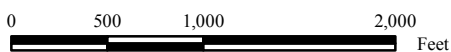


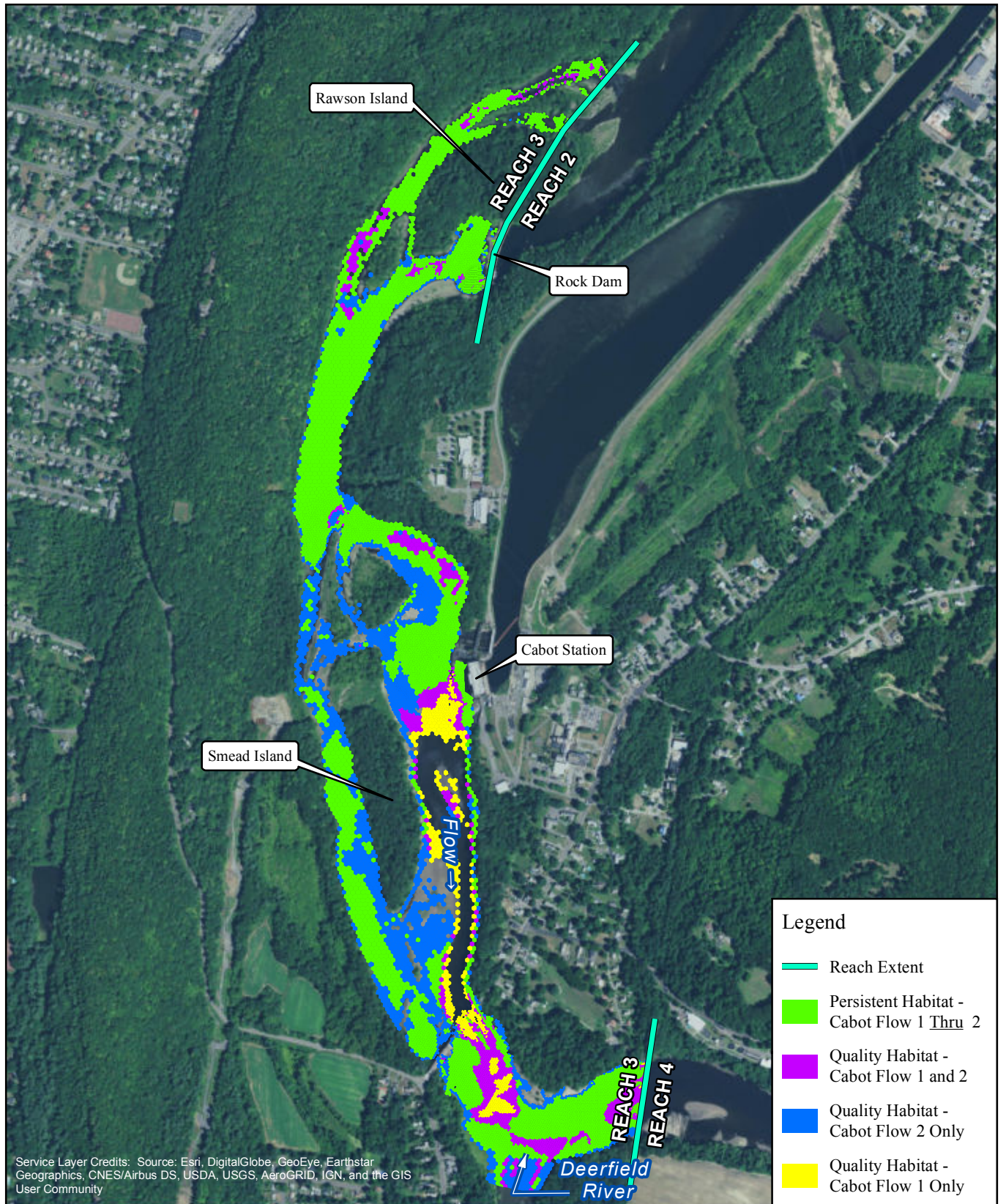
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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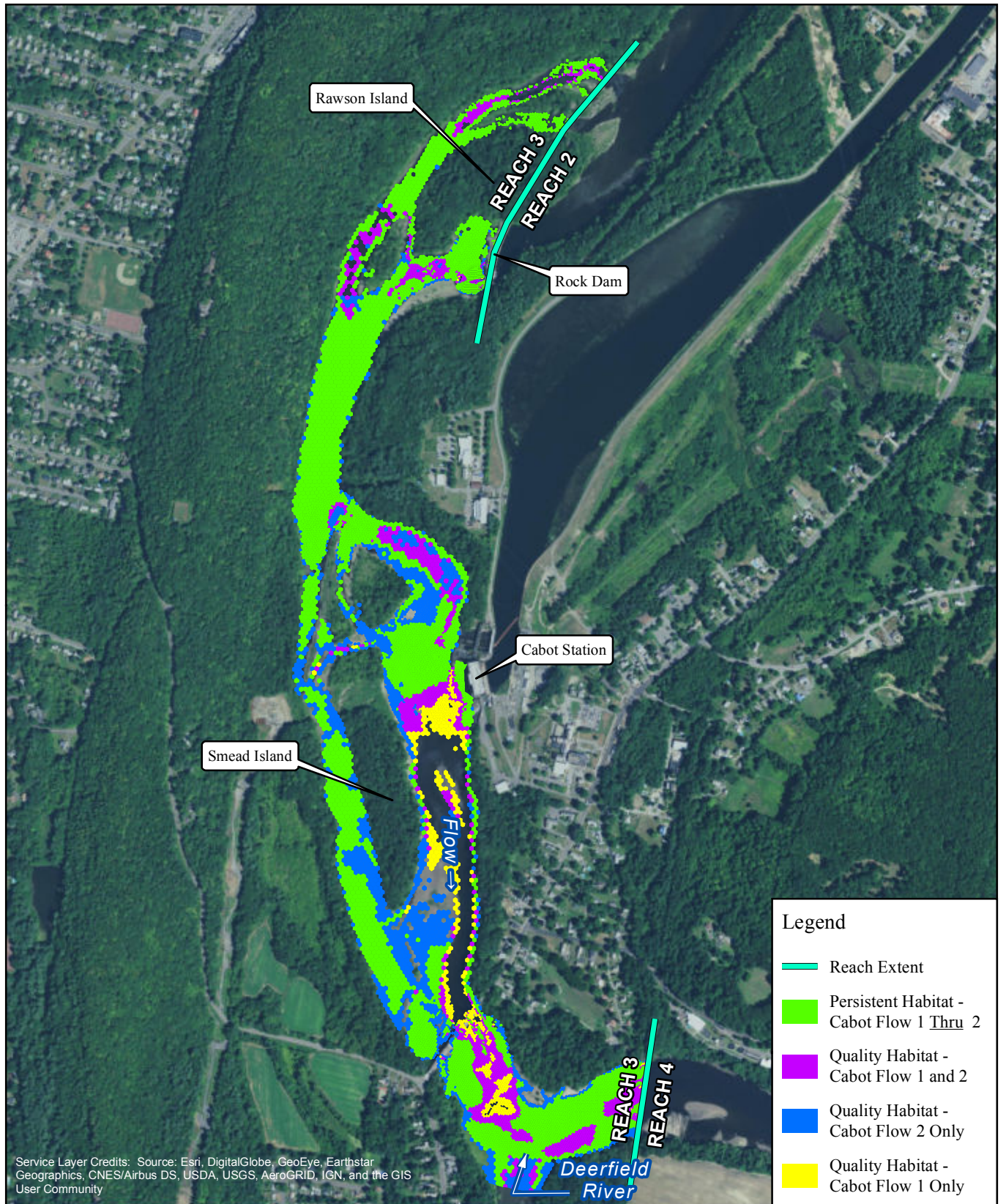
