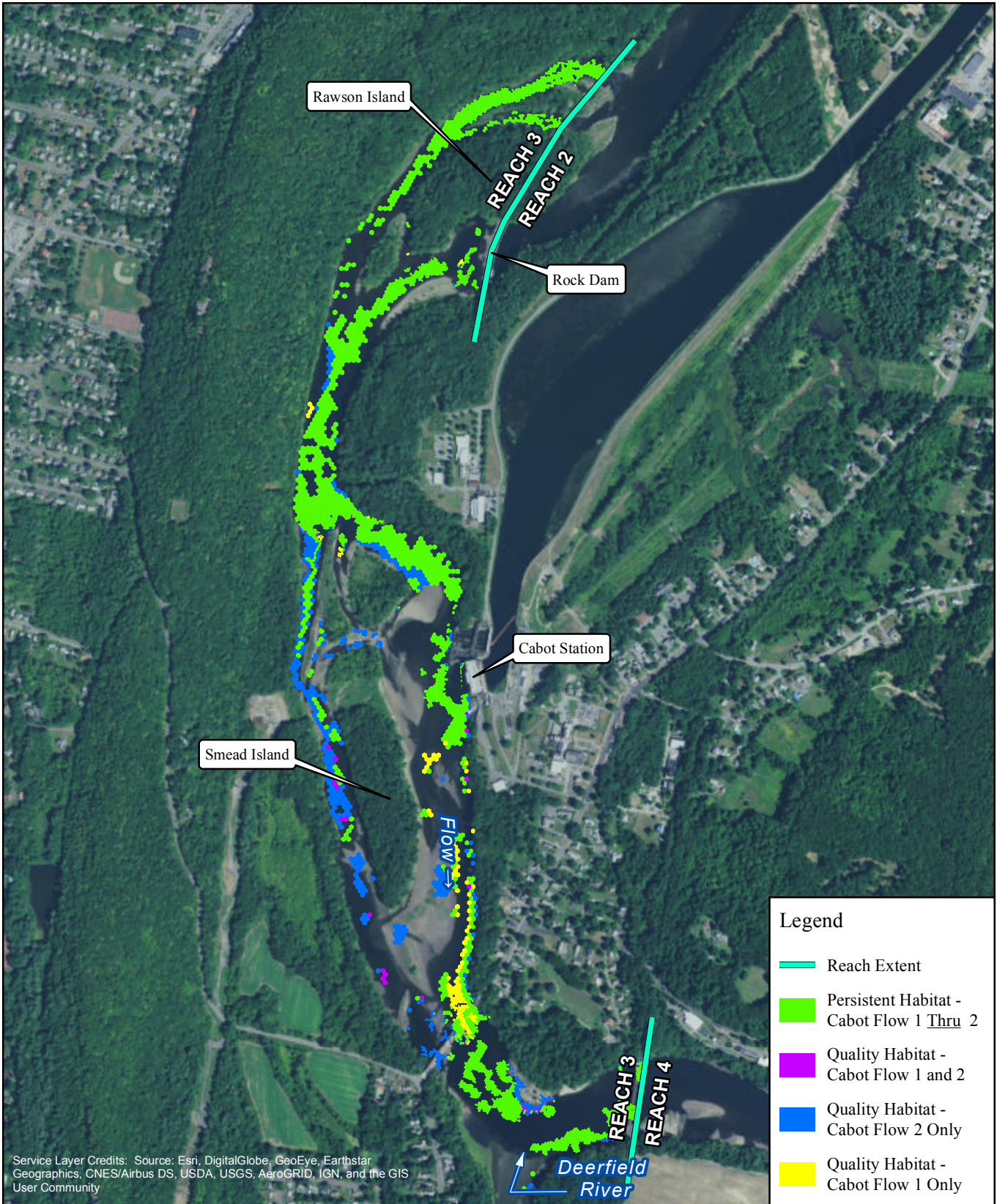
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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- Persistent Habitat - Cabot Flow 1 Thru 2
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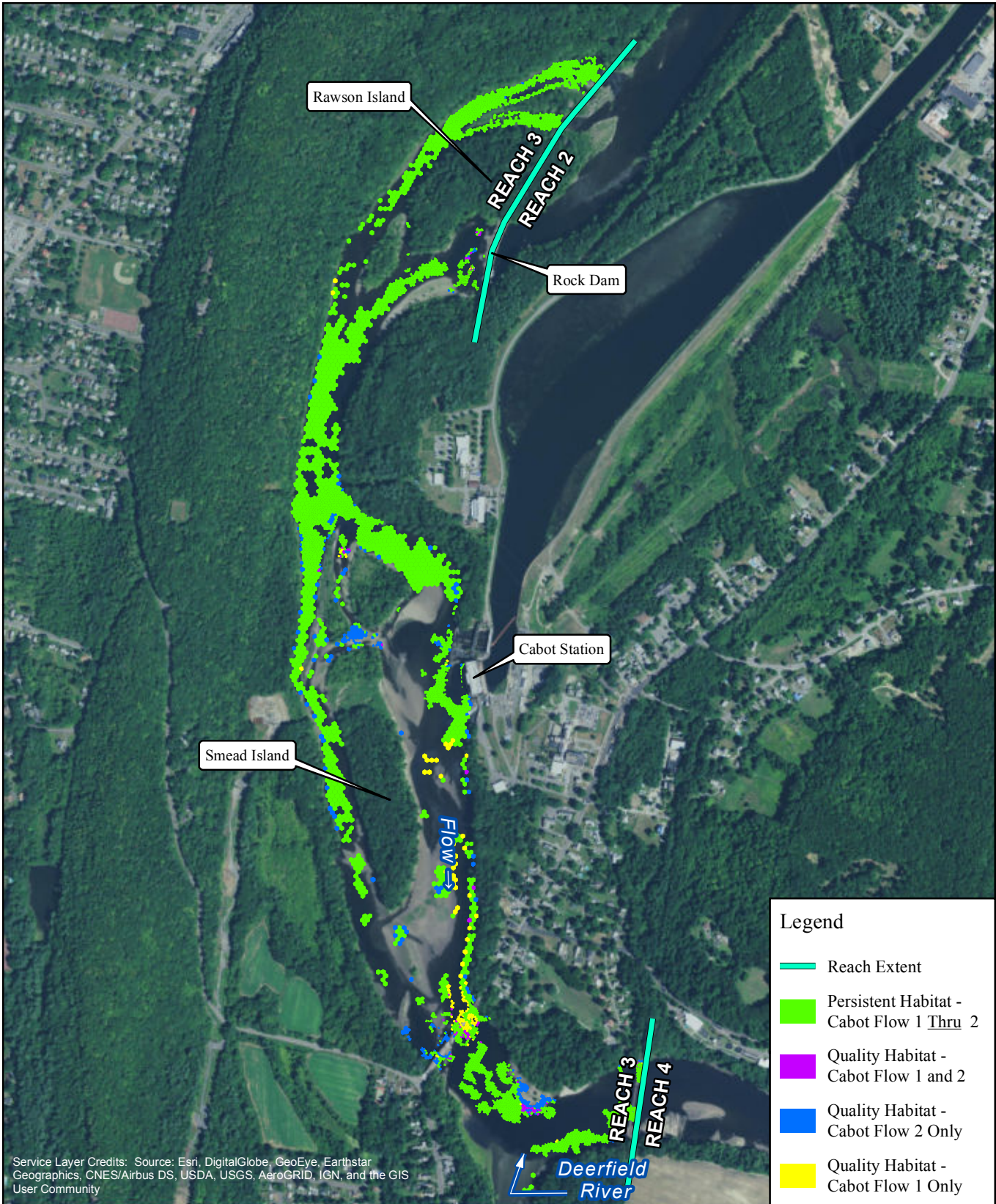
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Persistent Habitat
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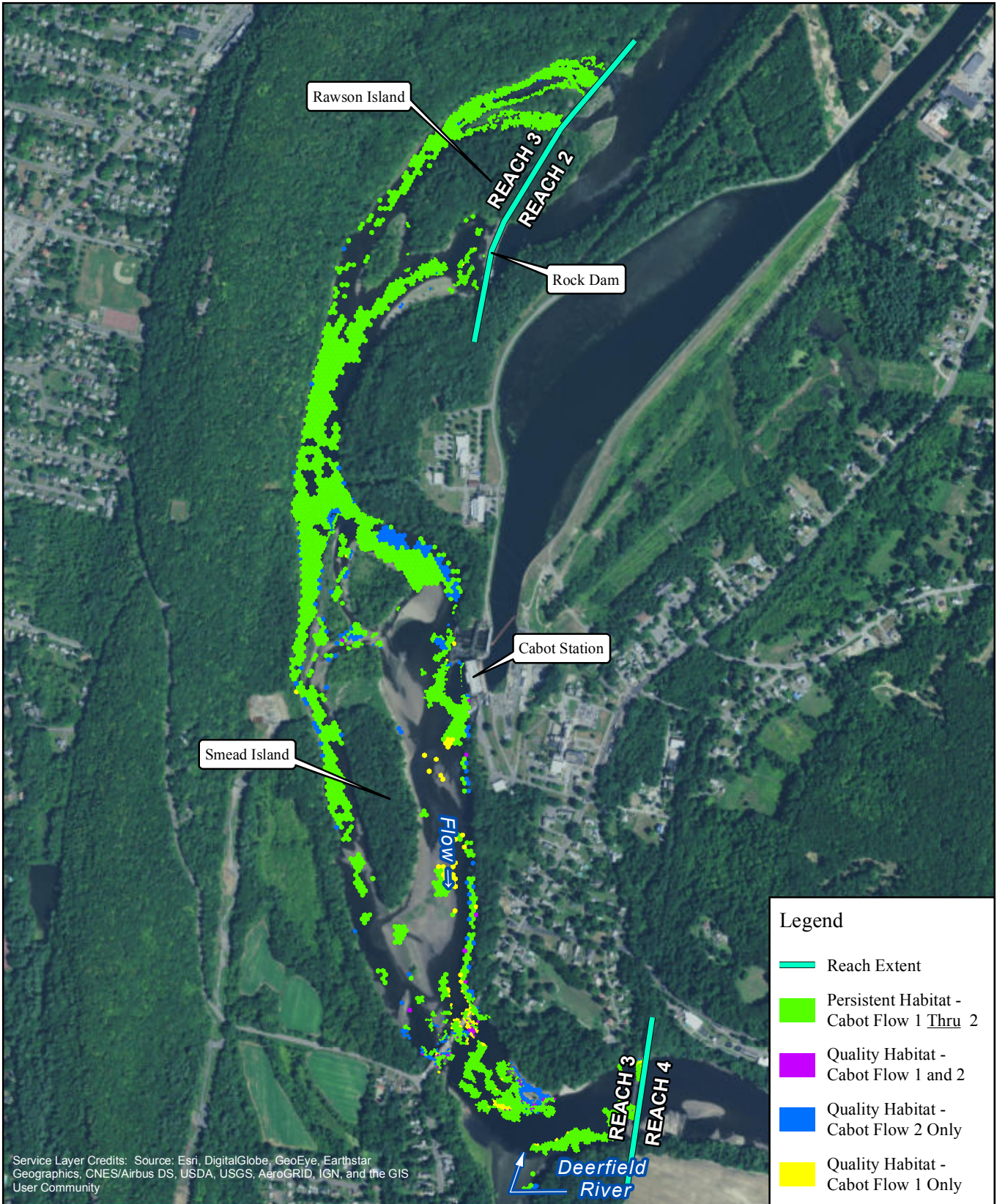
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Persistent Habitat
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Legend

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- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
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- Quality Habitat - Cabot Flow 1 Only

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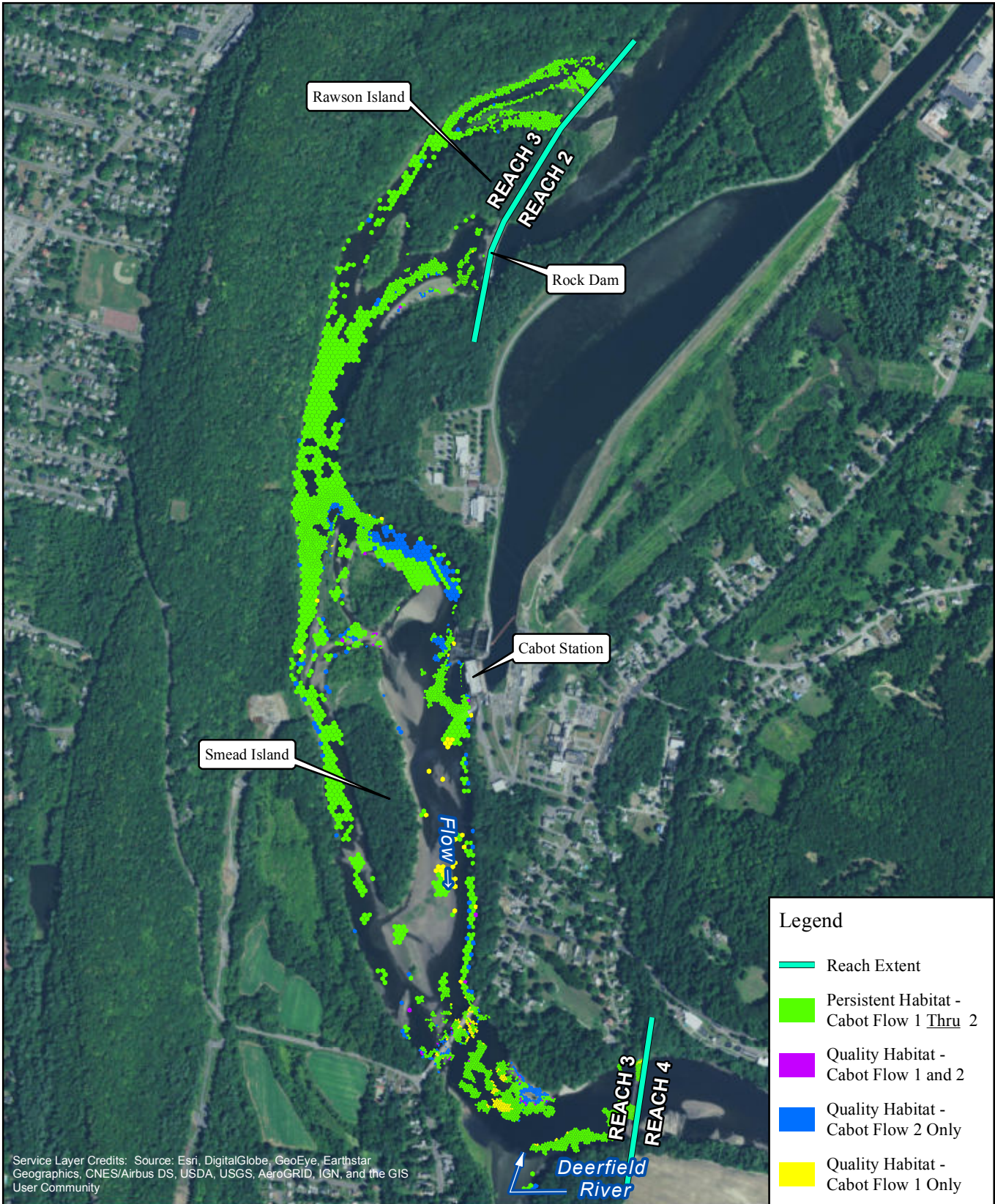
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Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 5000 cfs
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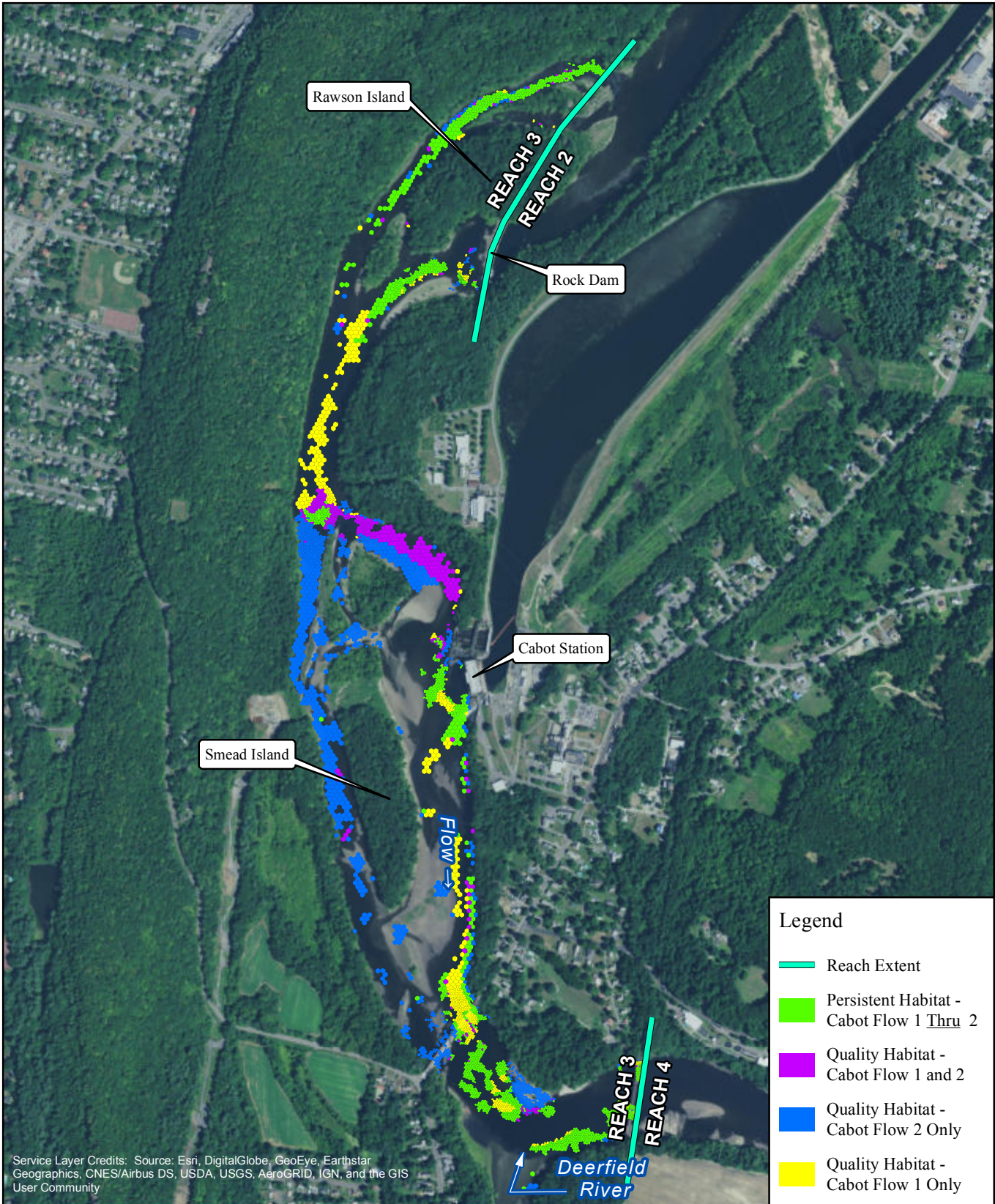
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RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 6500 cfs
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Cabot Flow 2: 7000 cfs

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- Quality Habitat - Cabot Flow 1 Only

N

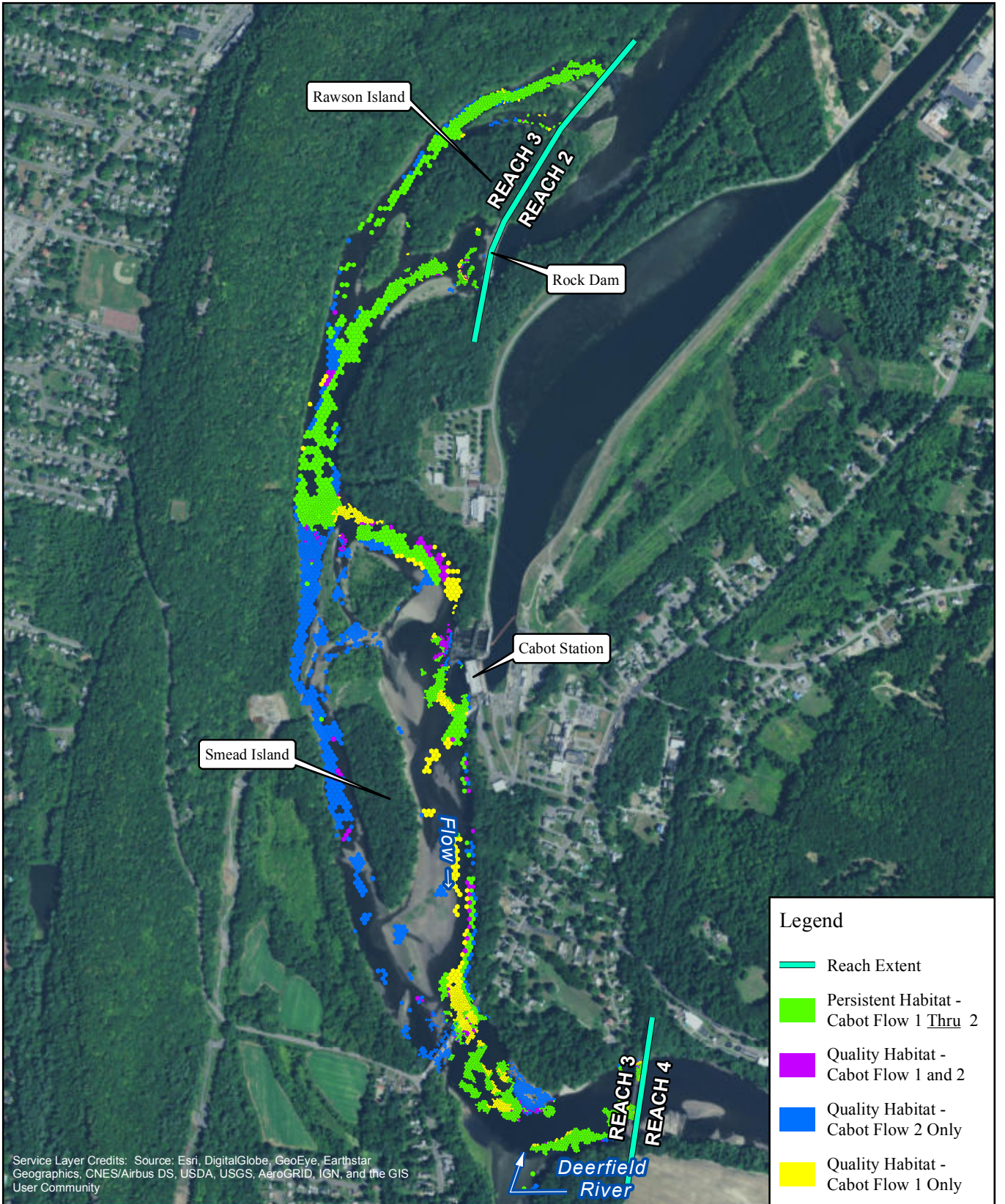
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 200 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

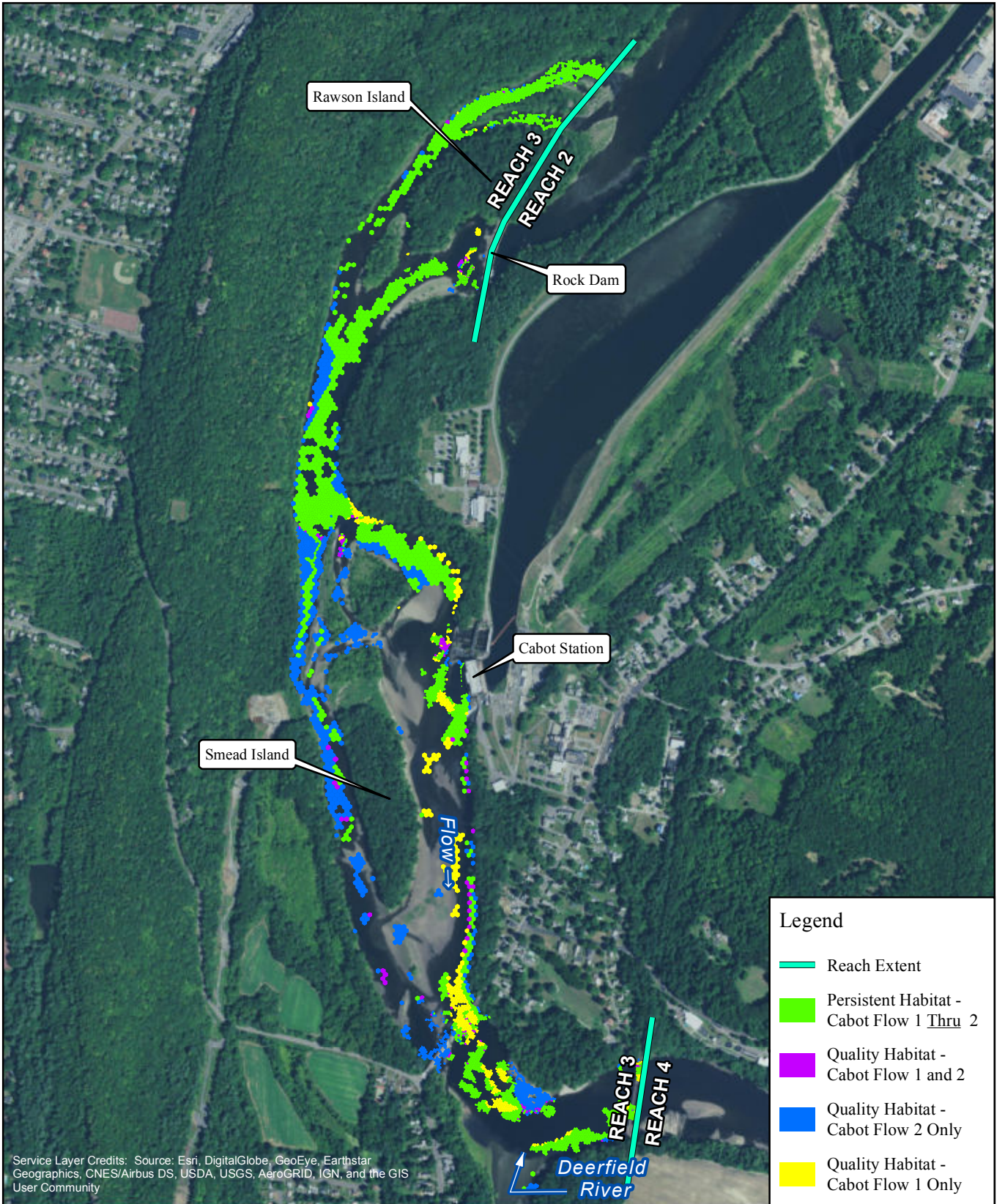
FIRSTLIGHT HYDRO GENERATING COMPANY
Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 500 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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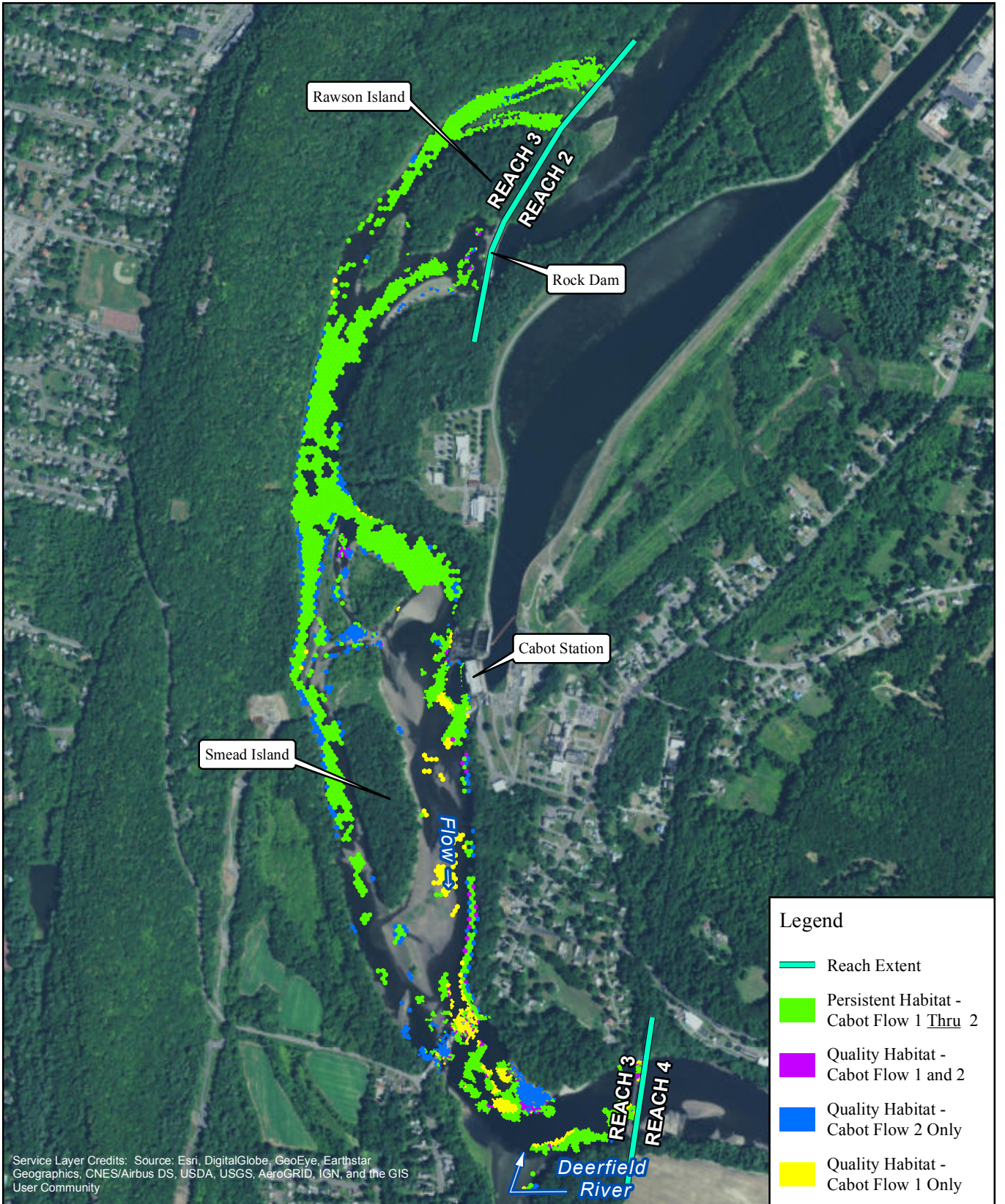
FIRSTLIGHT HYDRO GENERATING COMPANY
Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 1000 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

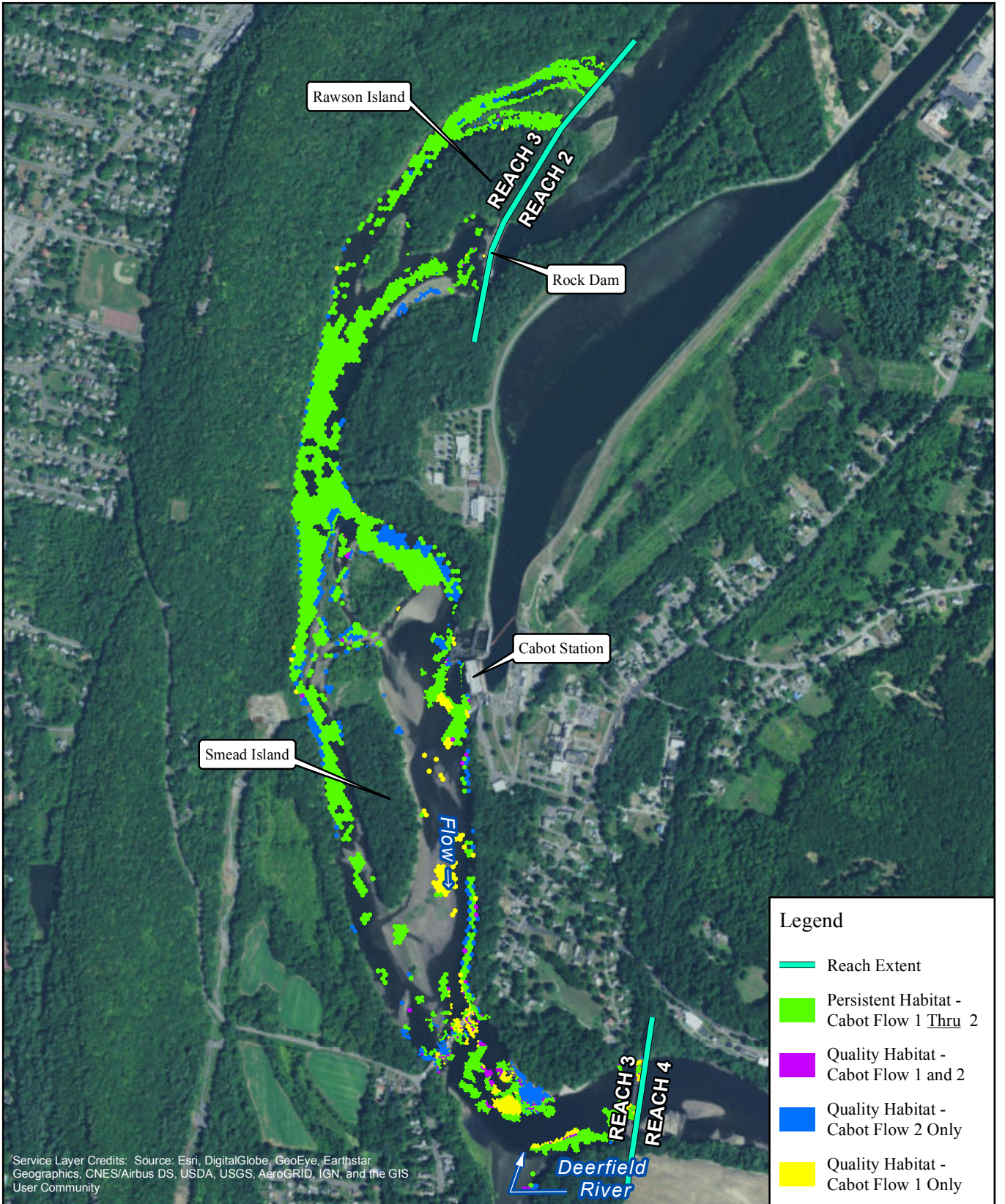
FIRSTLIGHT HYDRO GENERATING COMPANY
Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 3000 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet


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Legend

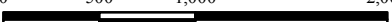
- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



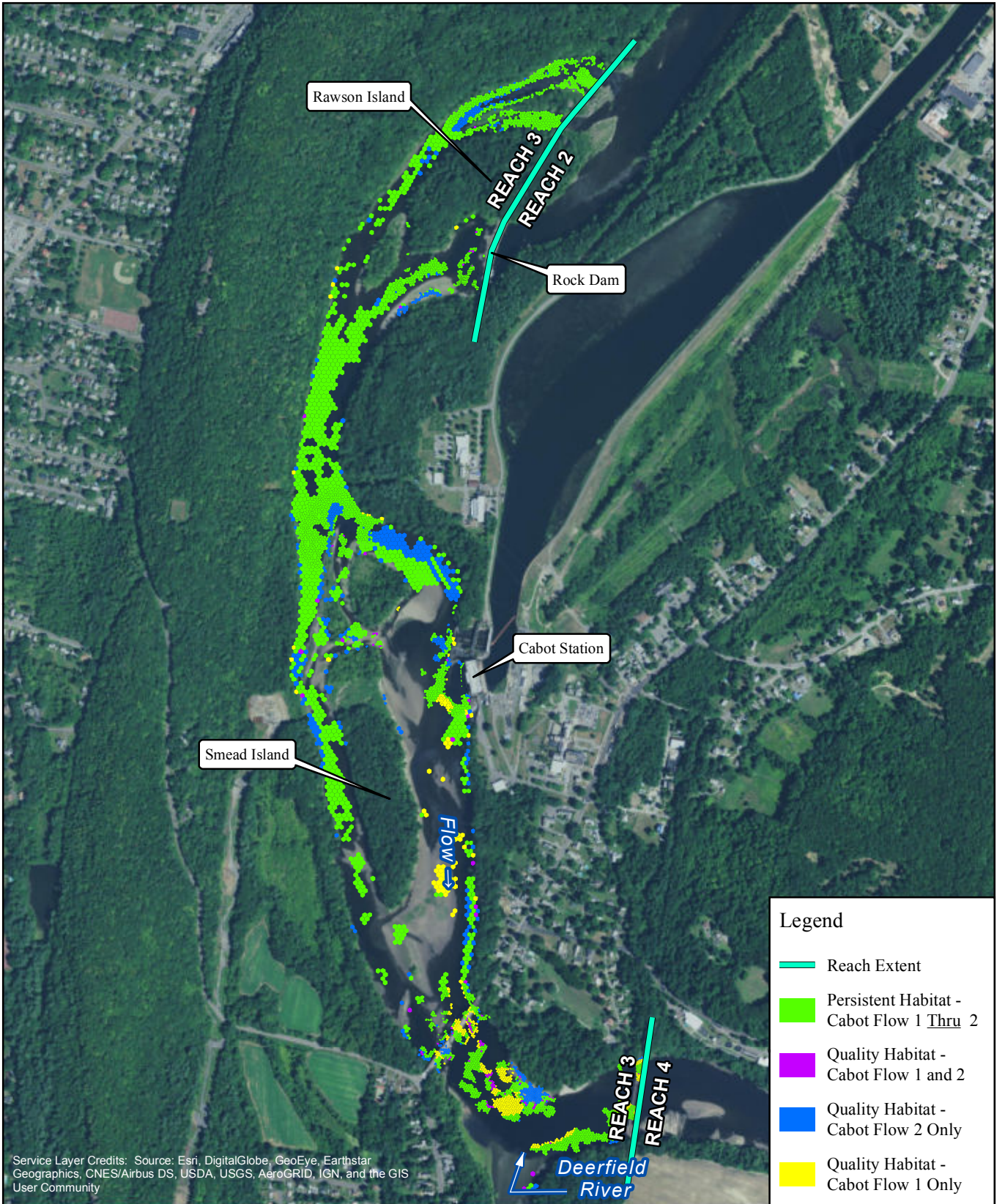
FIRSTLIGHT HYDRO GENERATING COMPANY
 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet



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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

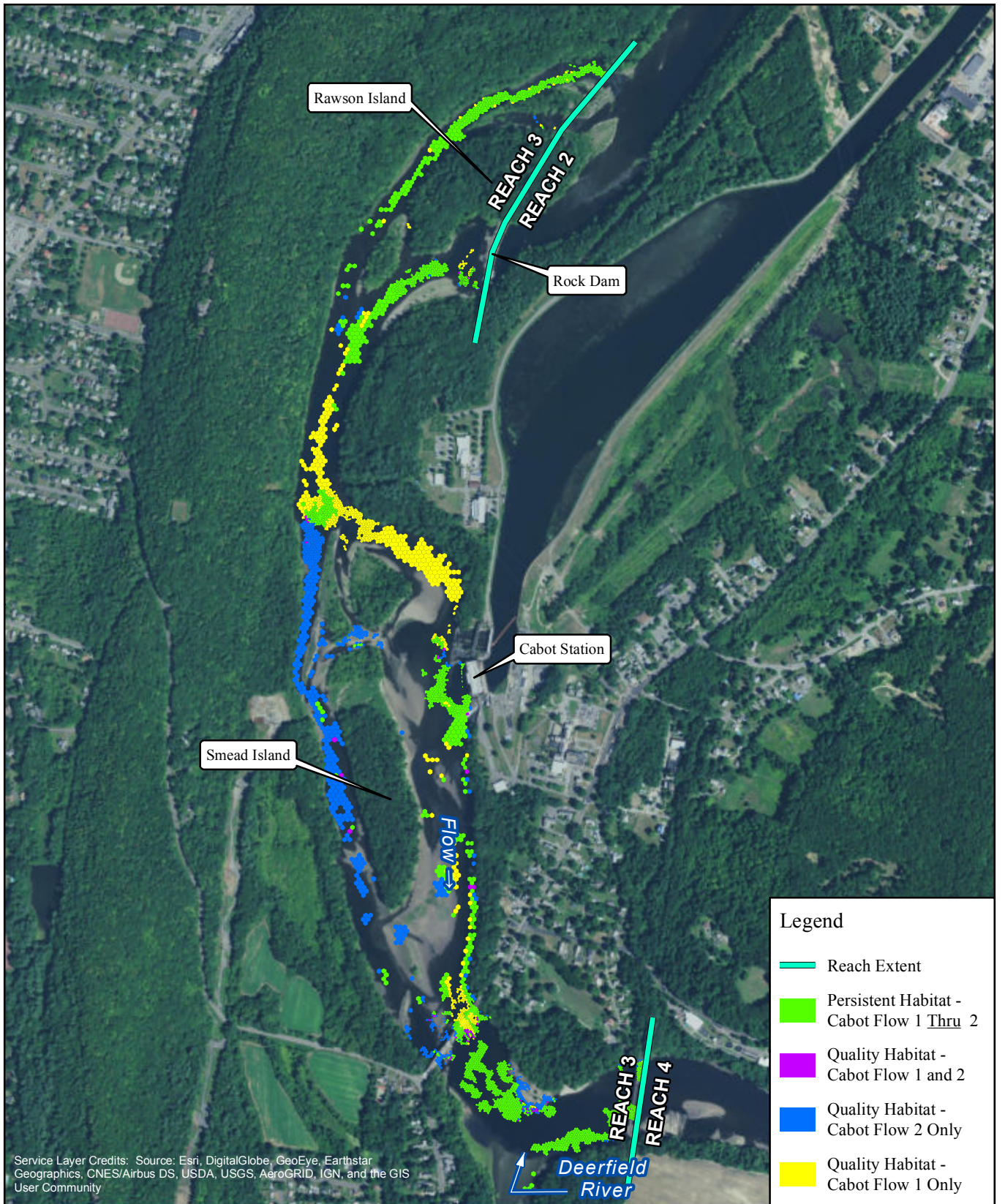
FIRSTLIGHT HYDRO GENERATING COMPANY
 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

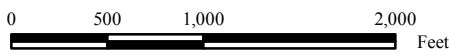
0 500 1,000 2,000 Feet

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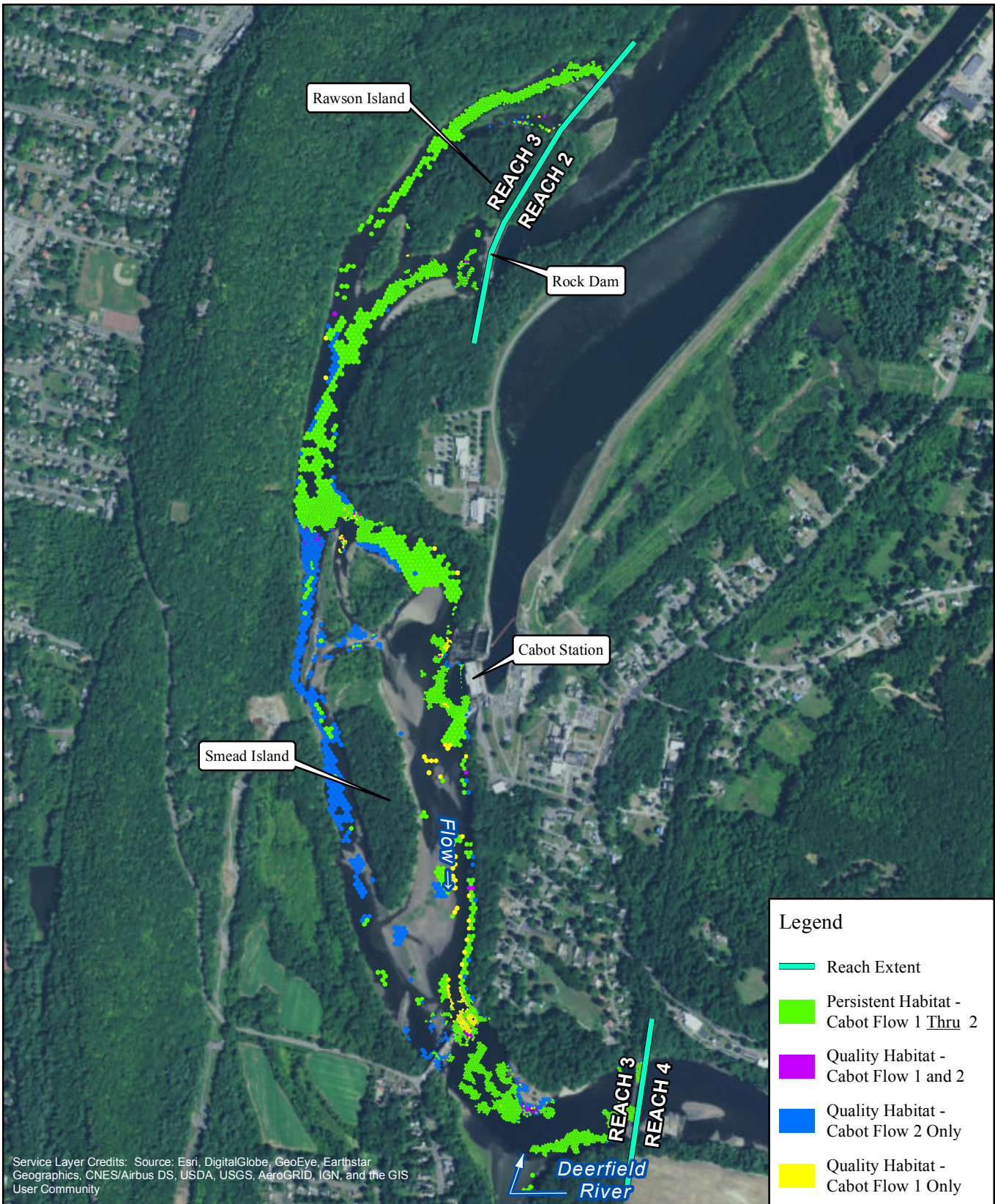
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat	
Shortnose Sturgeon-Egg-Embryo	
Bypass Flow:	200 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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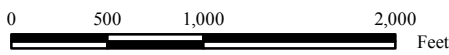
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



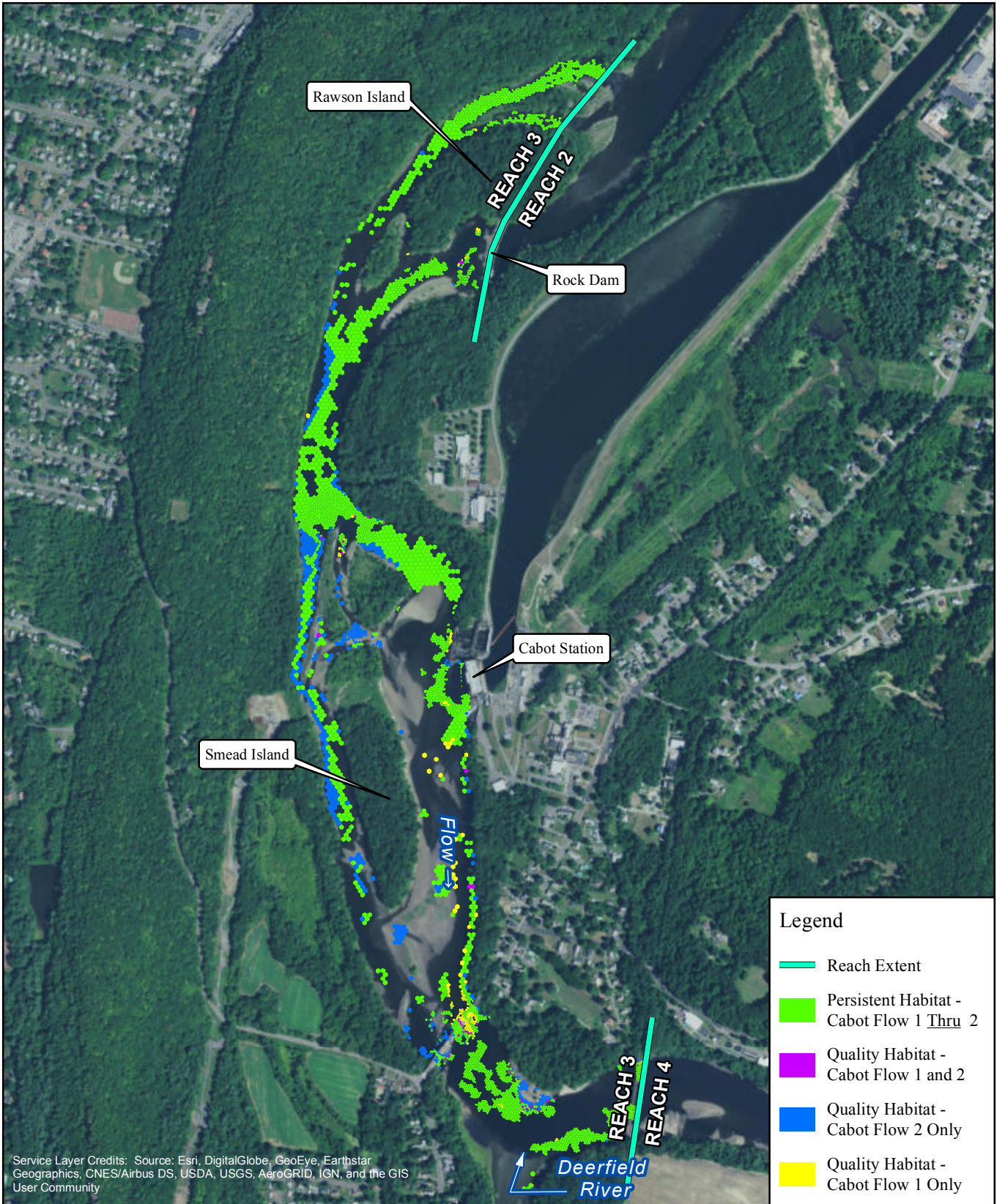
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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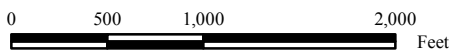
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



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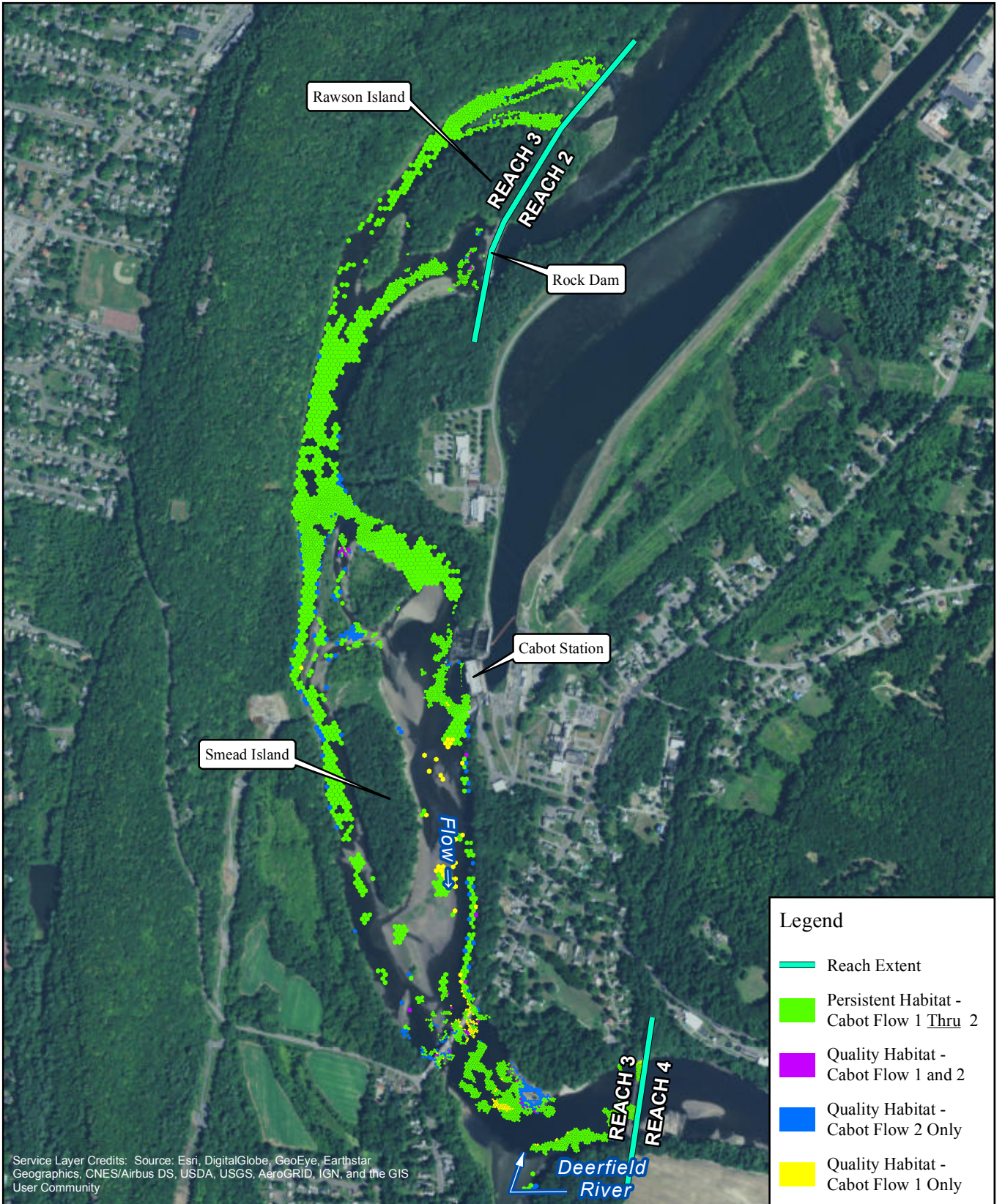
RELICENSING STUDY 3.3.1



Persistent Habitat Shortnose Sturgeon-Egg-Embryo

Bypass Flow:	1000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	9000 cfs

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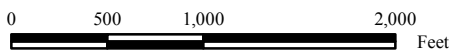
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



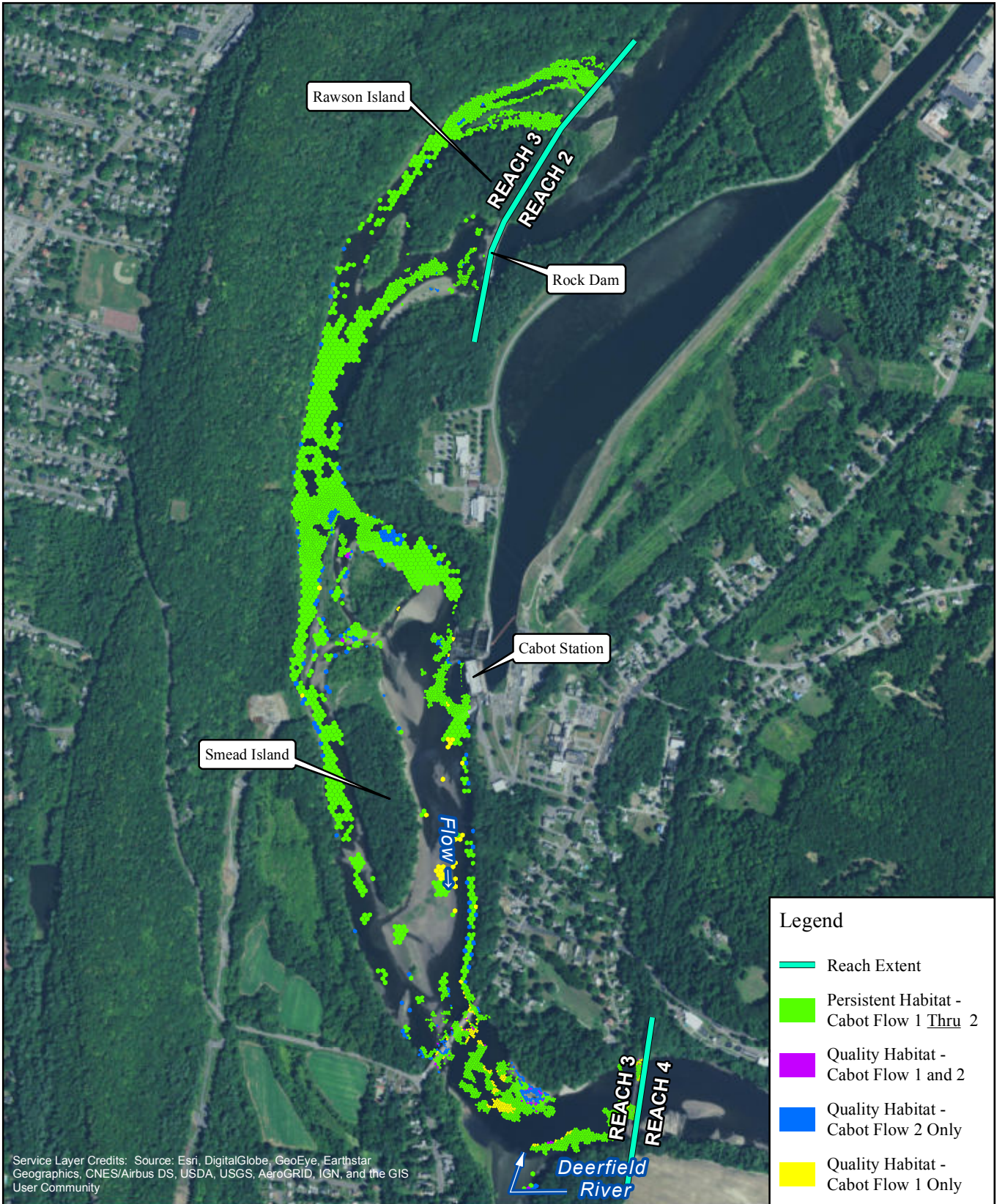
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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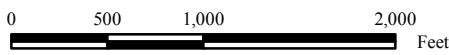
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