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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Turners Falls Hydroelectric Project No. 1889  
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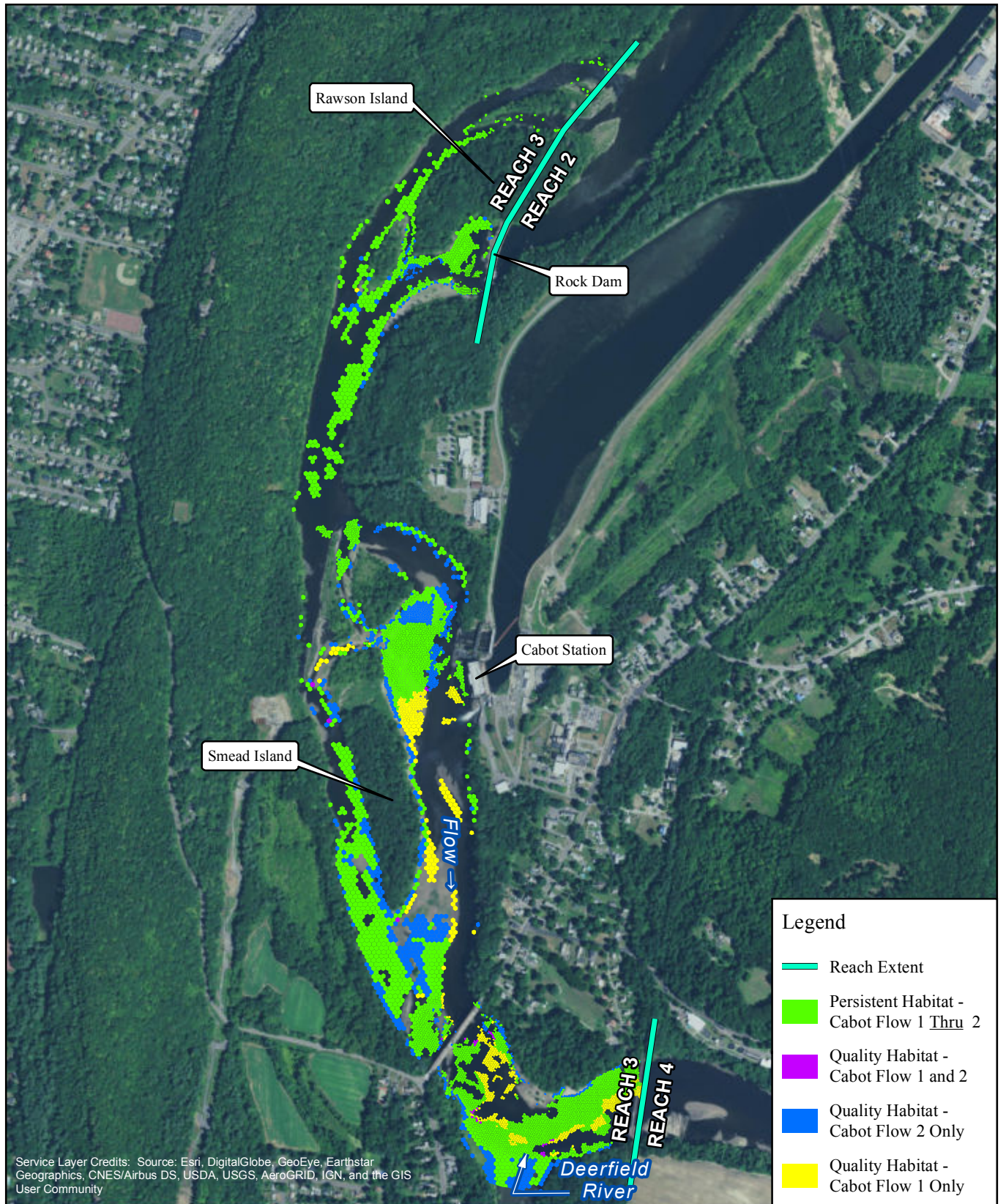