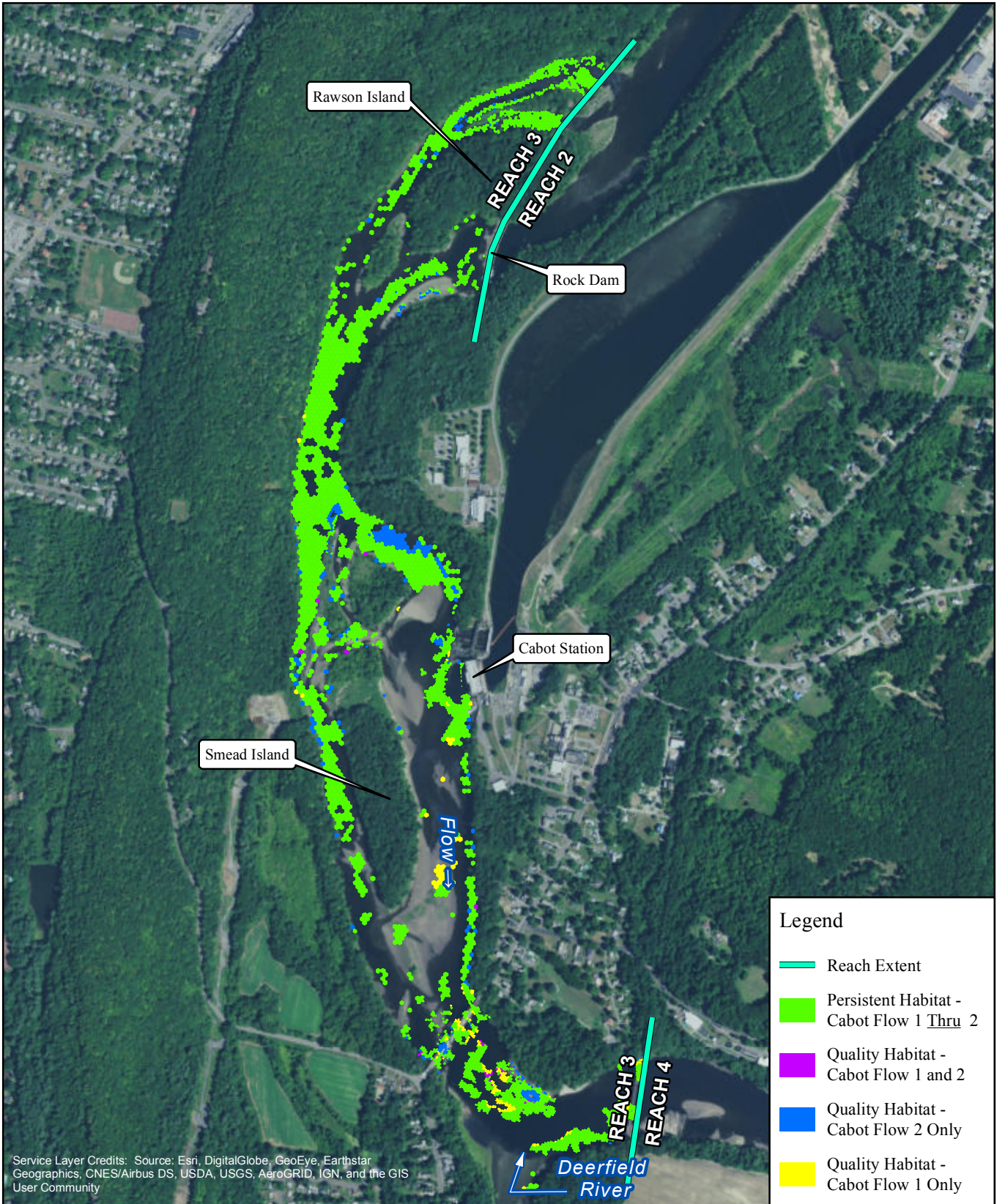
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

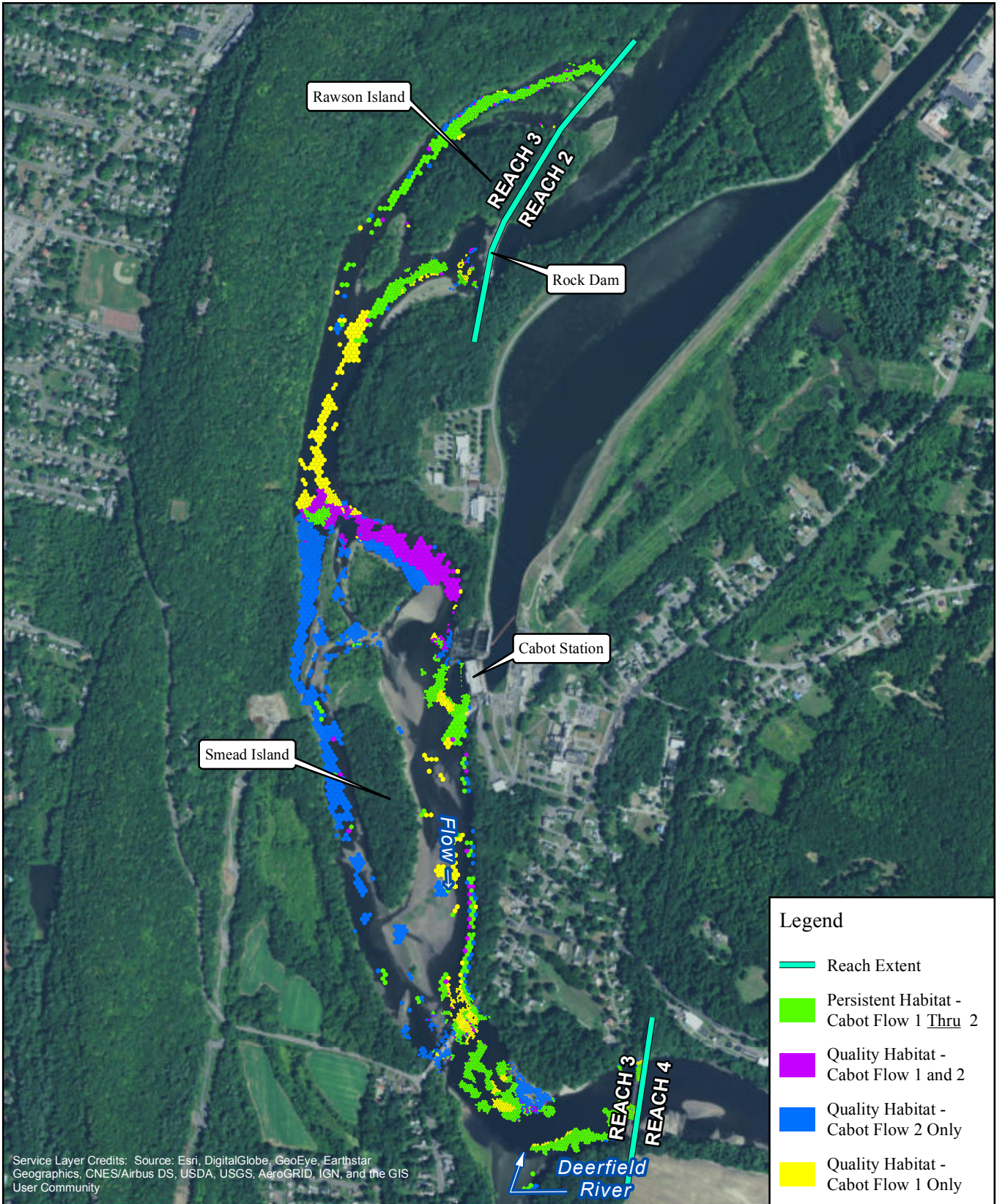
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 6500 cfs
Cabot Flow 1: 4500 cfs
Cabot Flow 2: 9000 cfs

0 500 1,000 2,000 Feet

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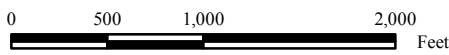
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



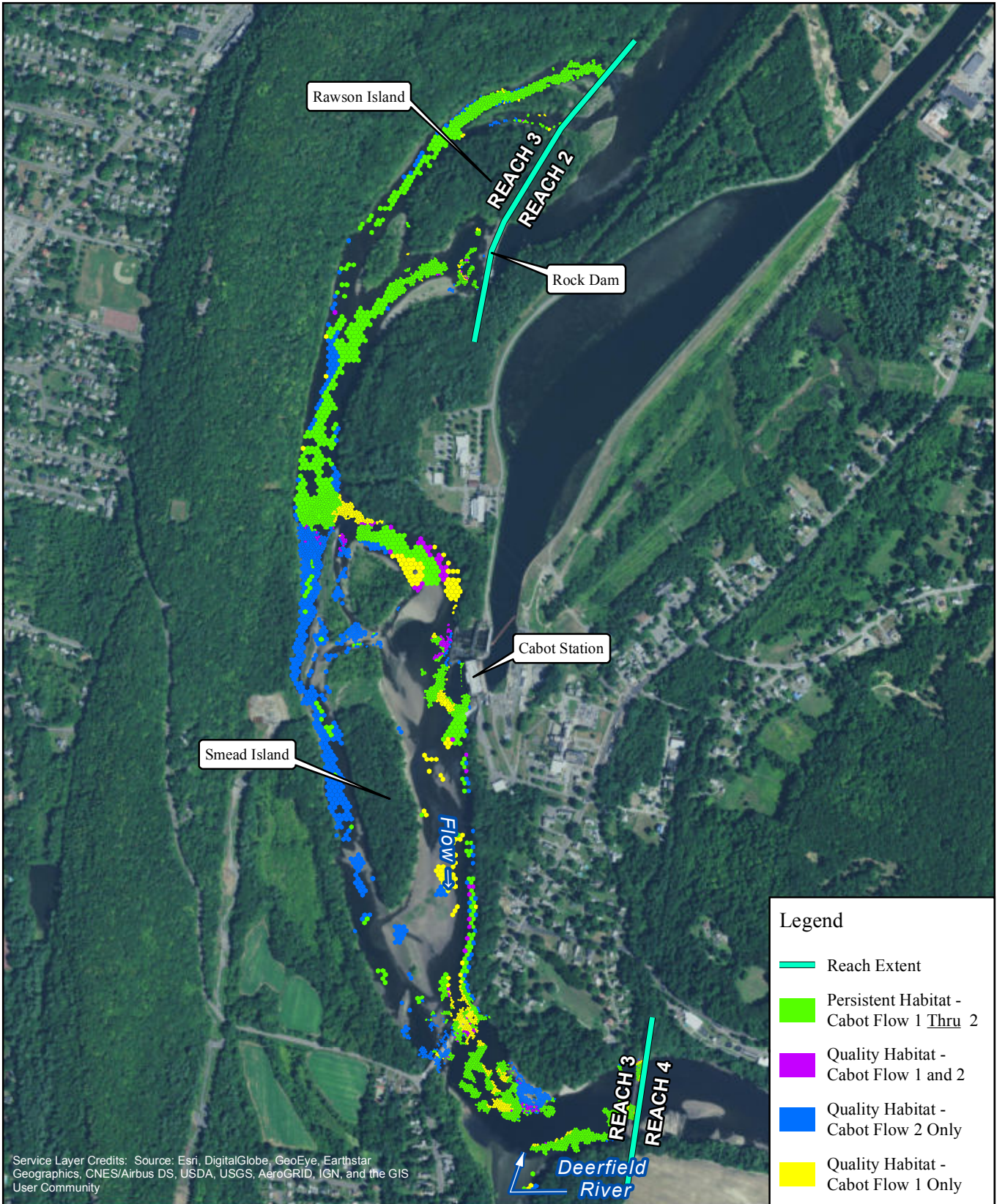
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

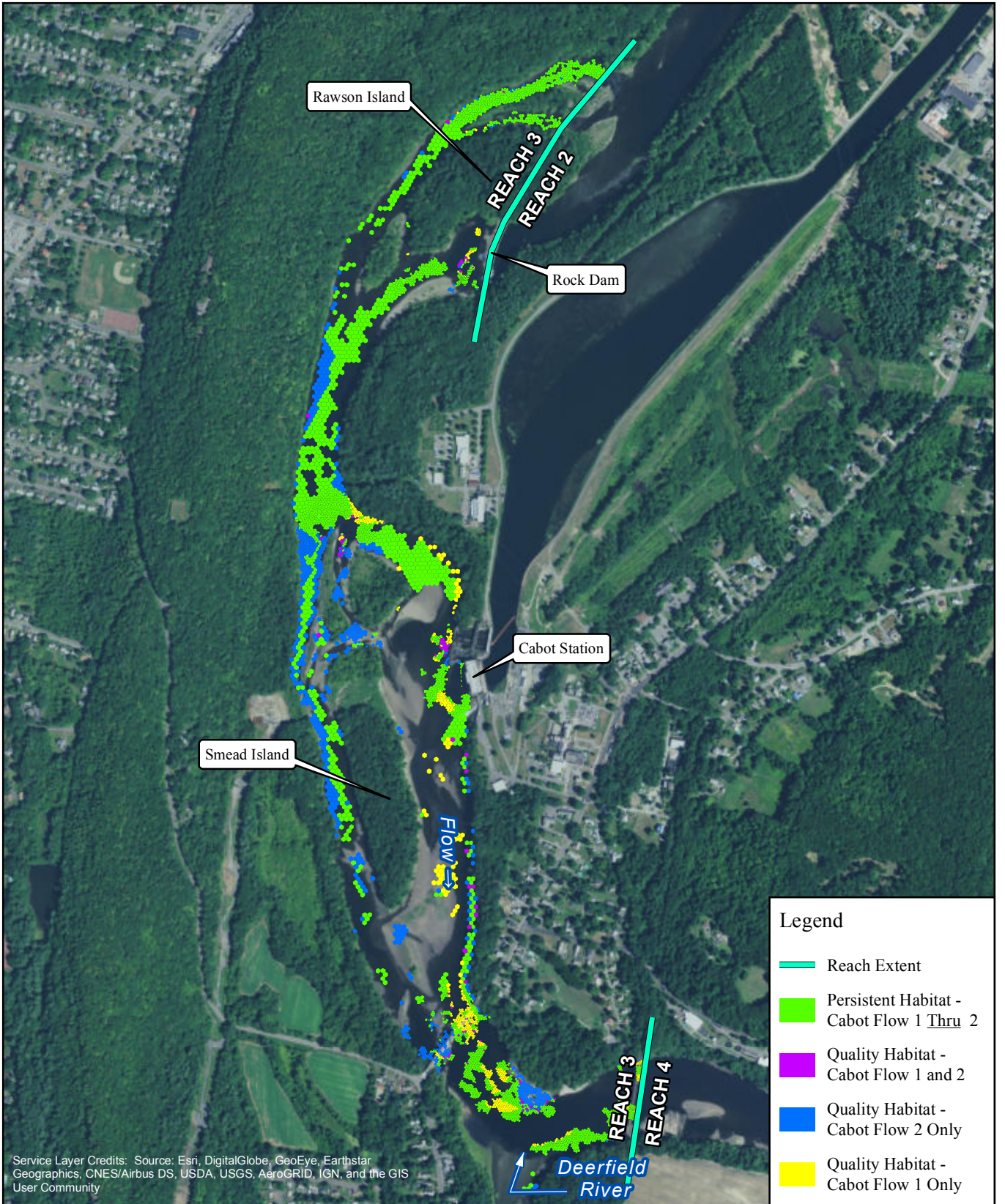
FIRSTLIGHT HYDRO GENERATING COMPANY
Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 500 cfs
Cabot Flow 1: 4500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet


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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



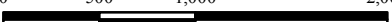
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889
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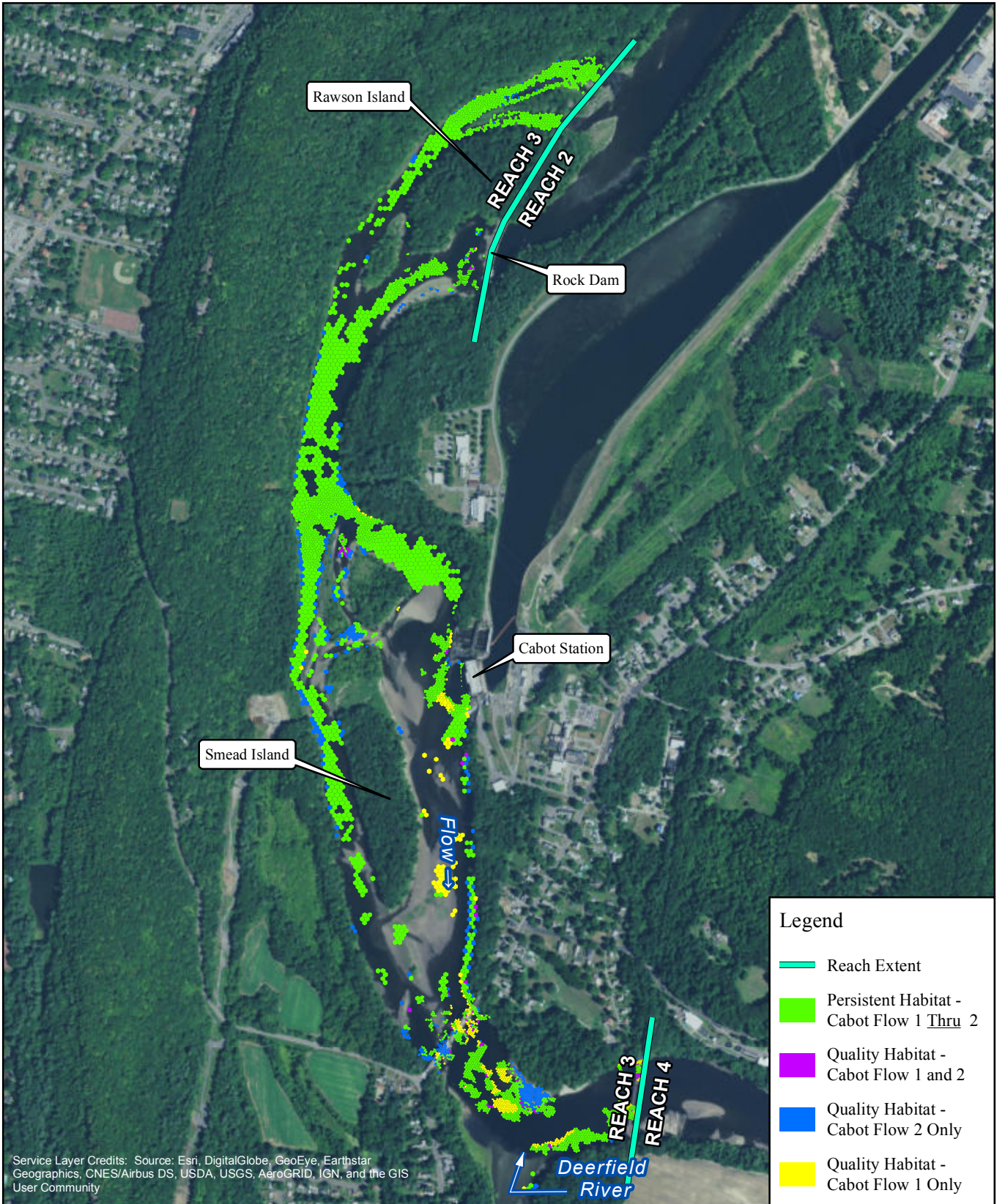
Persistent Habitat
Shortnose Sturgeon-Egg-Embryo

Bypass Flow:	1000 cfs
Cabot Flow 1:	4500 cfs
Cabot Flow 2:	14000 cfs

0 500 1,000 2,000 Feet



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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

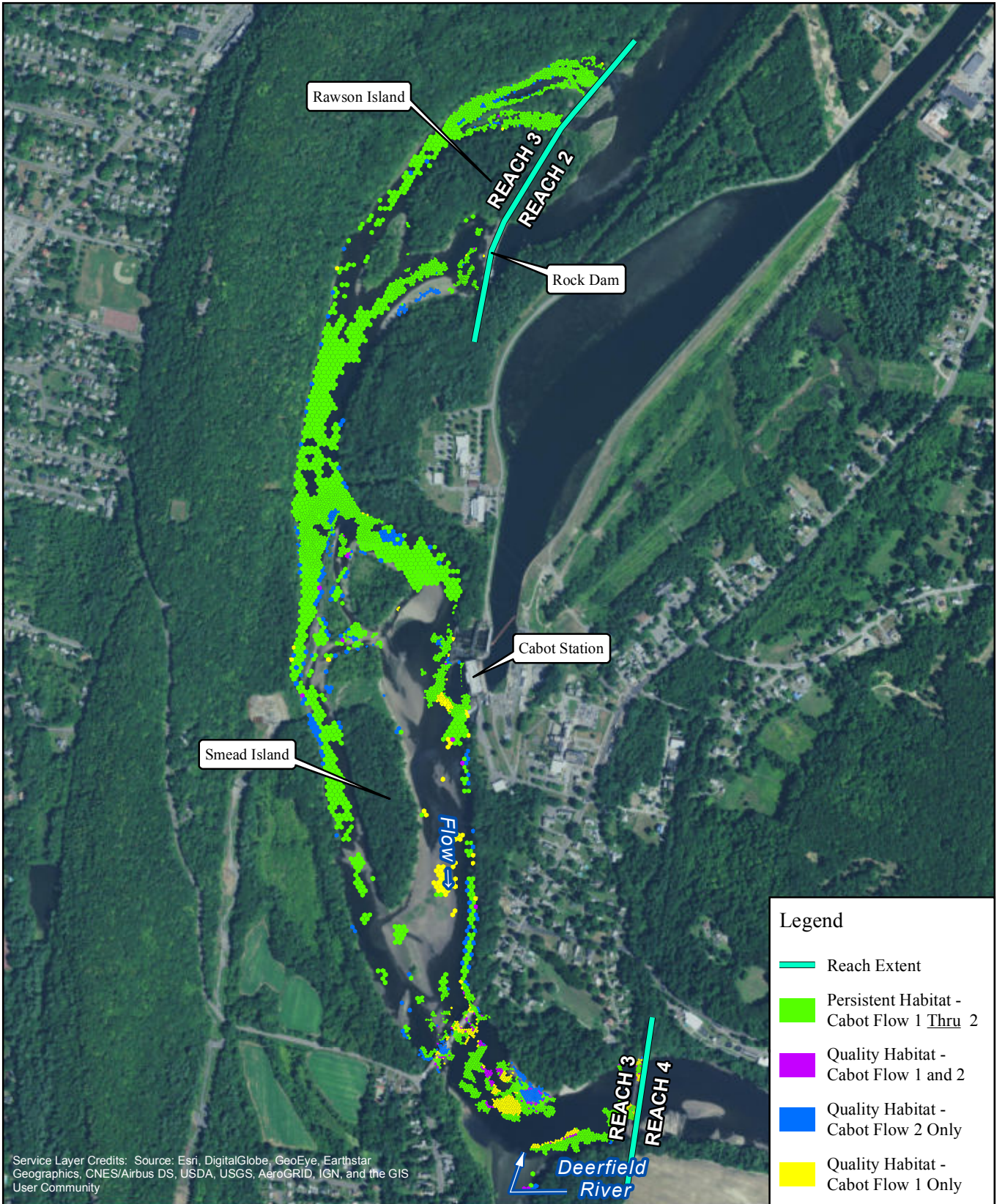
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 3000 cfs
Cabot Flow 1: 4500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet


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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

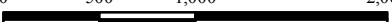


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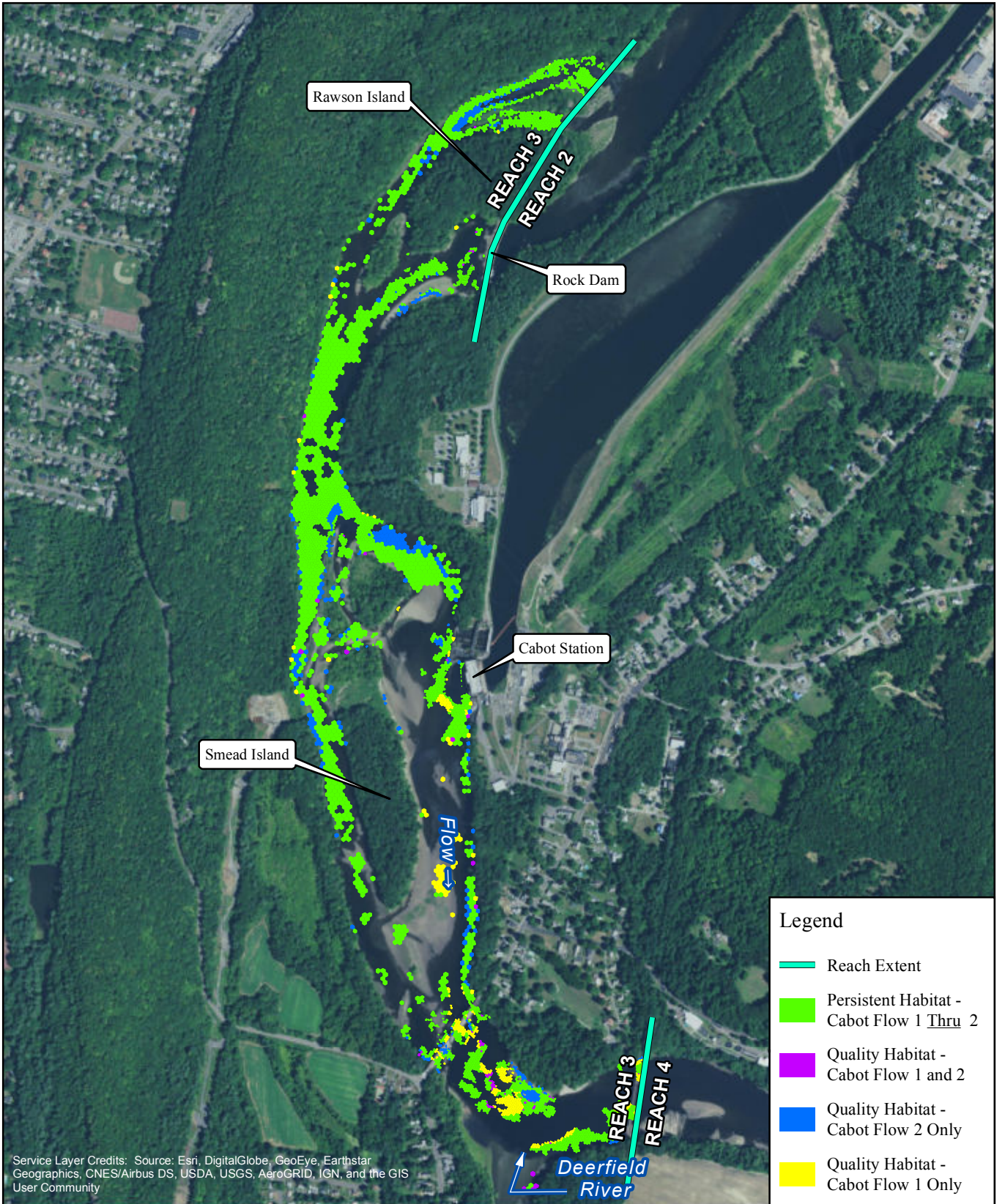
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 5000 cfs
Cabot Flow 1: 4500 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet



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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

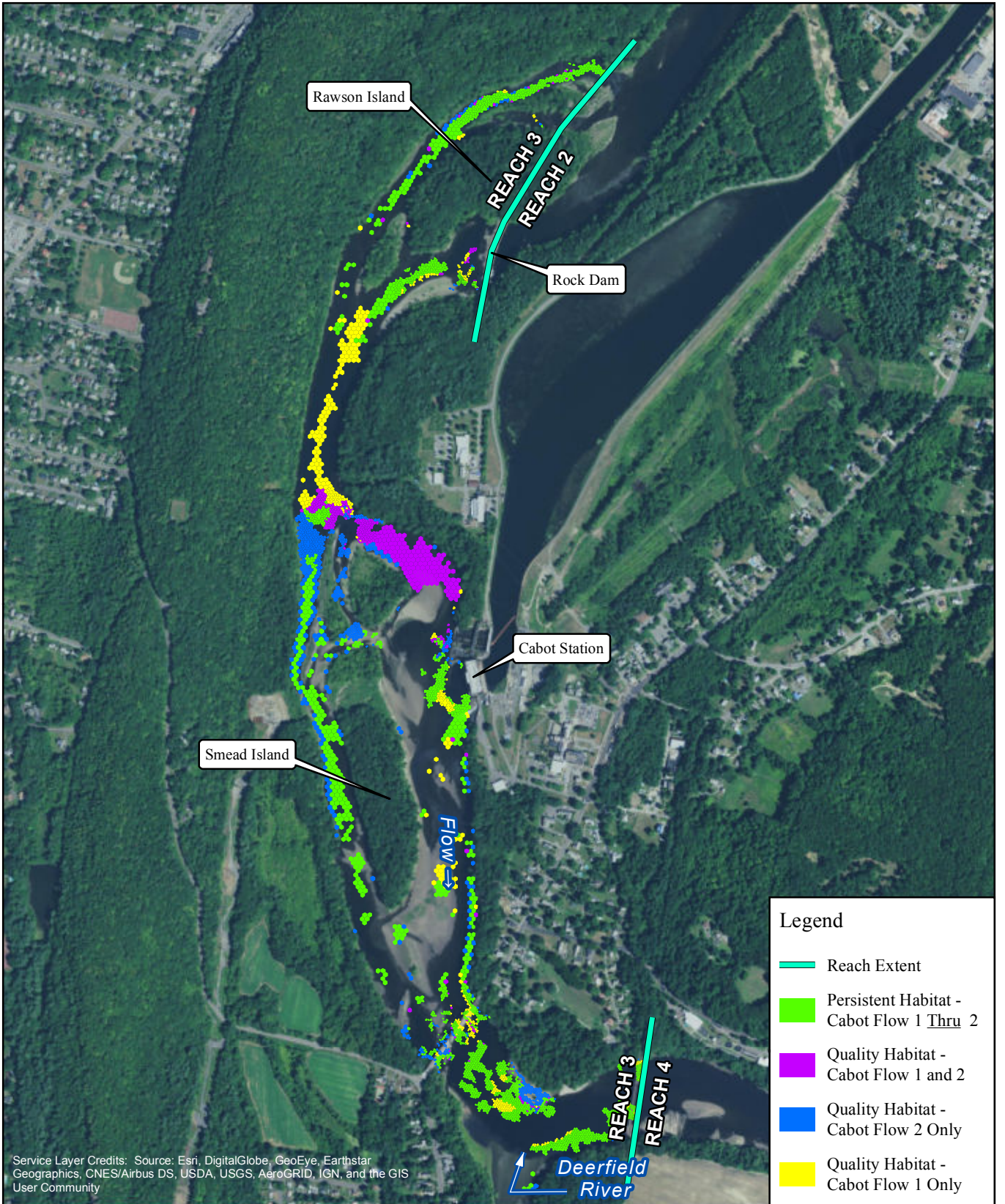
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

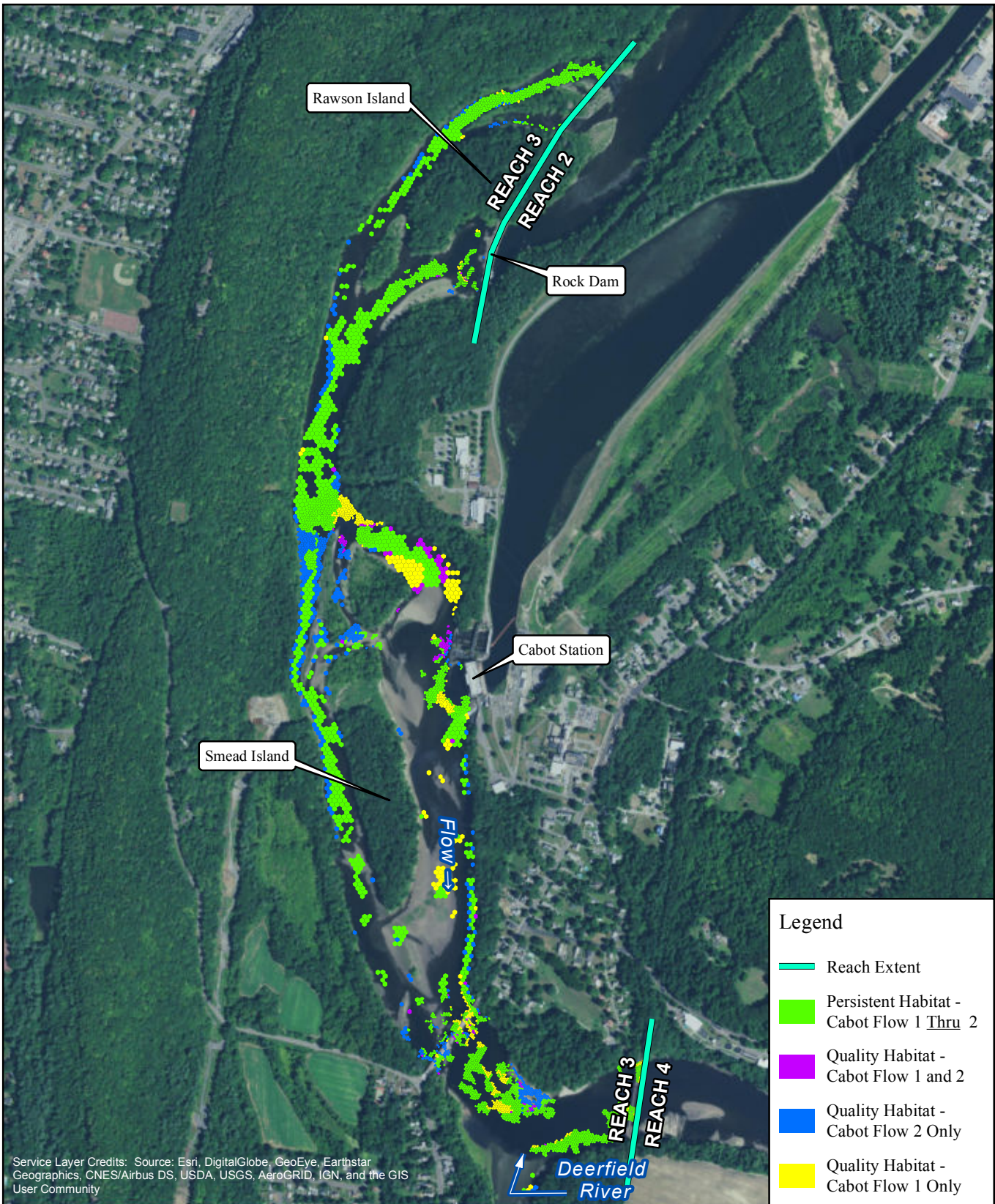
FIRSTLIGHT HYDRO GENERATING COMPANY
 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 200 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

N

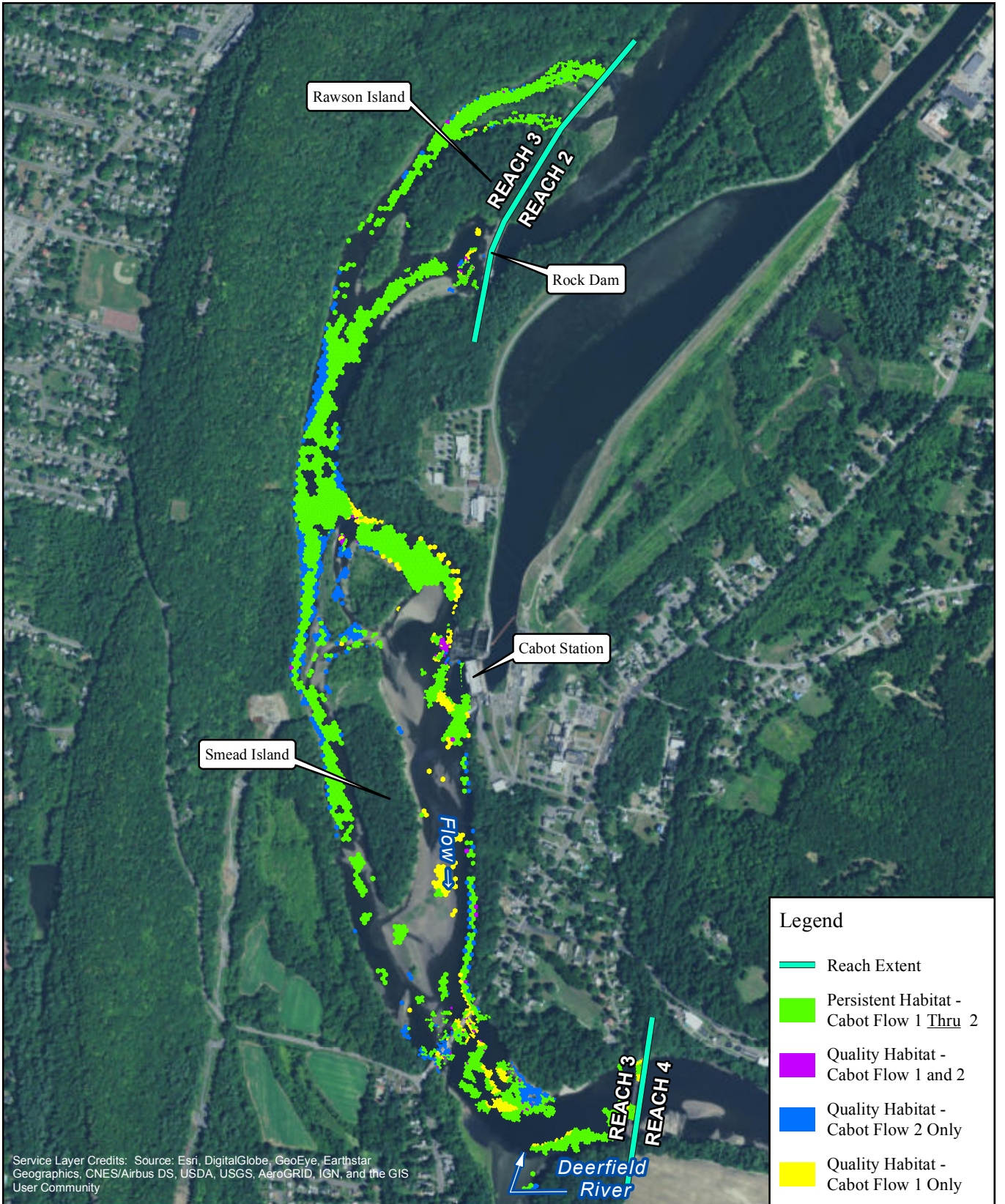
FIRSTLIGHT HYDRO GENERATING COMPANY
Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 500 cfs
Cabot Flow 1: 7000 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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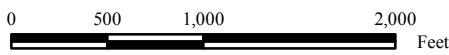
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



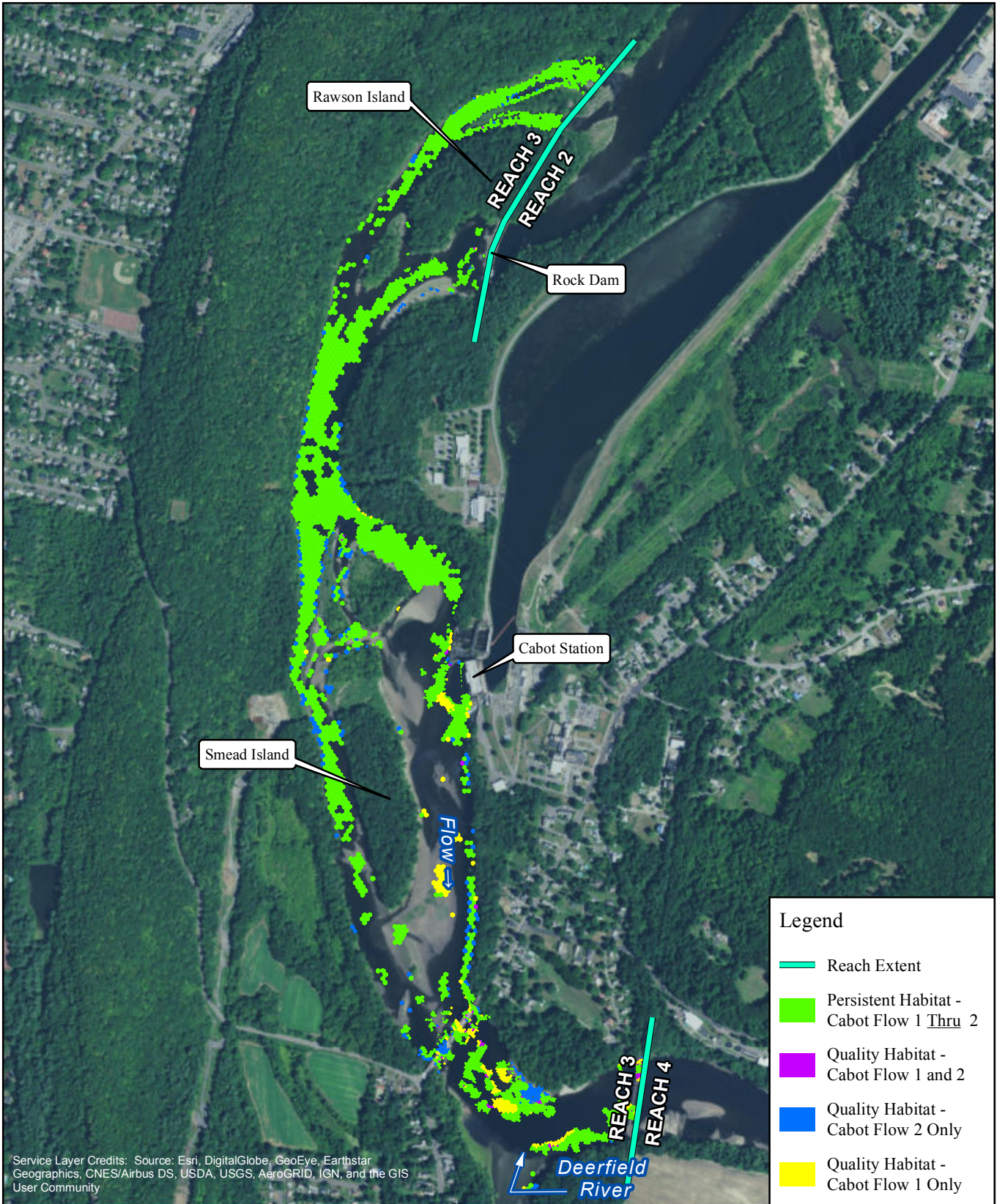
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

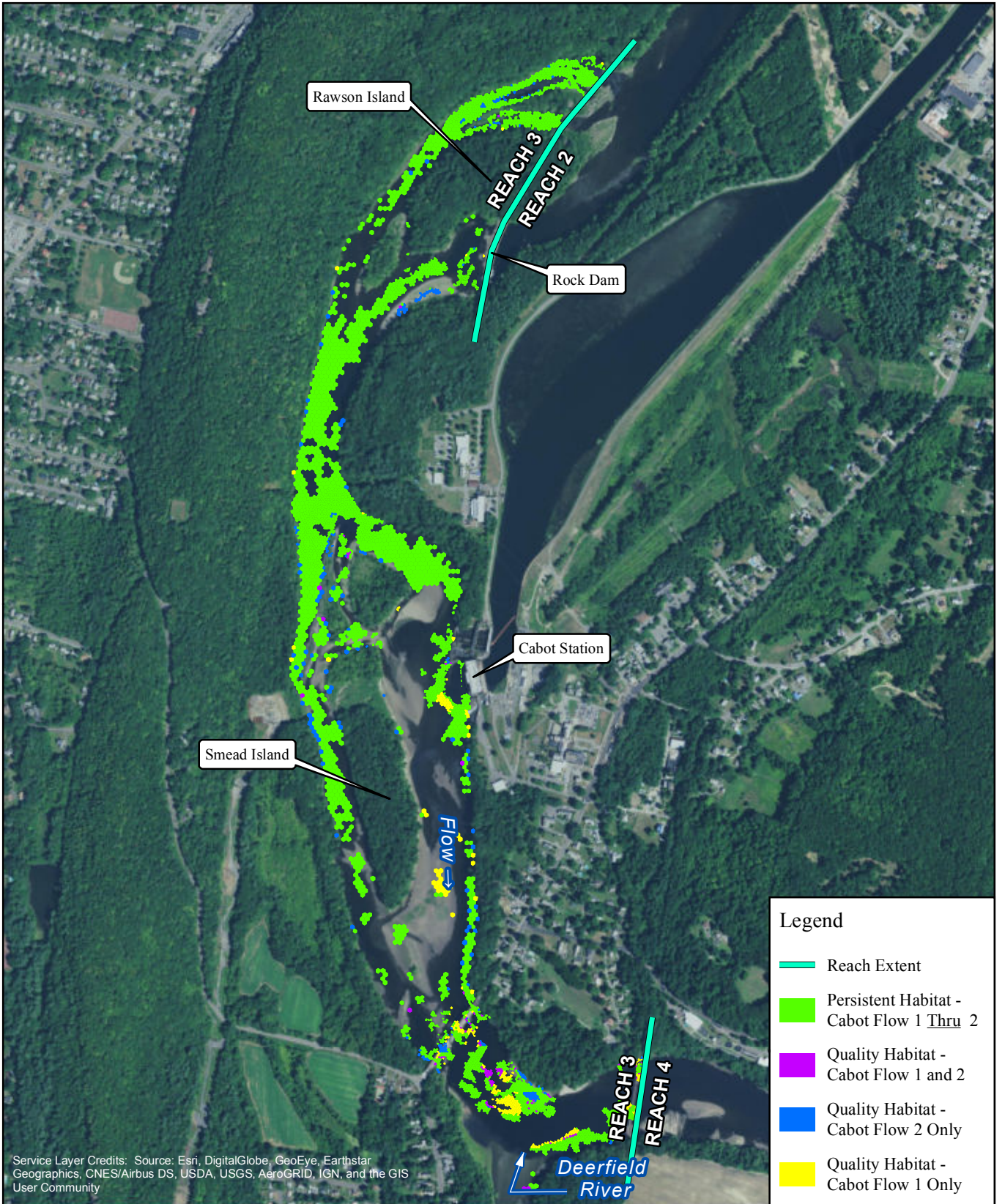
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Egg-Embryo
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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- Quality Habitat - Cabot Flow 2 Only
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N

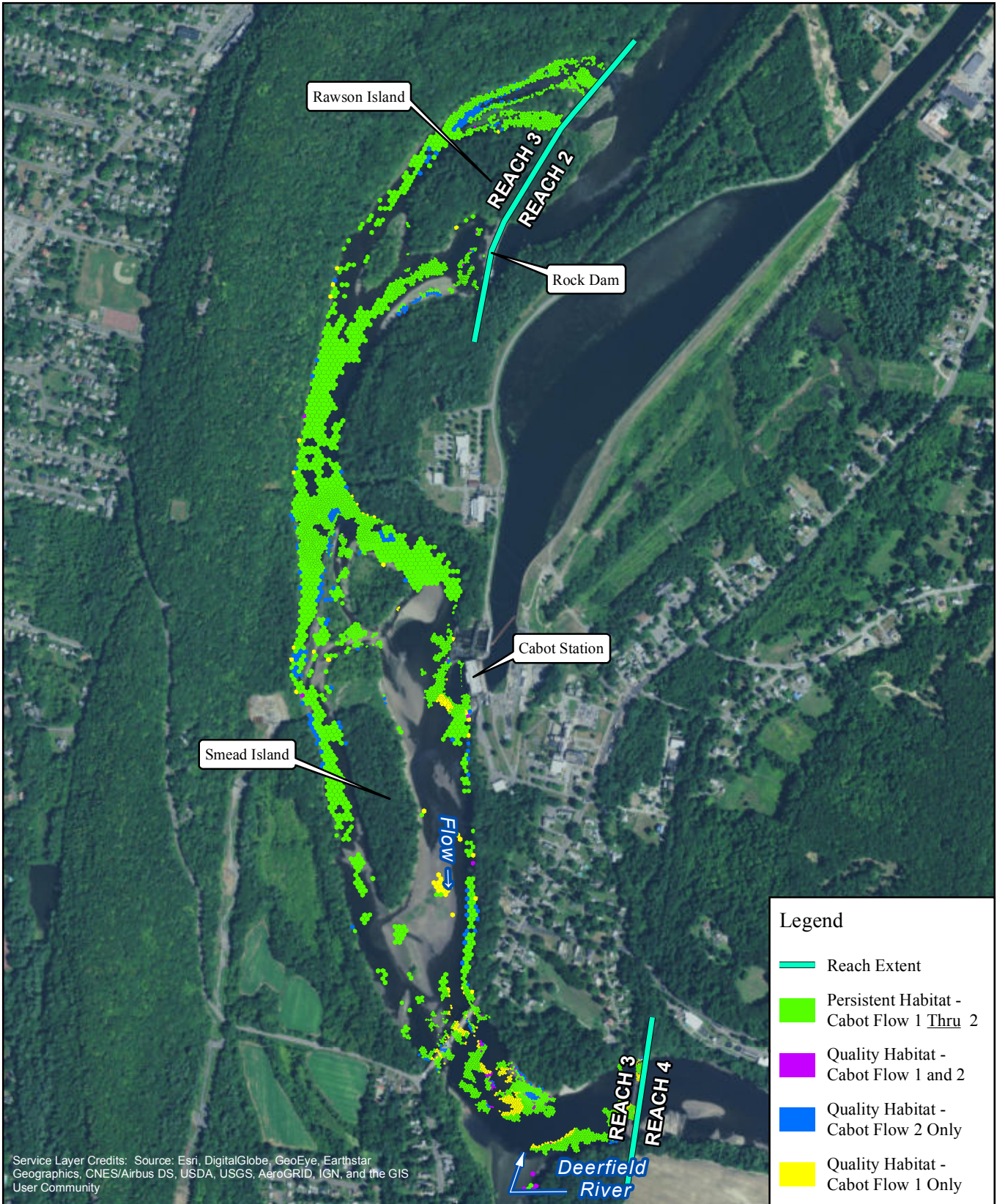
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 5000 cfs
Cabot Flow 1: 7000 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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Legend

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- Quality Habitat - Cabot Flow 1 Only

N

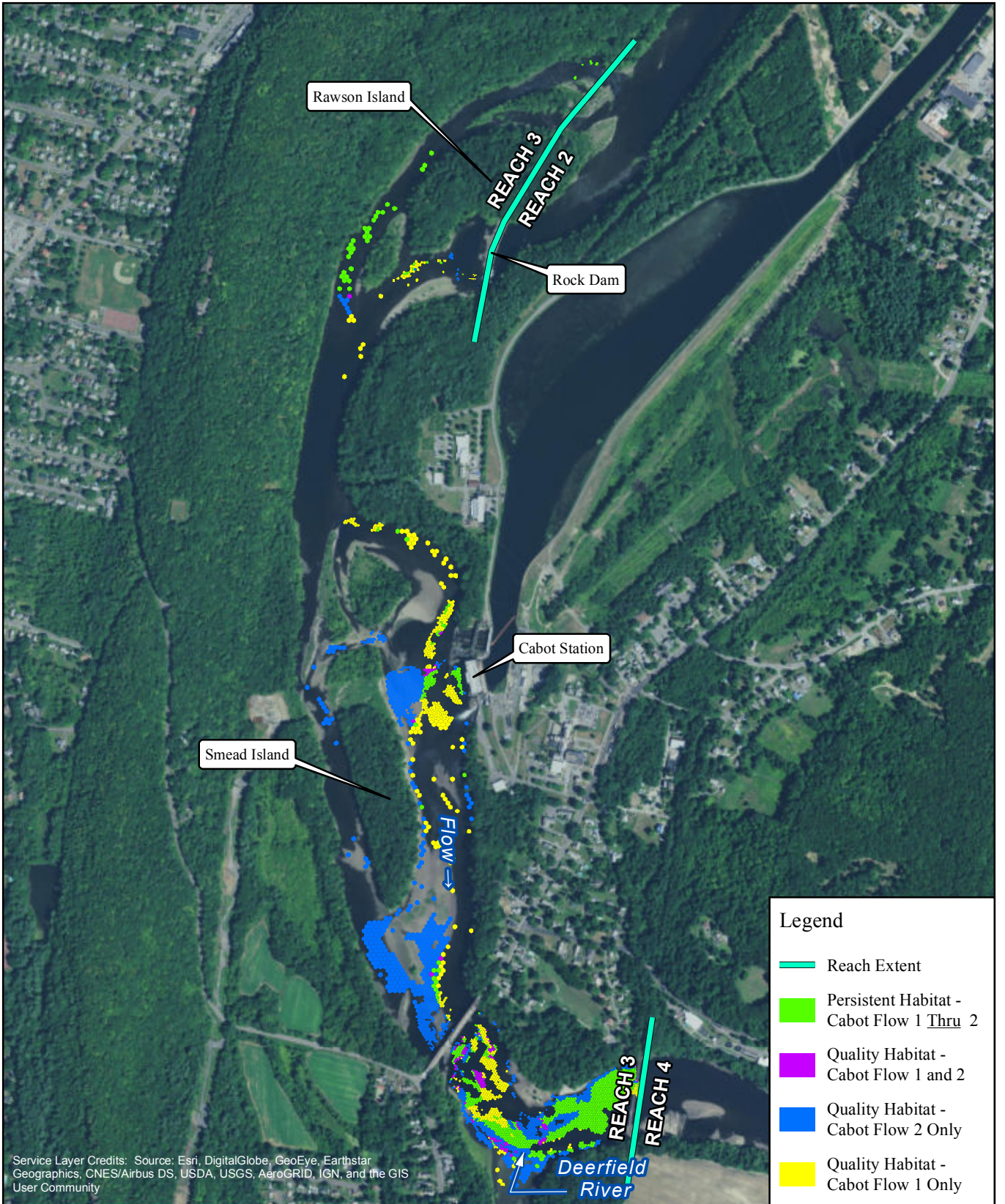
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Egg-Embryo
Bypass Flow: 6500 cfs
Cabot Flow 1: 7000 cfs
Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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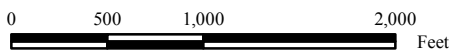
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



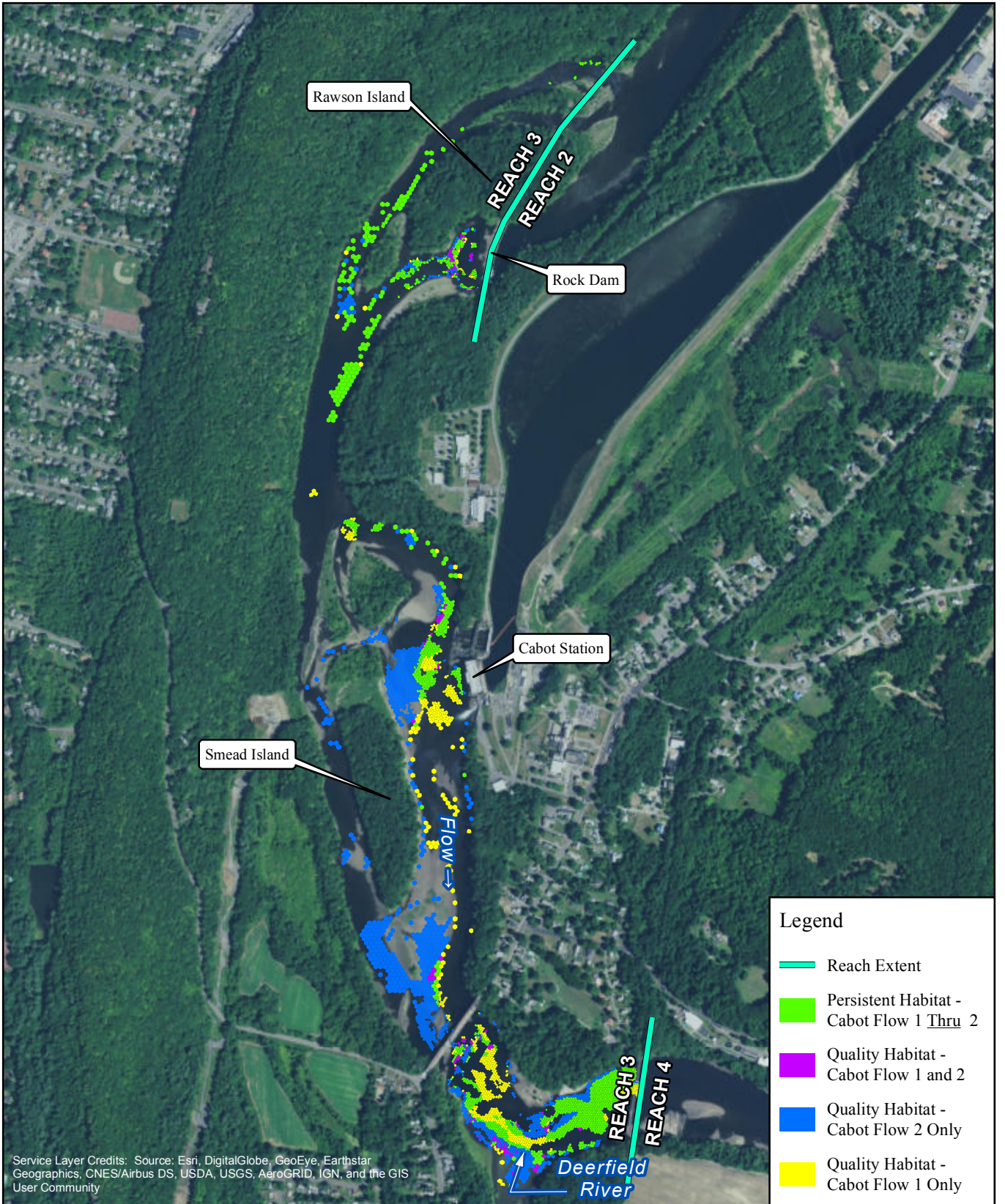
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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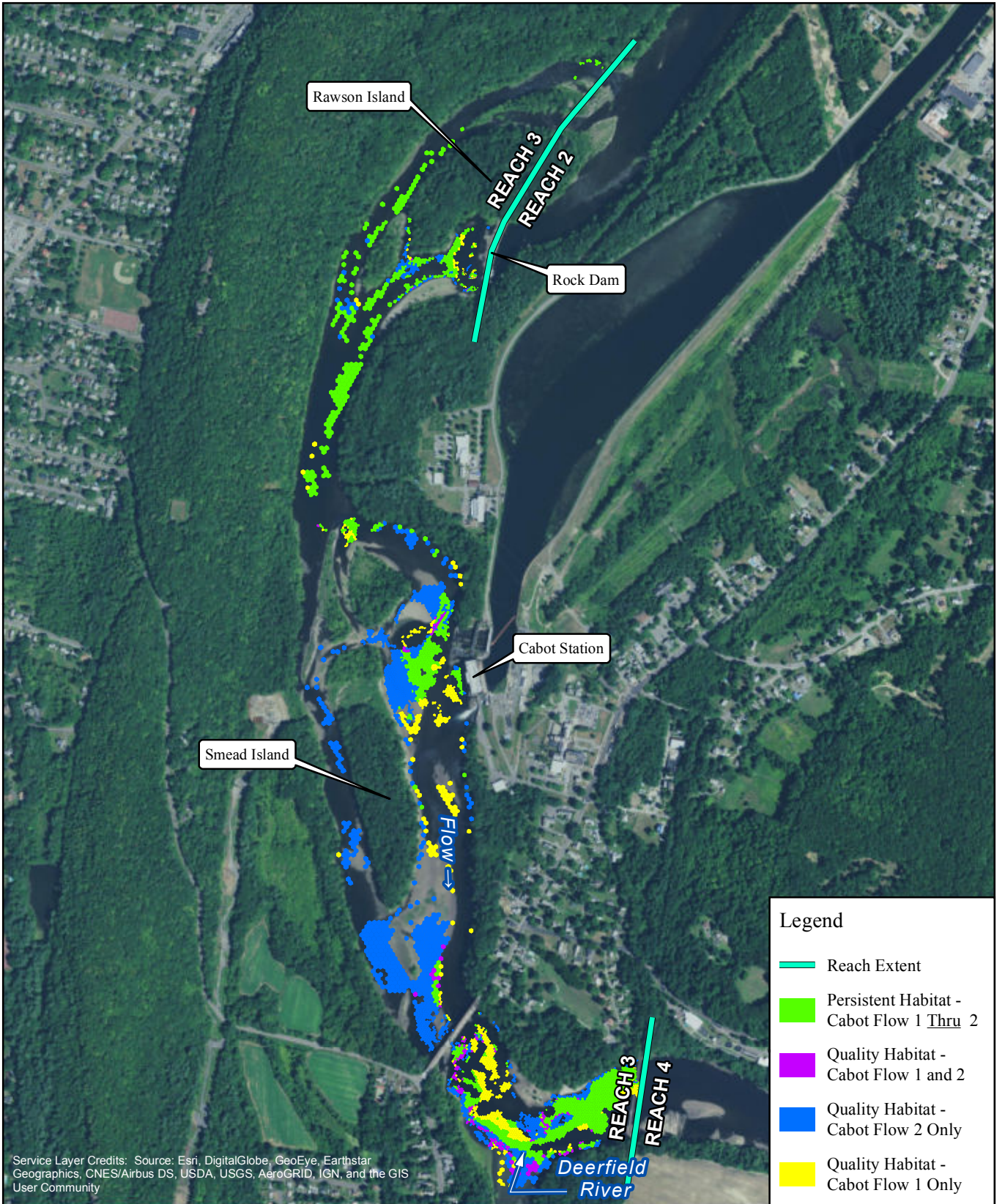
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

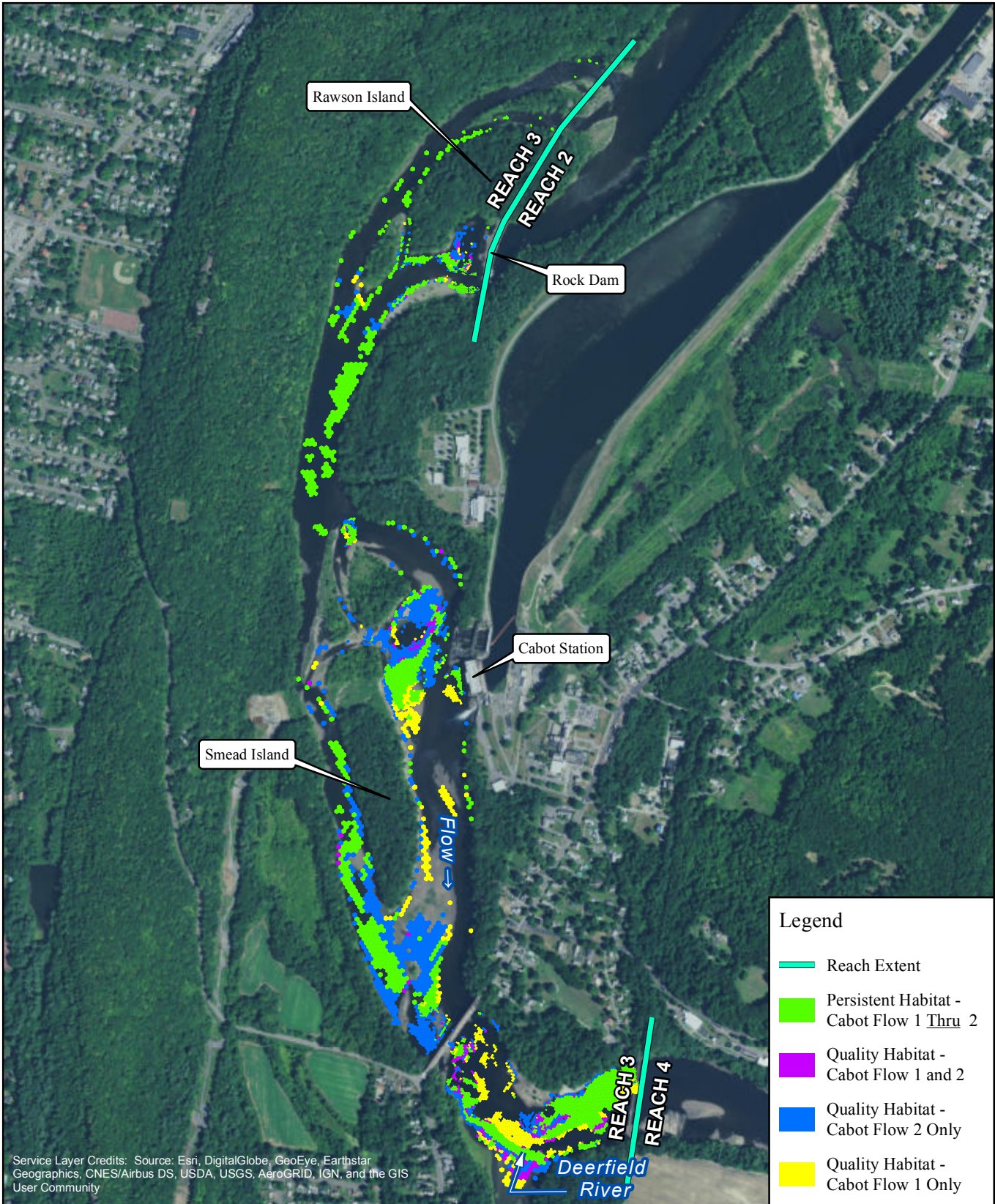
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

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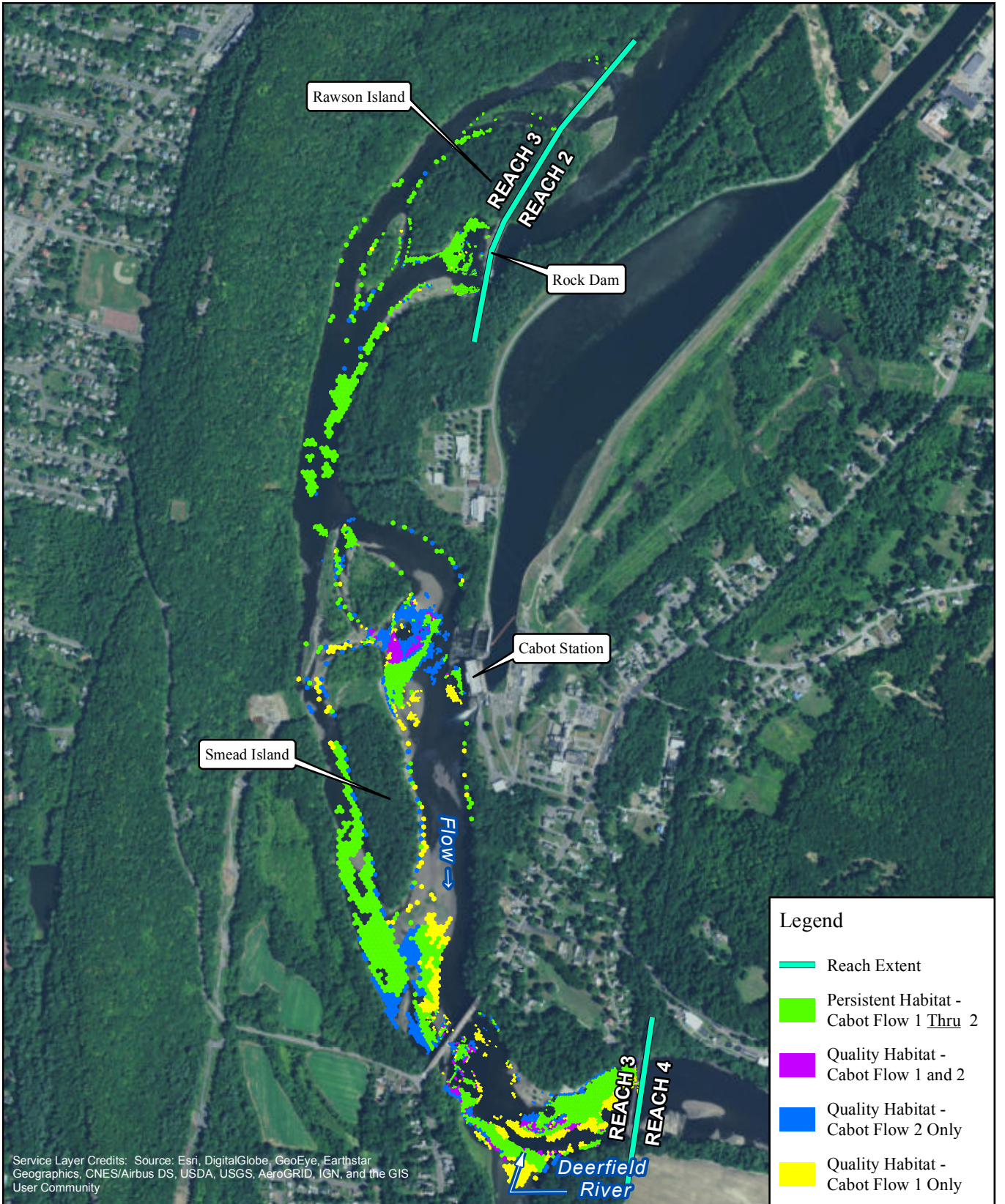
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Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1

Persistent Habitat
Shortnose Sturgeon-Fry
Bypass Flow: 3000 cfs
Cabot Flow 1: 2500 cfs
Cabot Flow 2: 7000 cfs

0 500 1,000 2,000 Feet

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

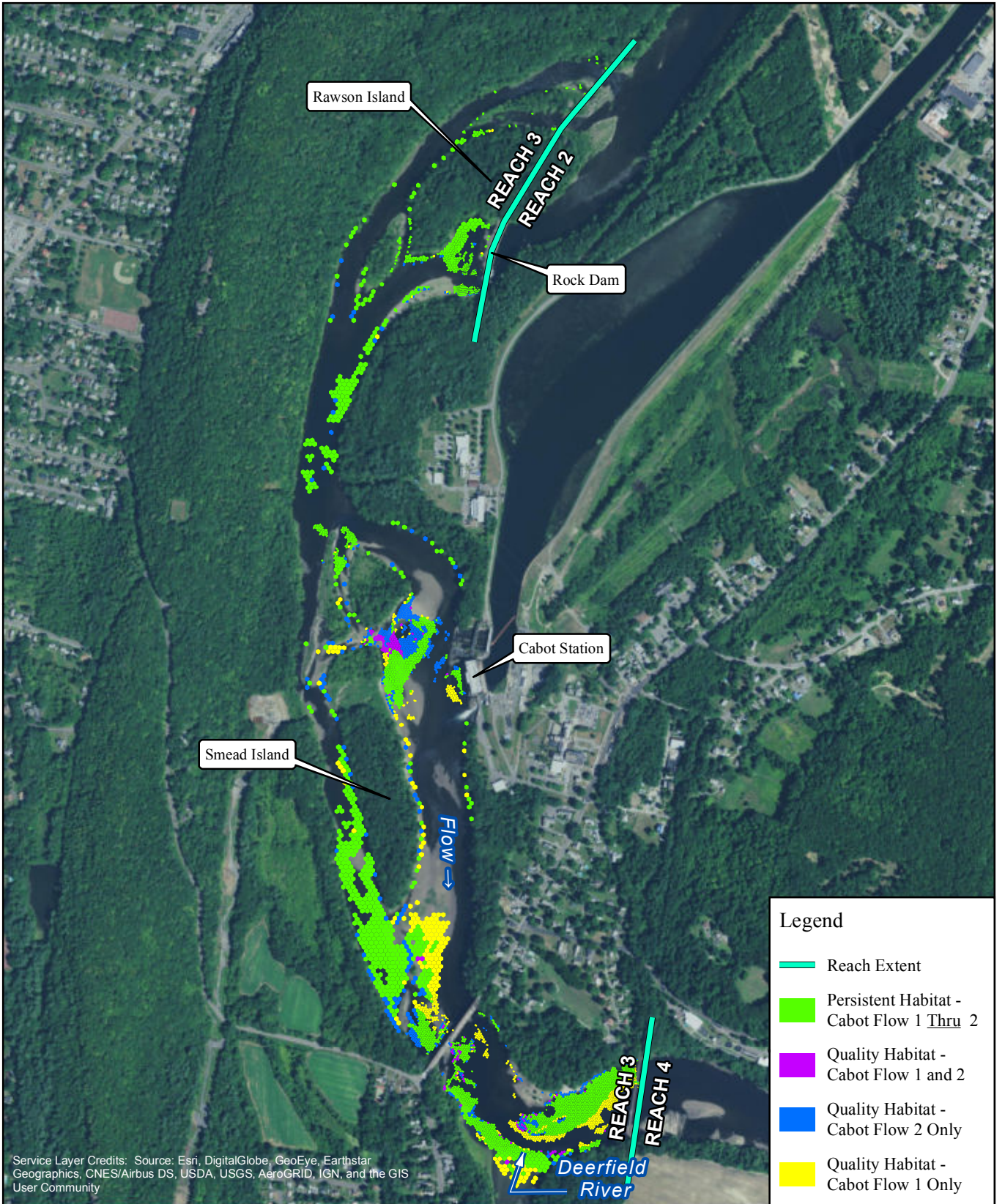
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

0 500 1,000 2,000 Feet

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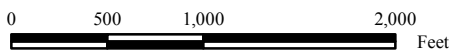
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
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- Quality Habitat - Cabot Flow 1 Only



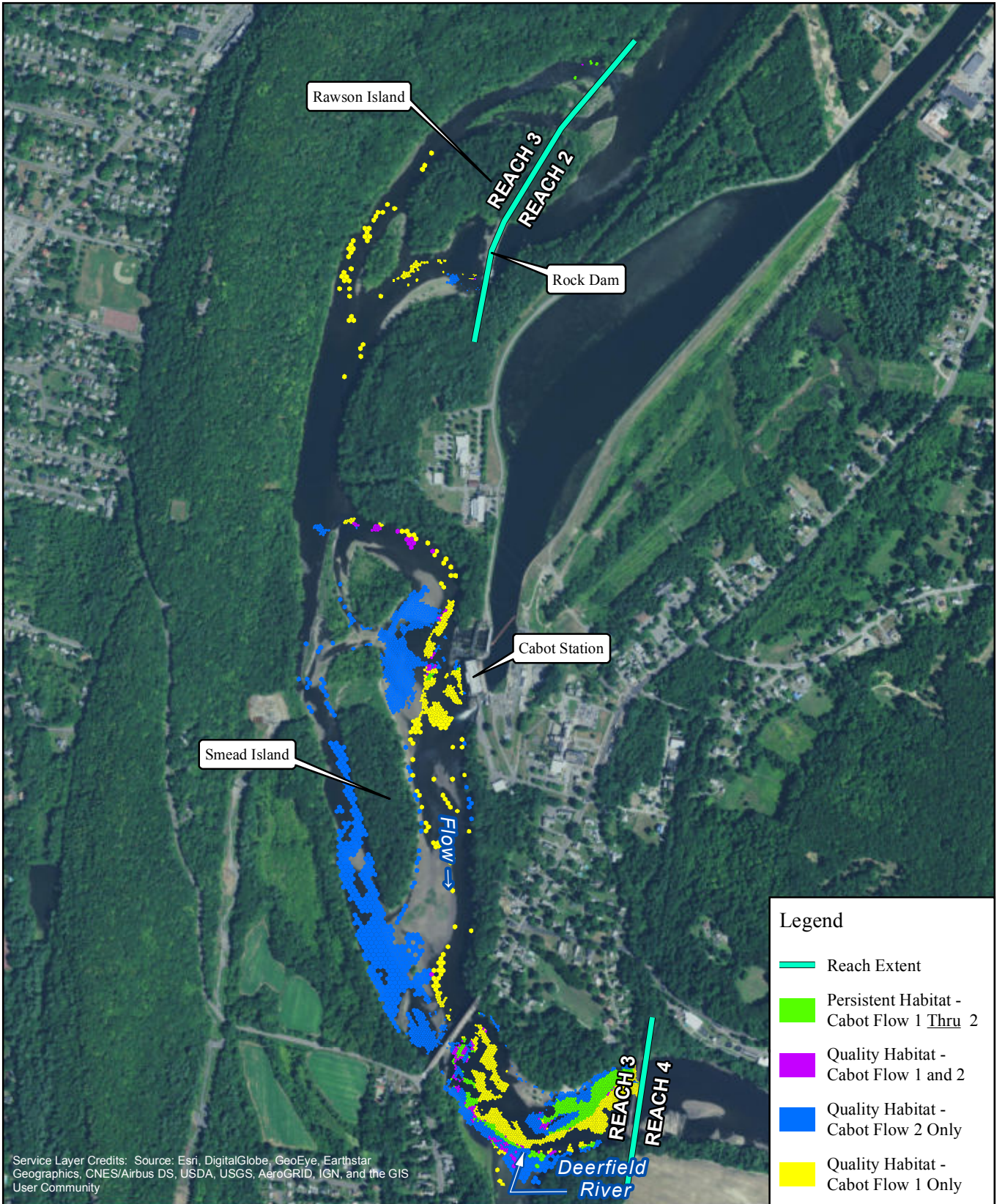
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 7000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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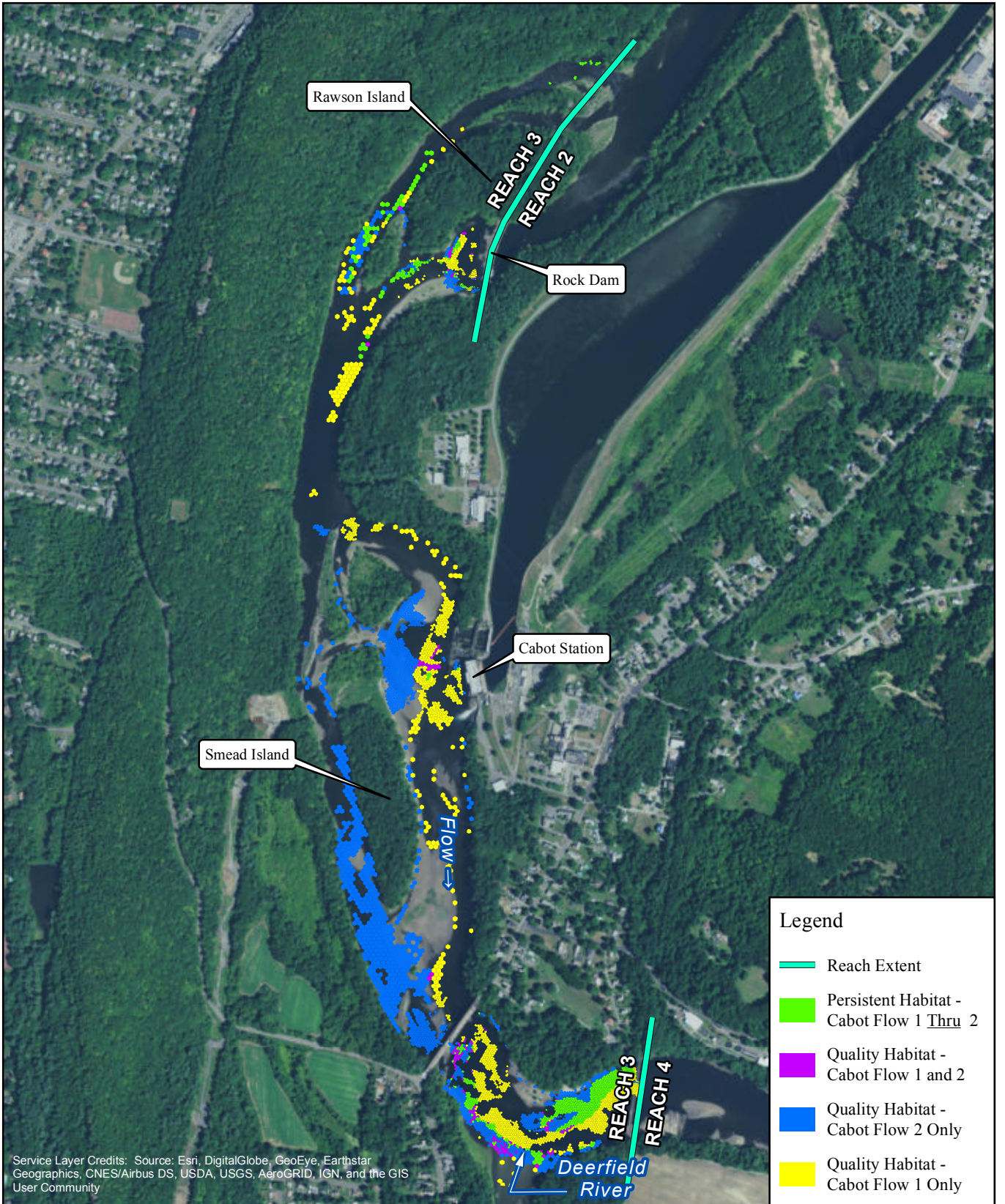
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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 200 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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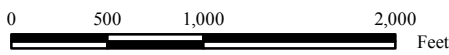
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



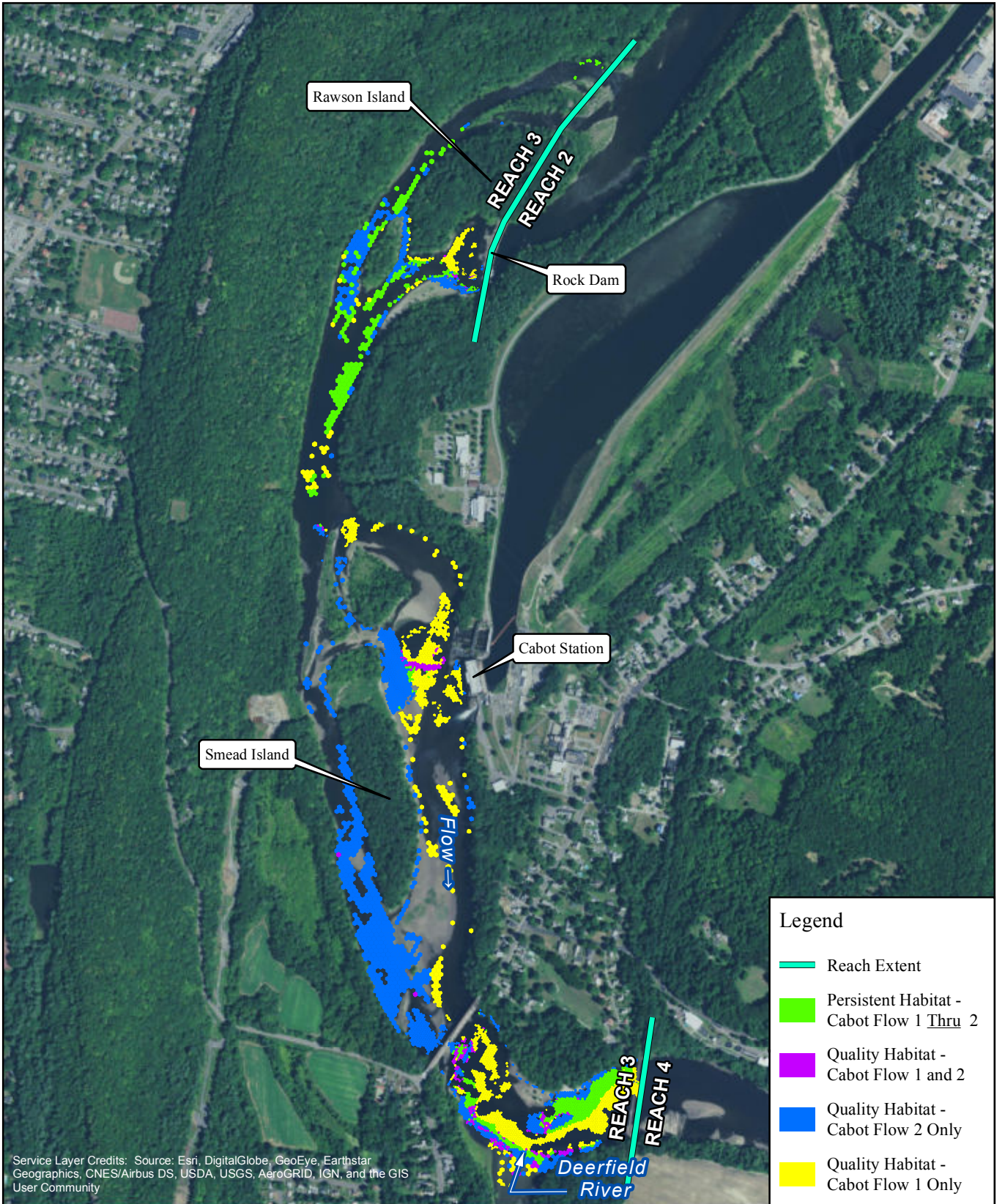
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 500 cfs
 Cabot Flow 1: 2500 cfs
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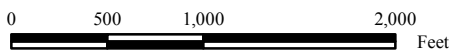
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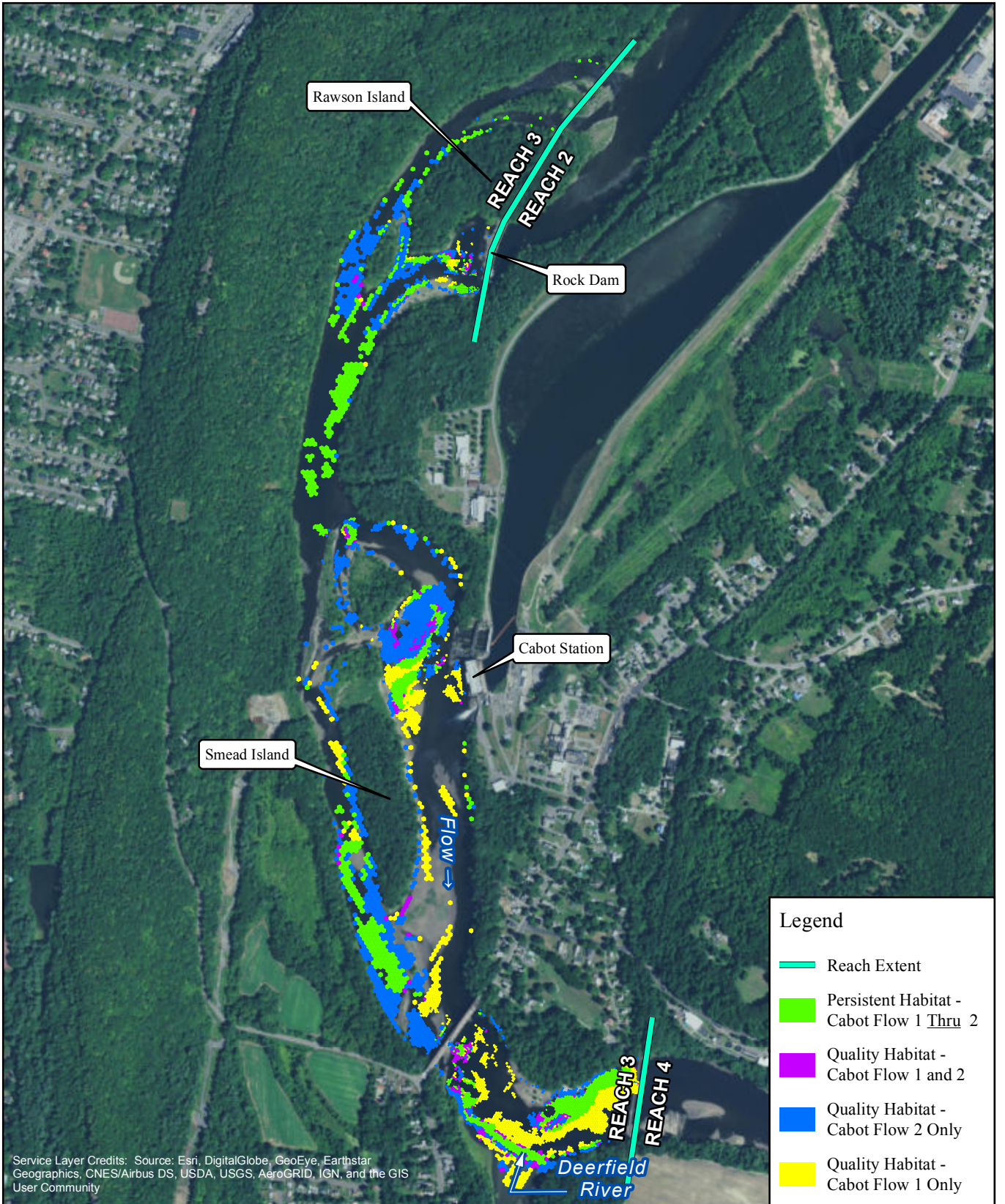
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Persistent Habitat
 Shortnose Sturgeon-Fry
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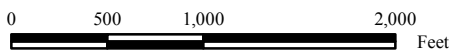
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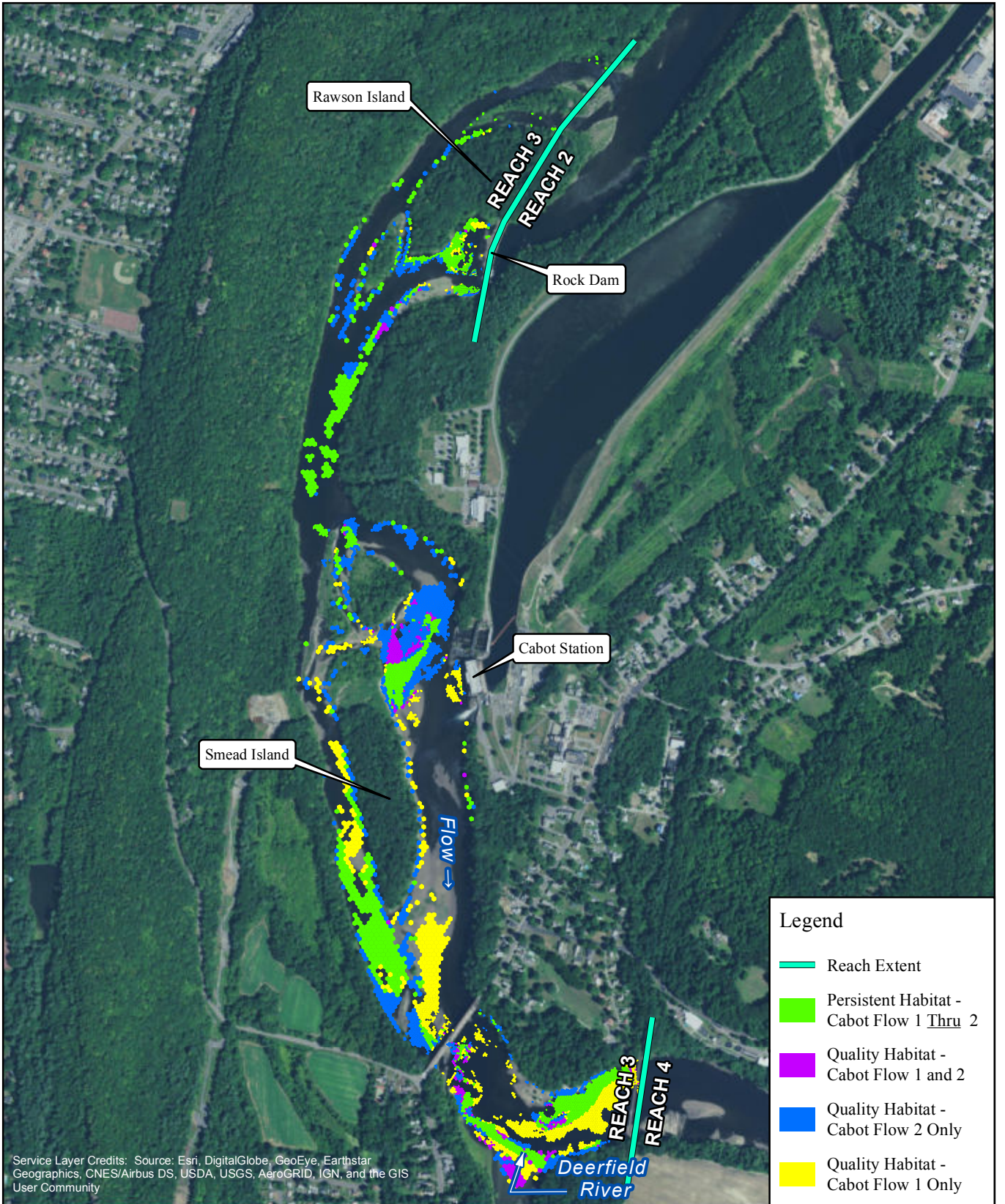
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
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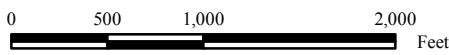
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 and 2
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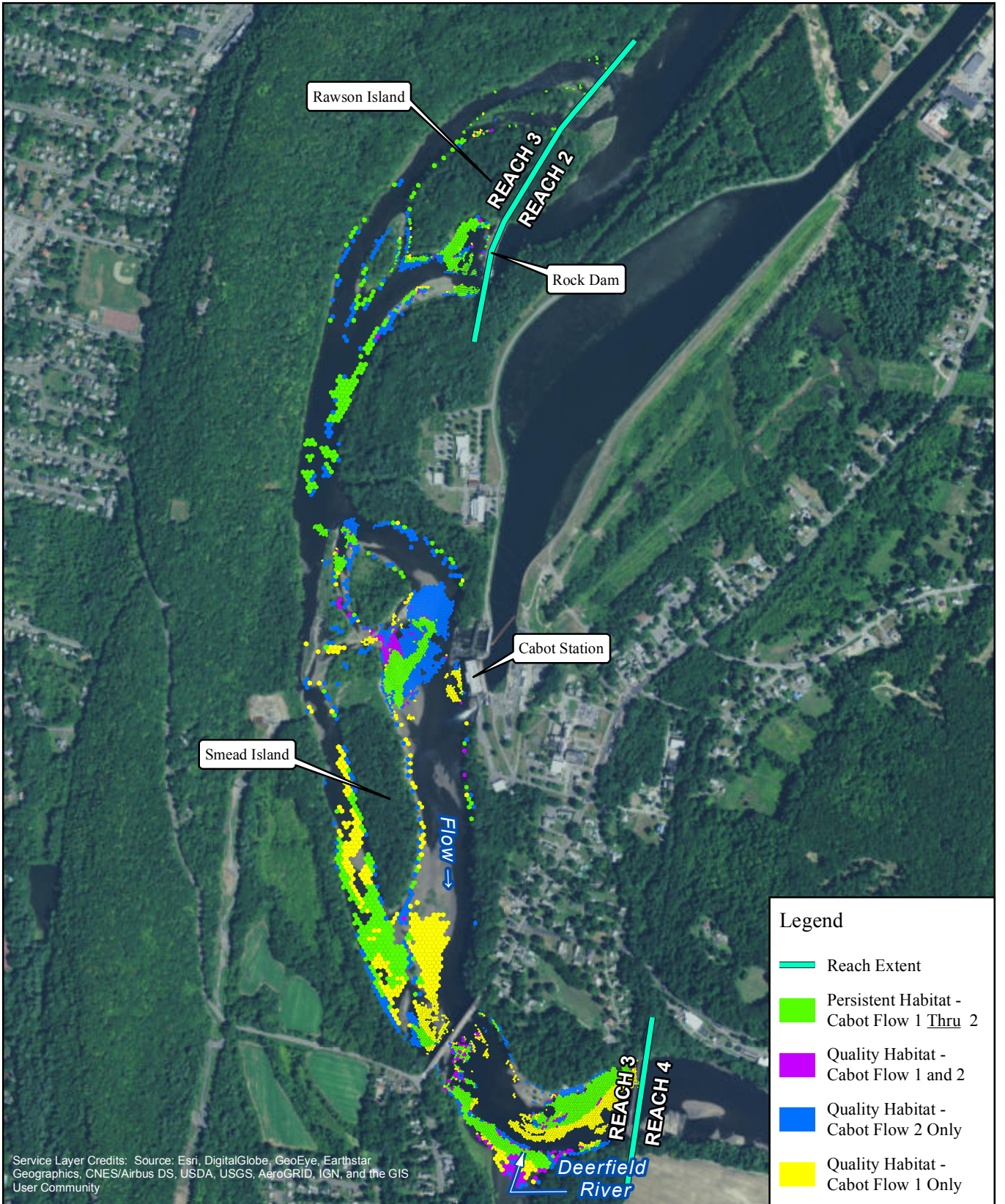
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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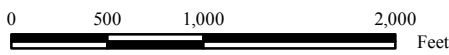
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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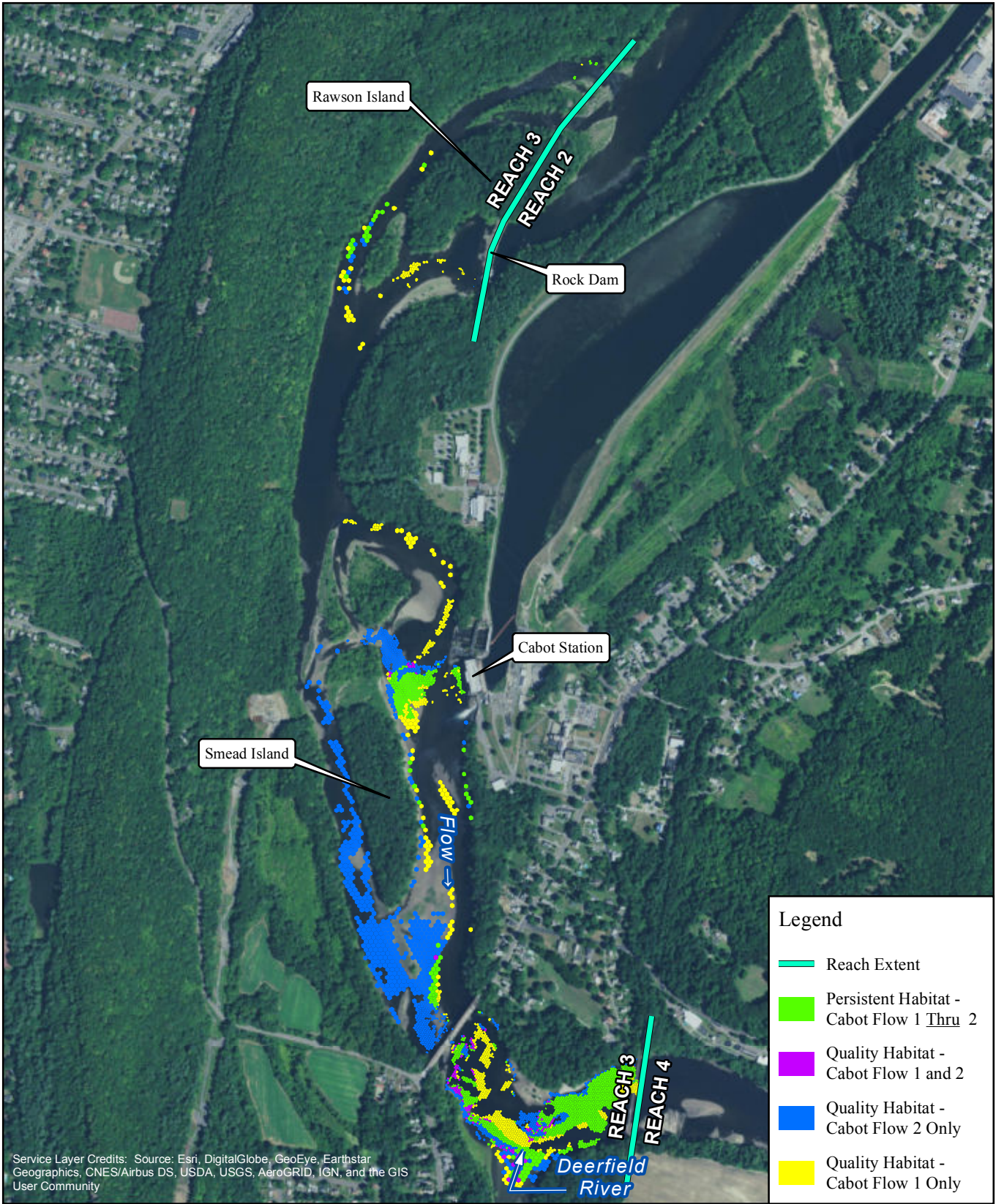
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 2500 cfs
 Cabot Flow 2: 14000 cfs

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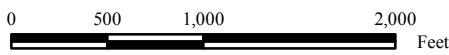
Legend

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- Quality Habitat - Cabot Flow 1 Only



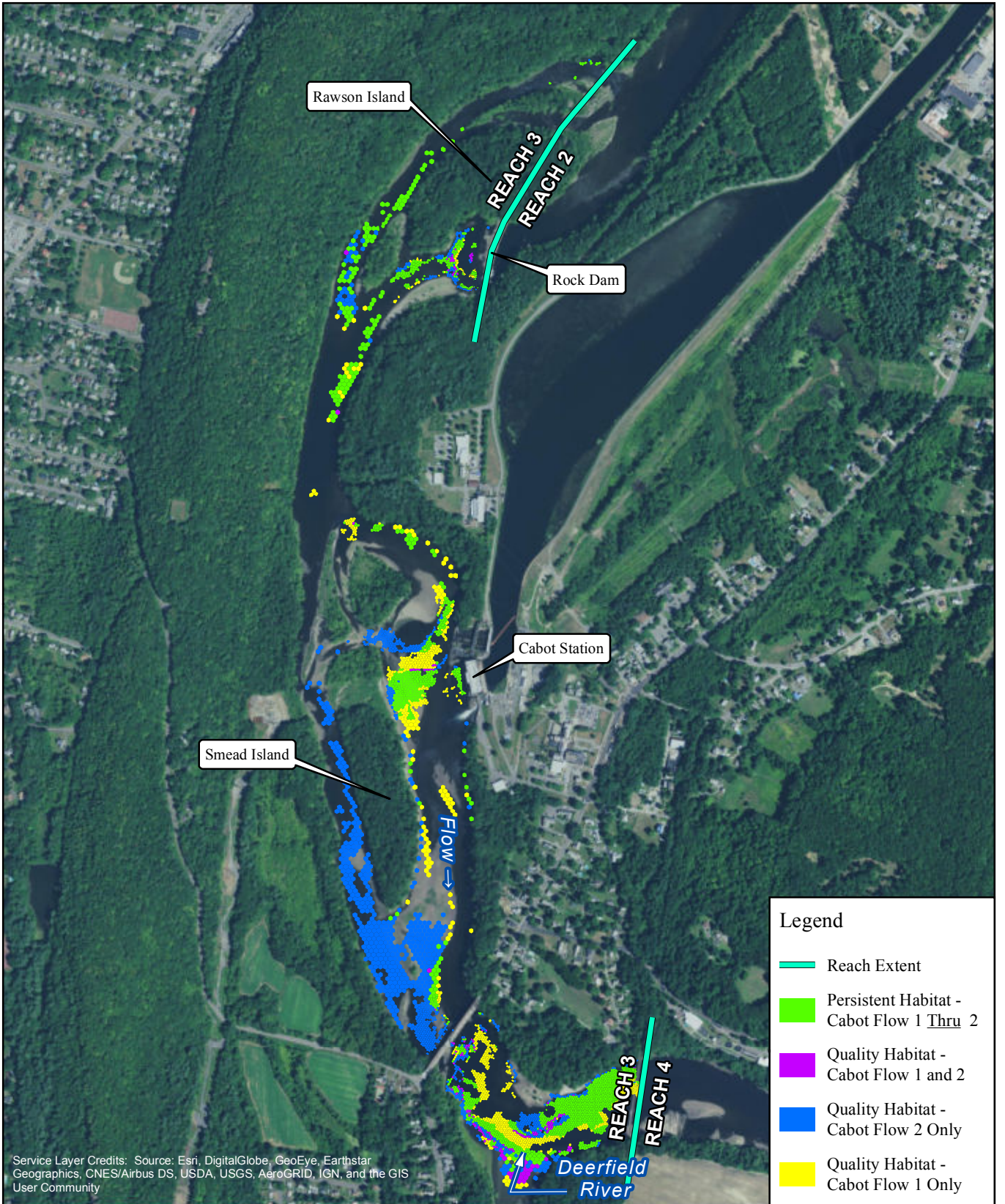
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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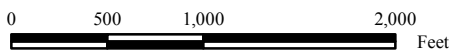
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 Only



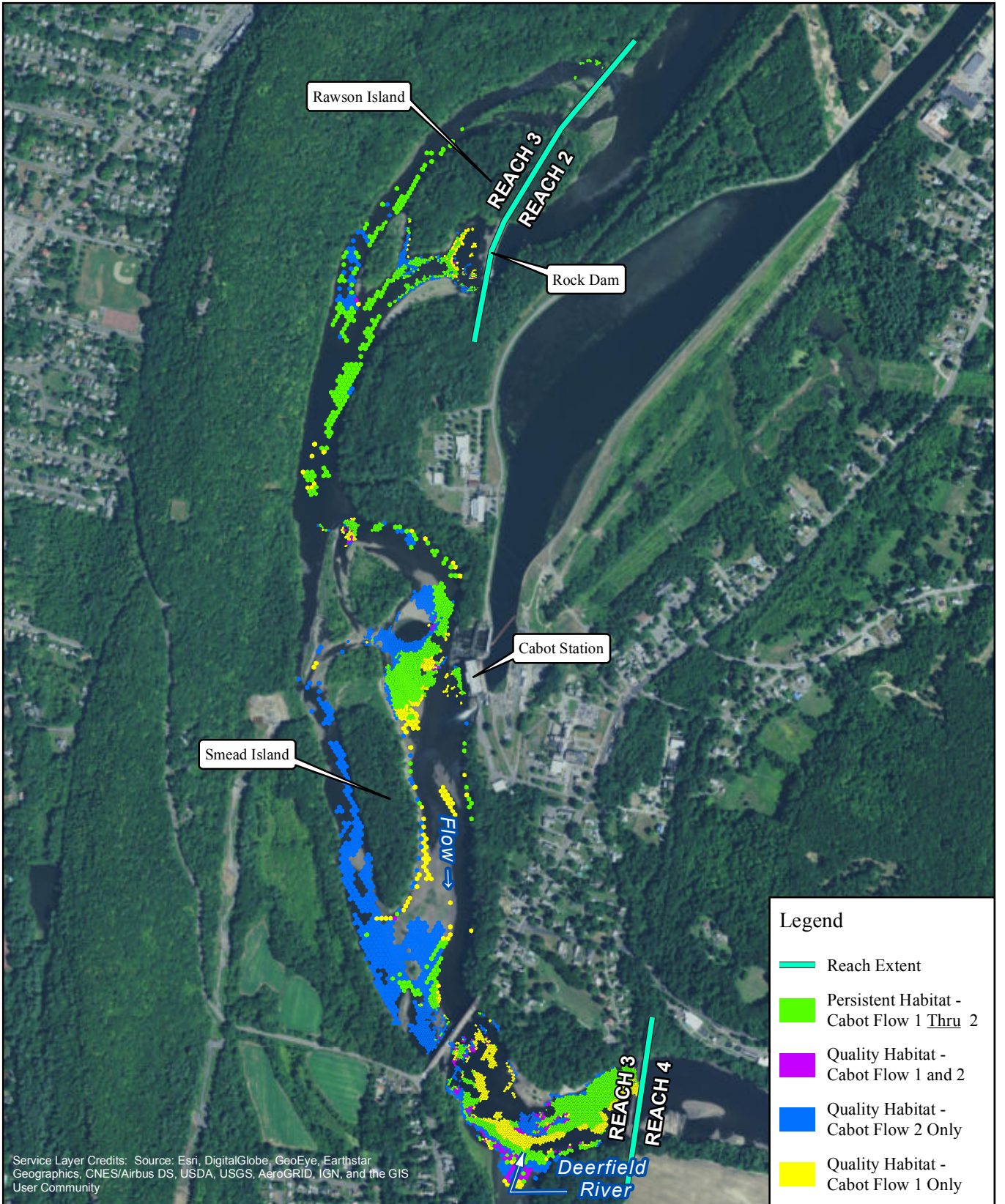
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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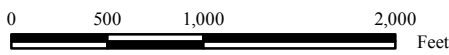
Legend

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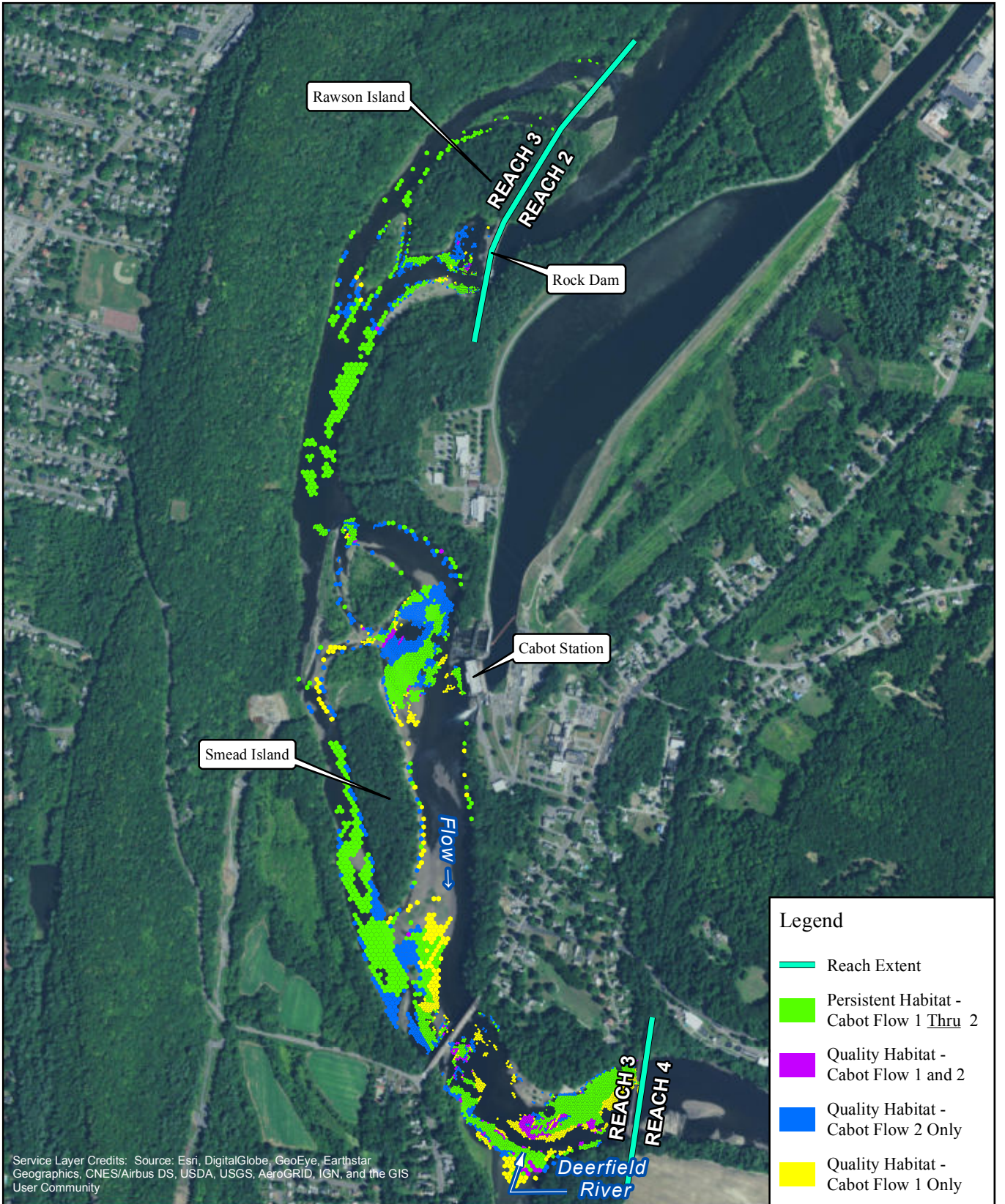
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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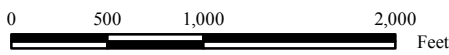
Legend

- Reach Extent
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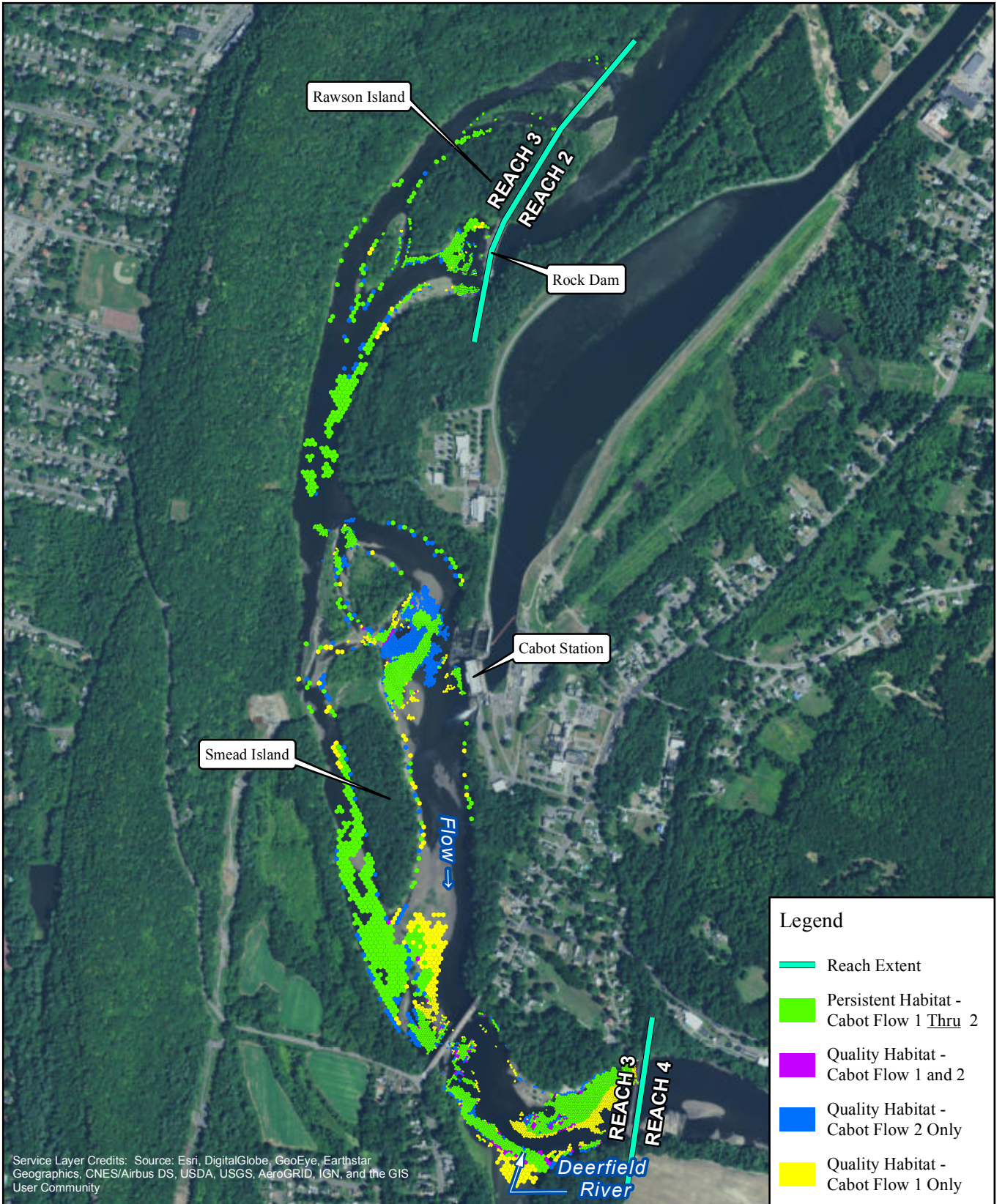
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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Legend

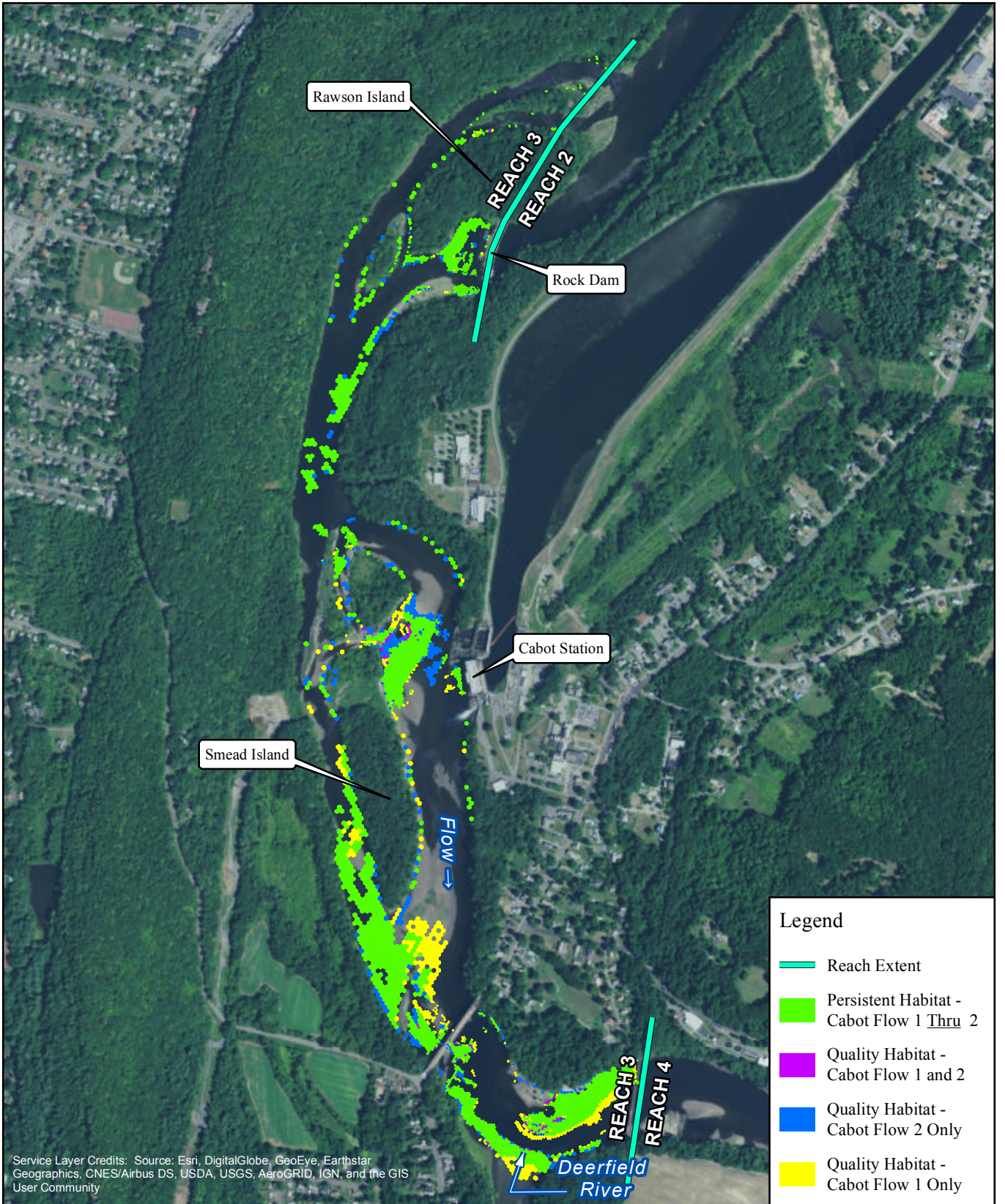
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- Persistent Habitat - Cabot Flow 1 Thru 2
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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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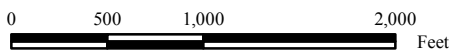
Legend

- Reach Extent
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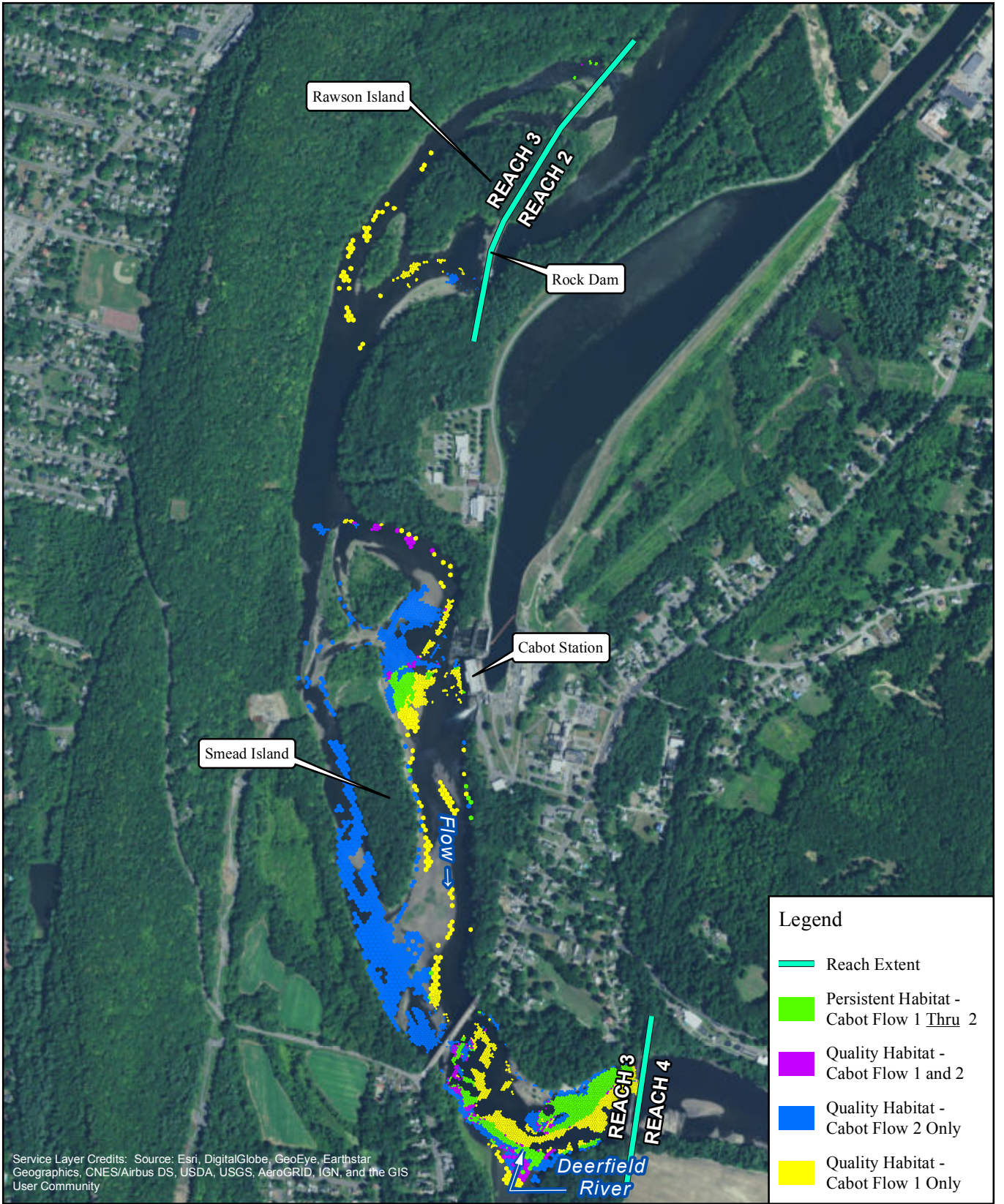
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 9000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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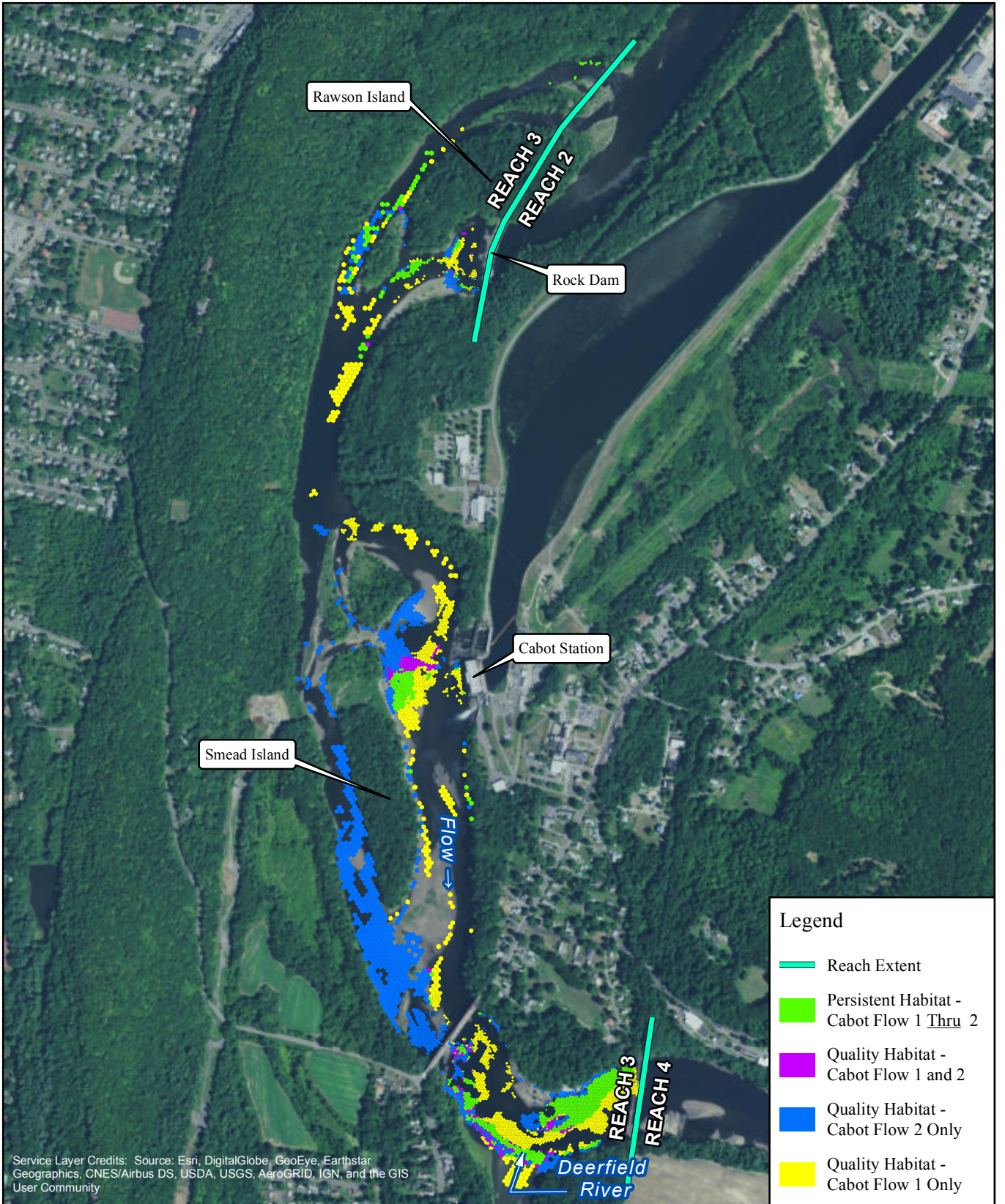
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 200 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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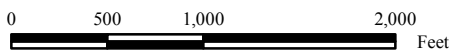
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Legend

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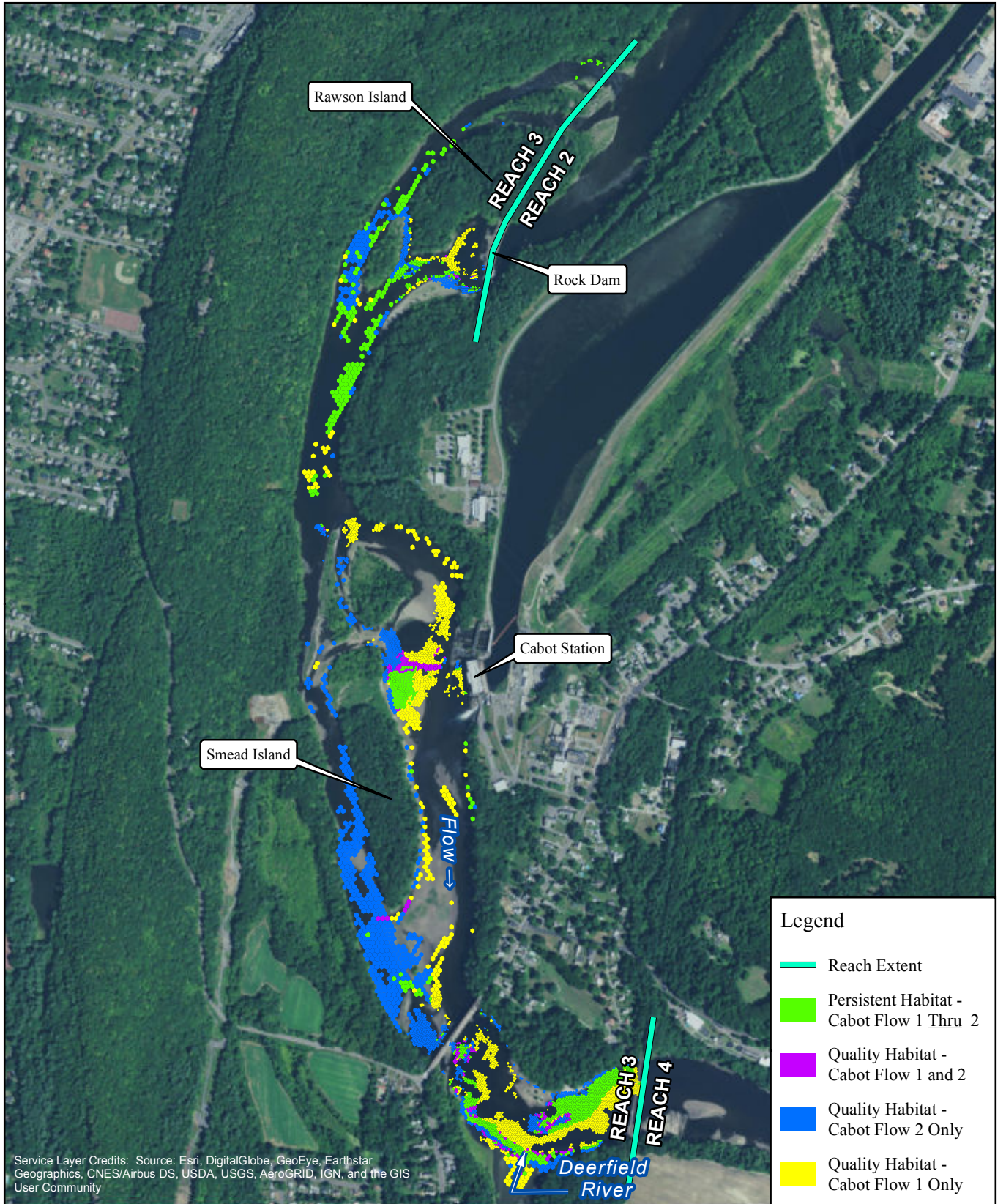


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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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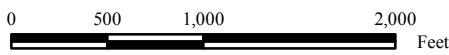
Legend

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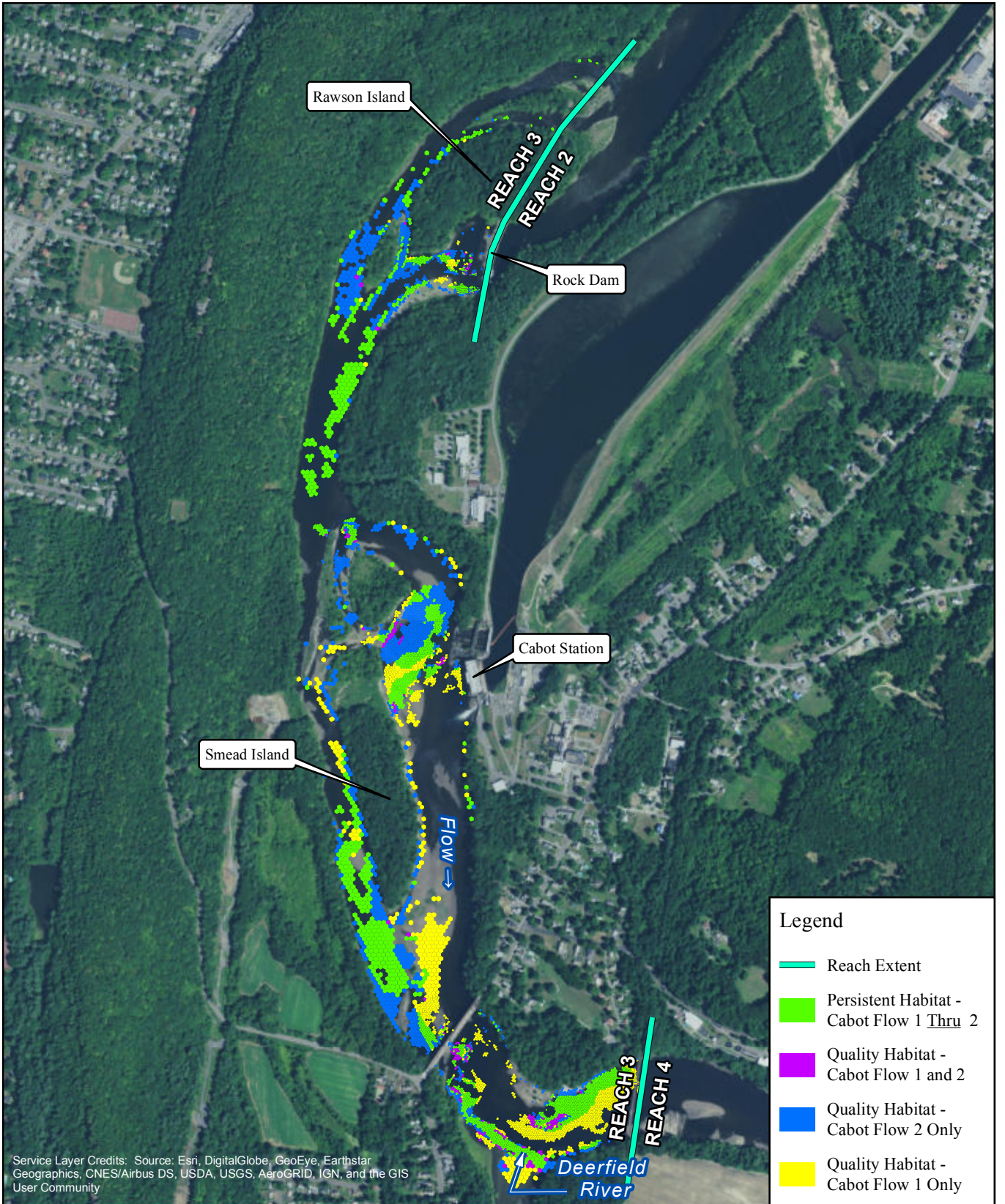
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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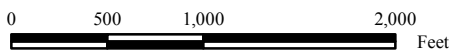
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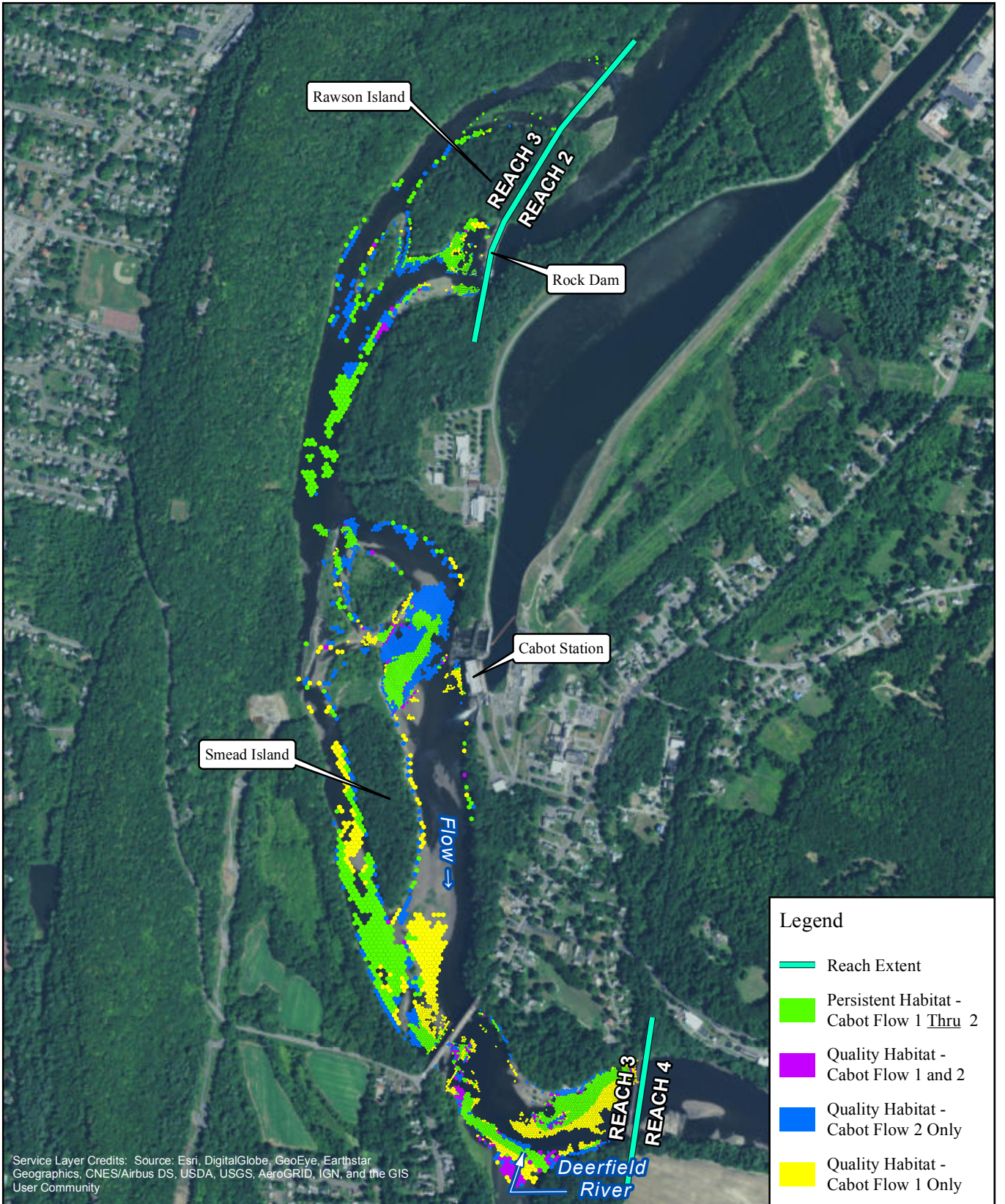
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 Bypass Flow: 3000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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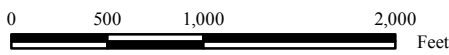
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



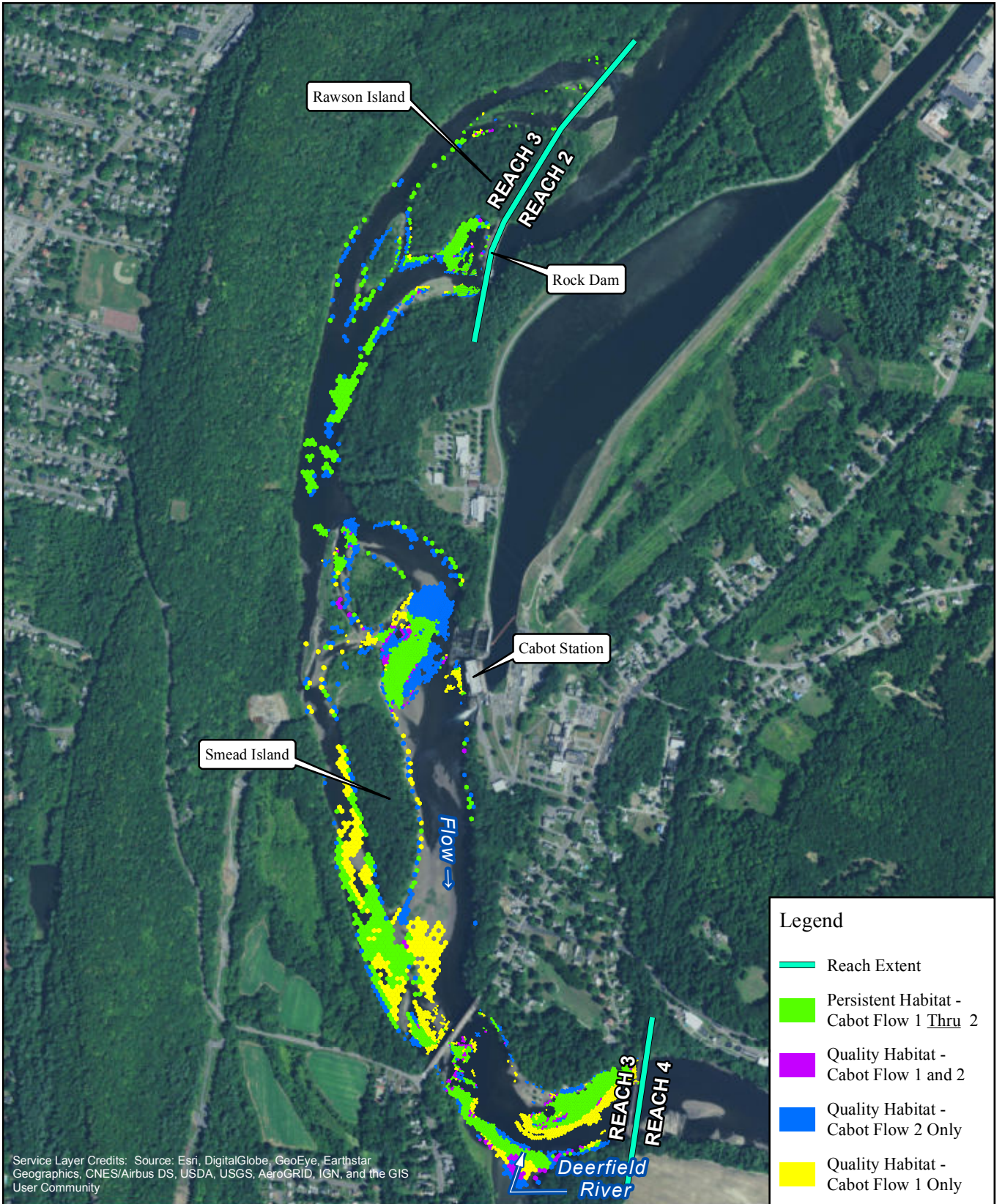
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 Northfield Mountain Pumped Storage Project No. 2485
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

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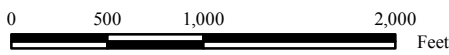
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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

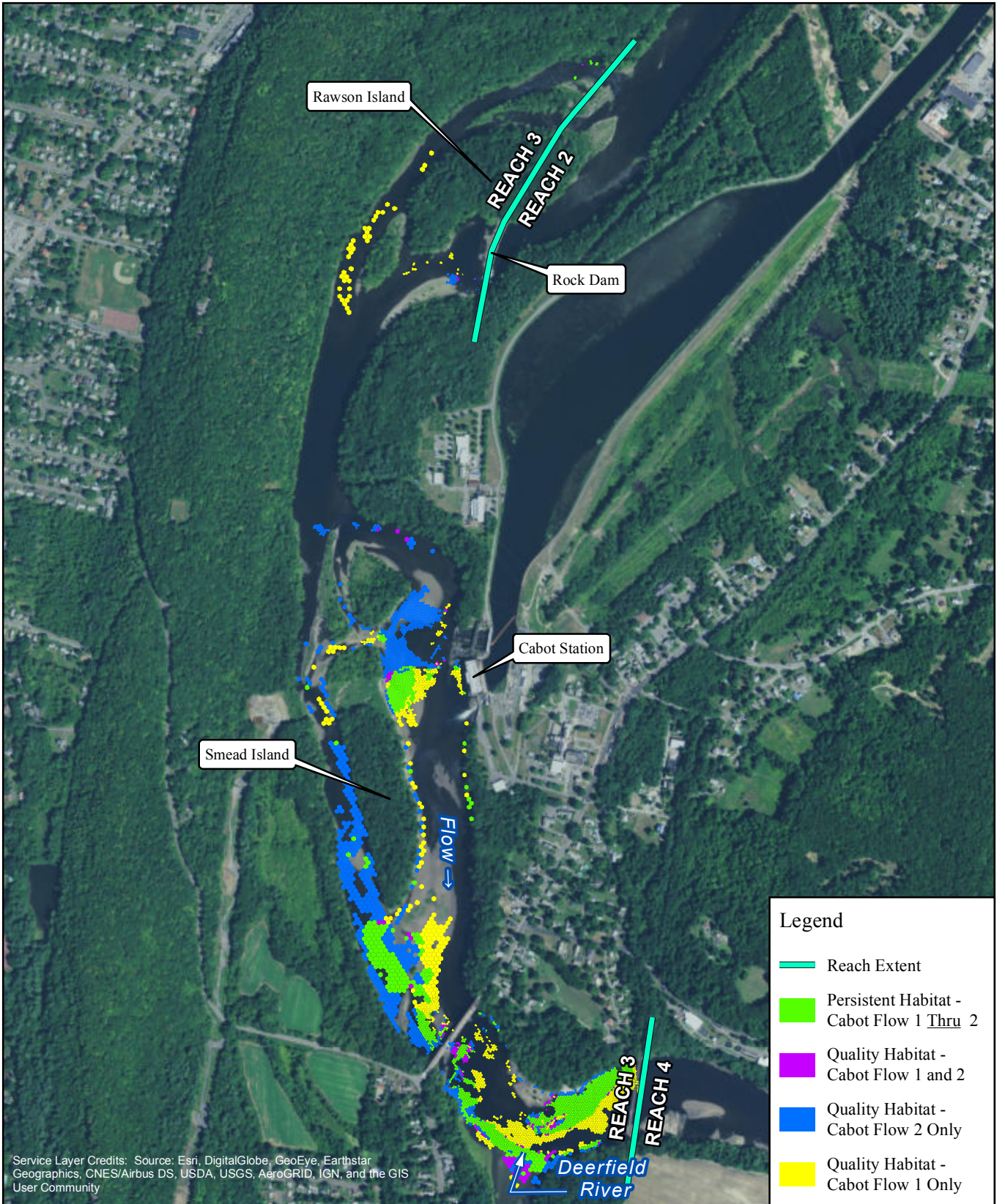


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RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 4500 cfs
 Cabot Flow 2: 14000 cfs

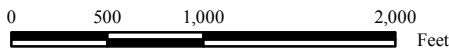
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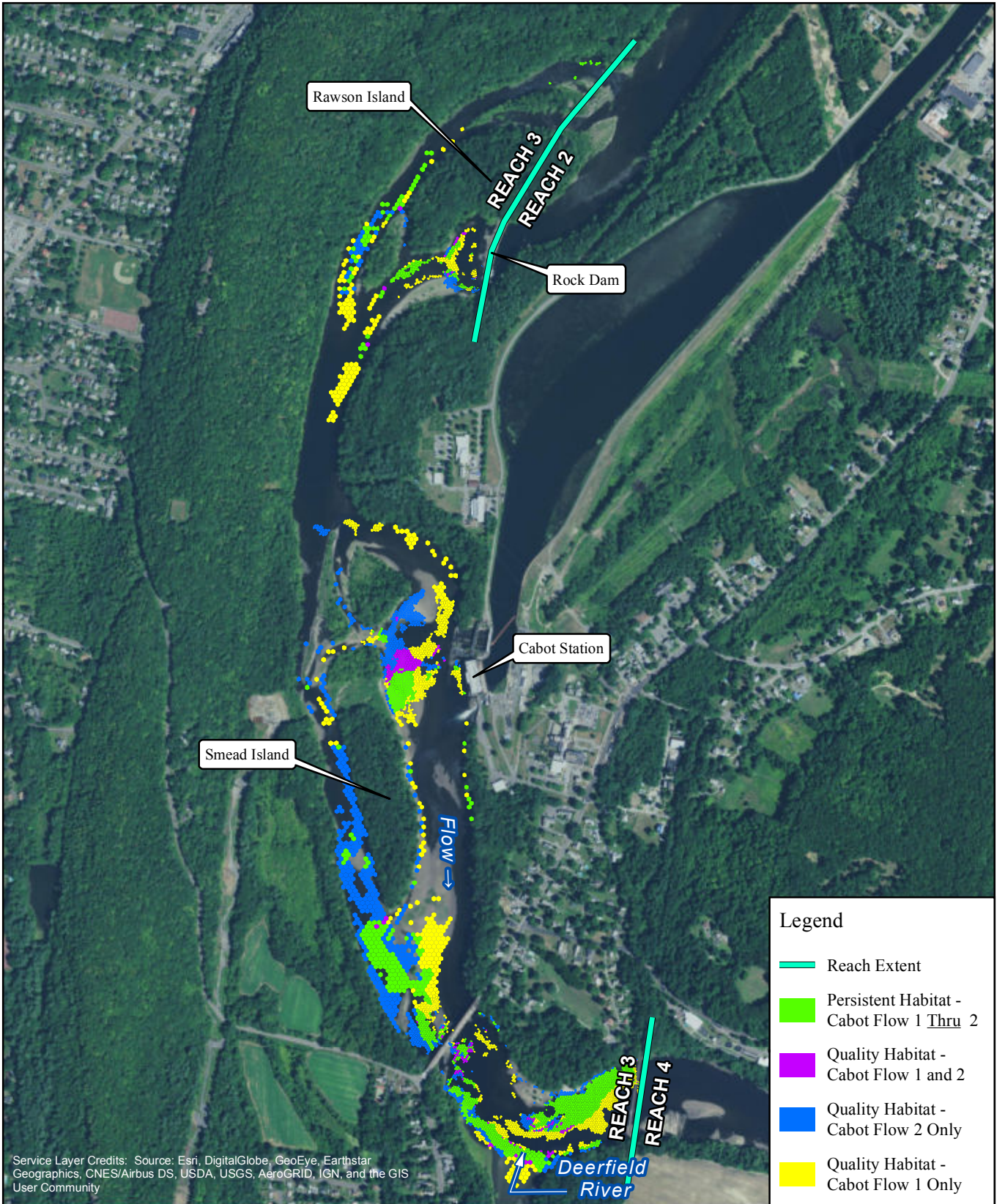


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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 200 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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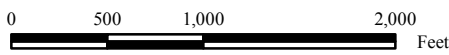
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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

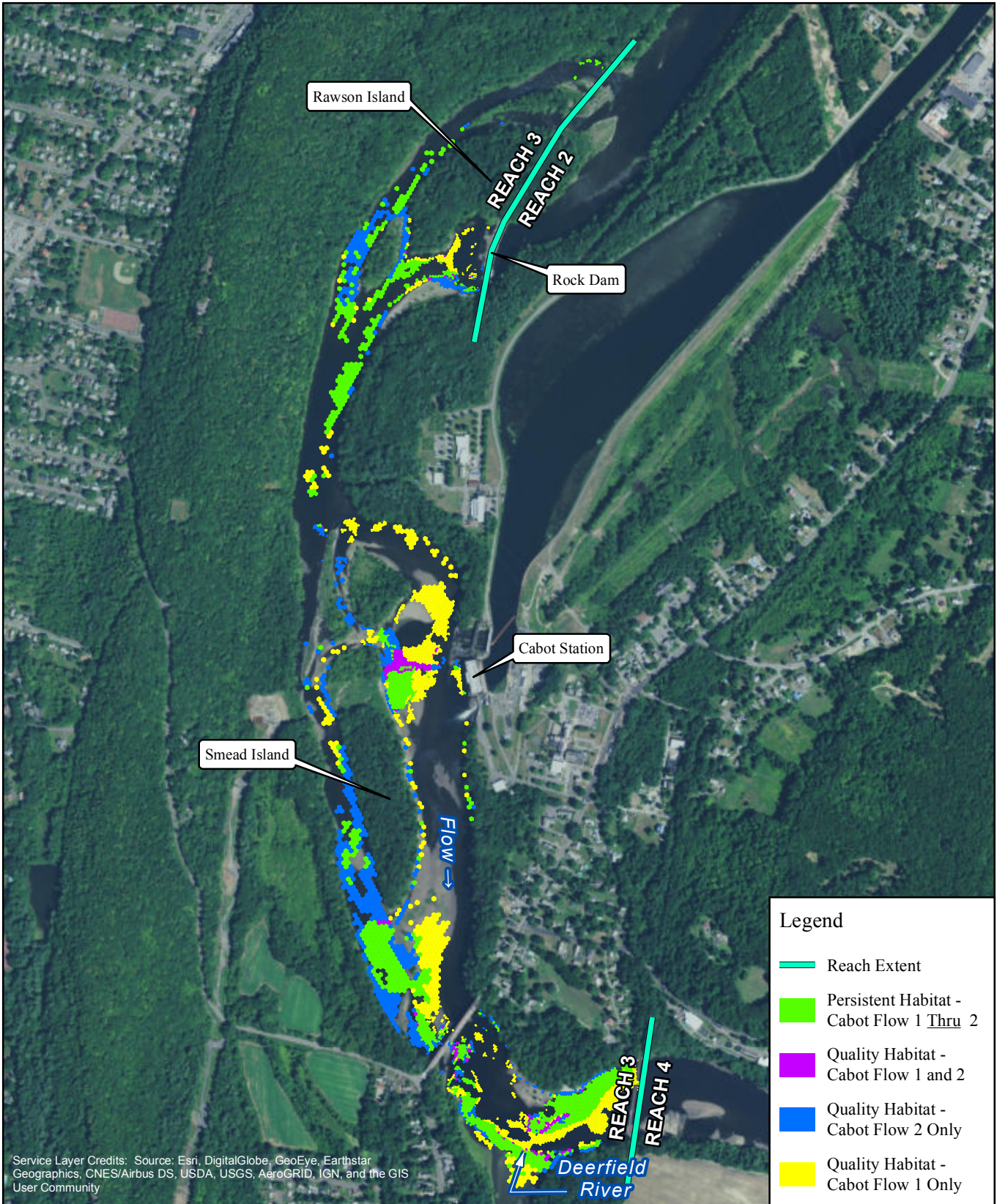


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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 500 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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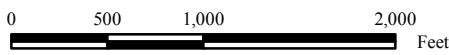
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



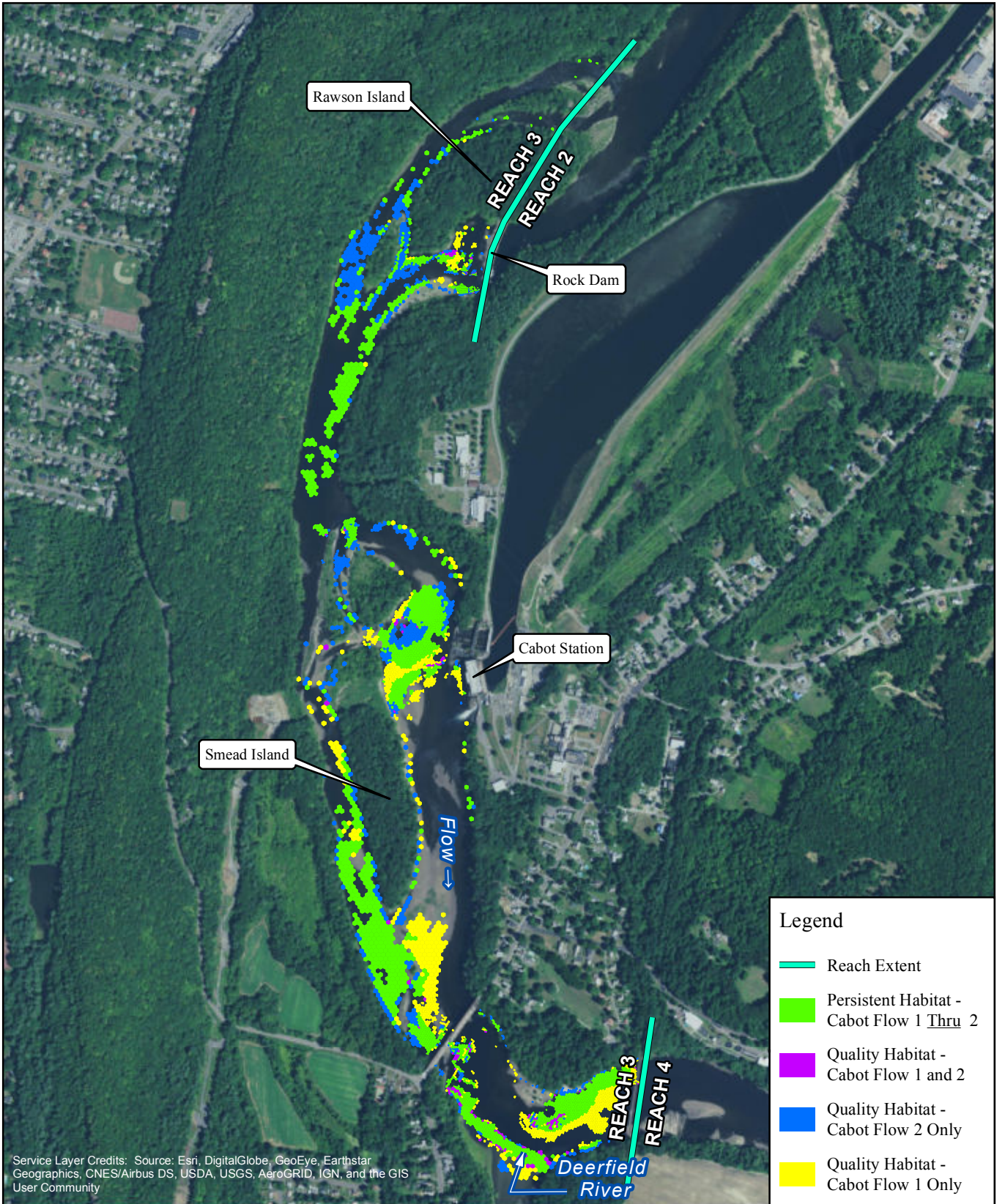
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 Turners Falls Hydroelectric Project No. 1889

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Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 1000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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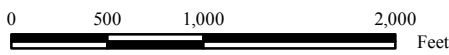
Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



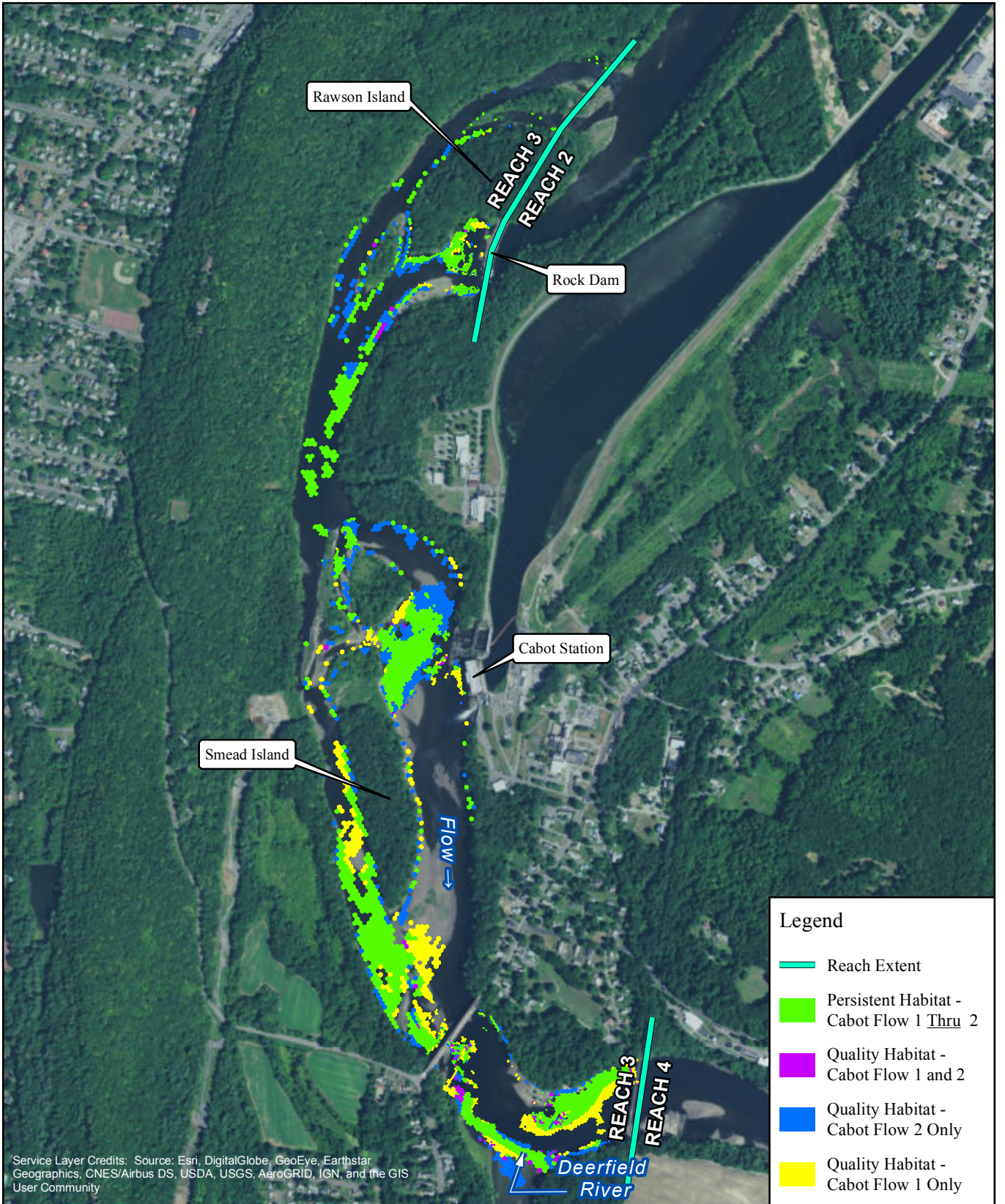
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 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 3000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only

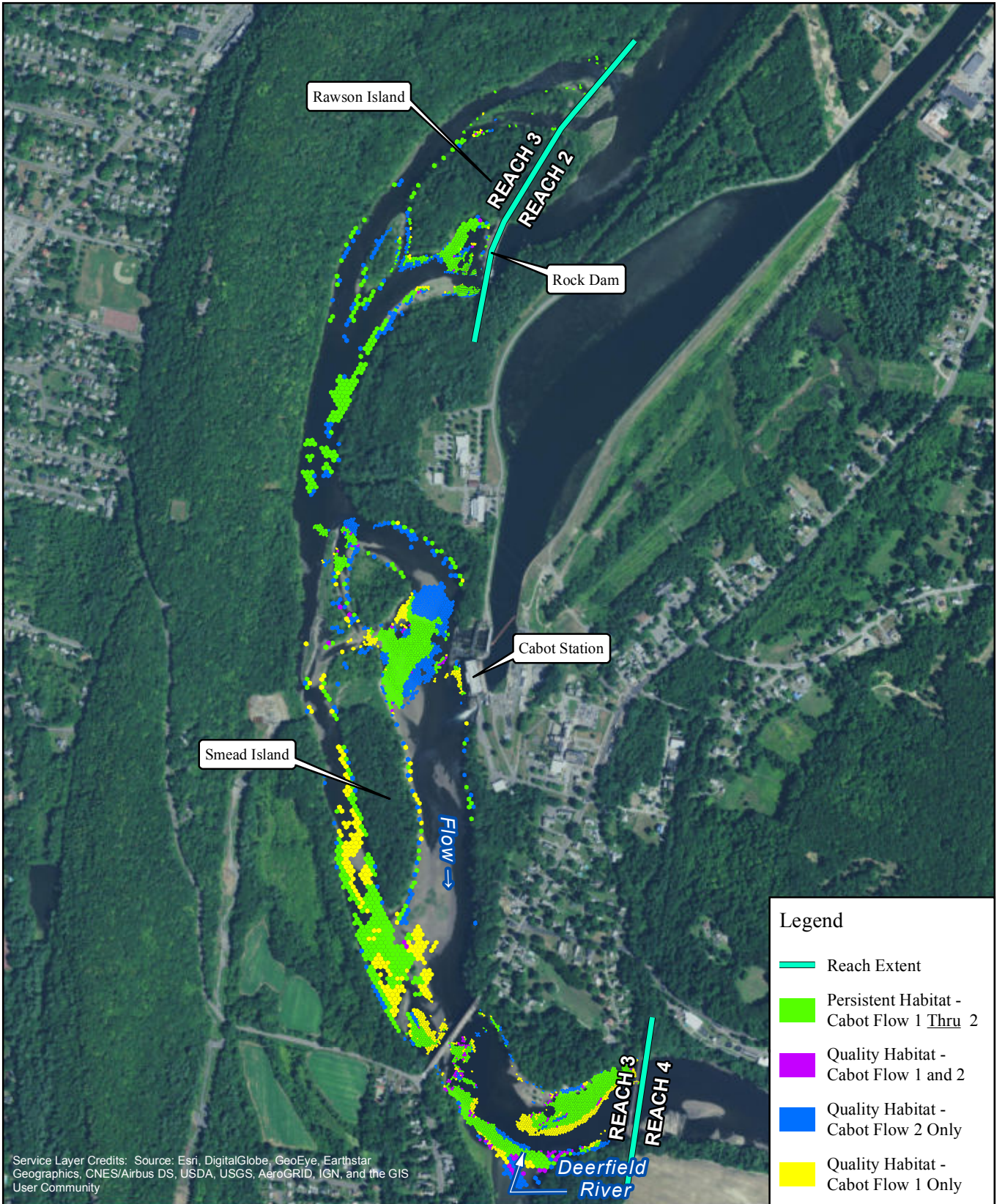
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 Turners Falls Hydroelectric Project No. 1889
RELICENSING STUDY 3.3.1

Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 5000 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

0 500 1,000 2,000 Feet

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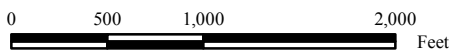
Legend

- Reach Extent
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- Quality Habitat - Cabot Flow 1 Only



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RELICENSING STUDY 3.3.1



Persistent Habitat
 Shortnose Sturgeon-Fry
 Bypass Flow: 6500 cfs
 Cabot Flow 1: 7000 cfs
 Cabot Flow 2: 14000 cfs

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