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

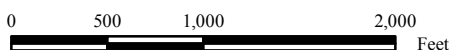
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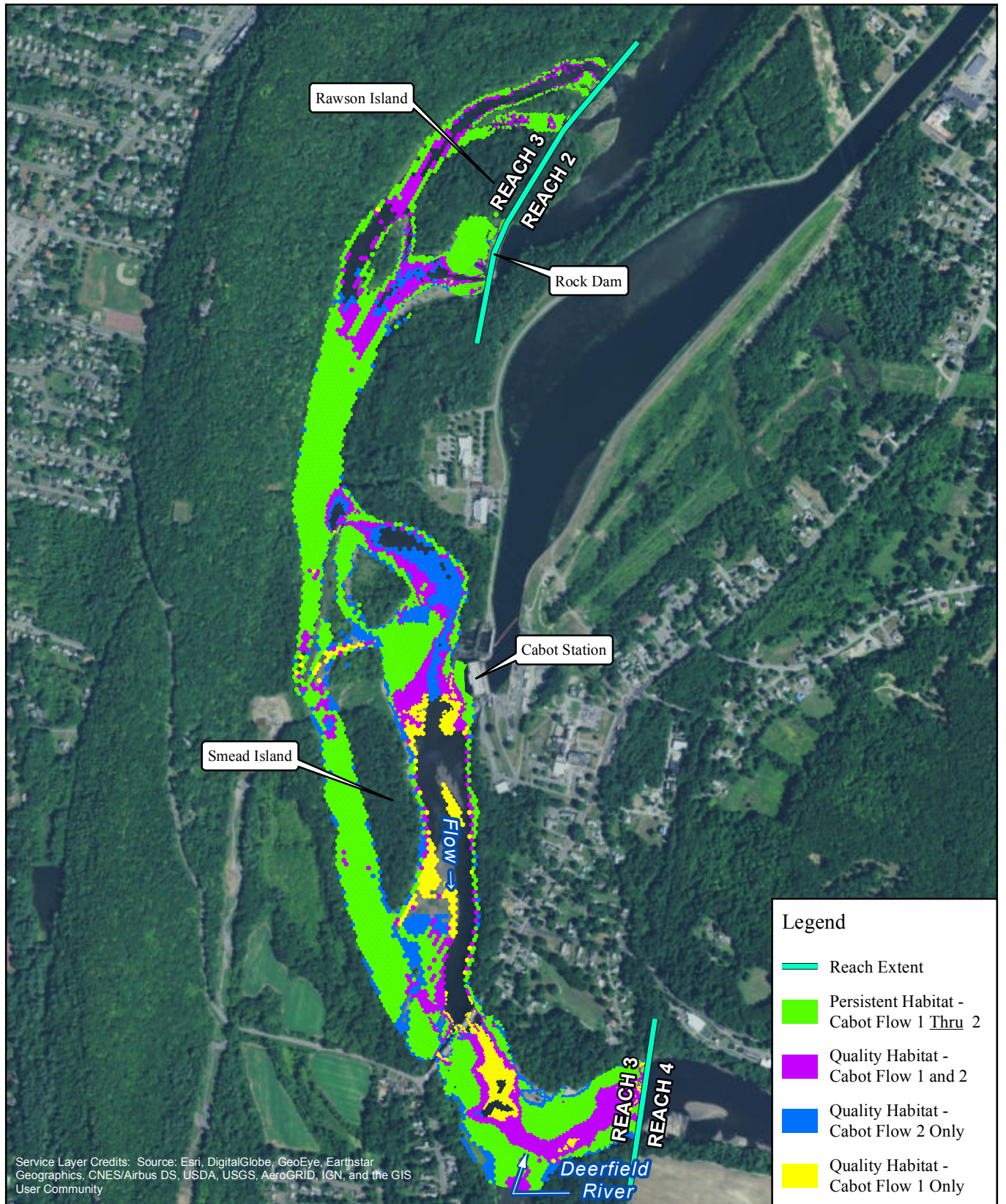
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 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**



**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 2000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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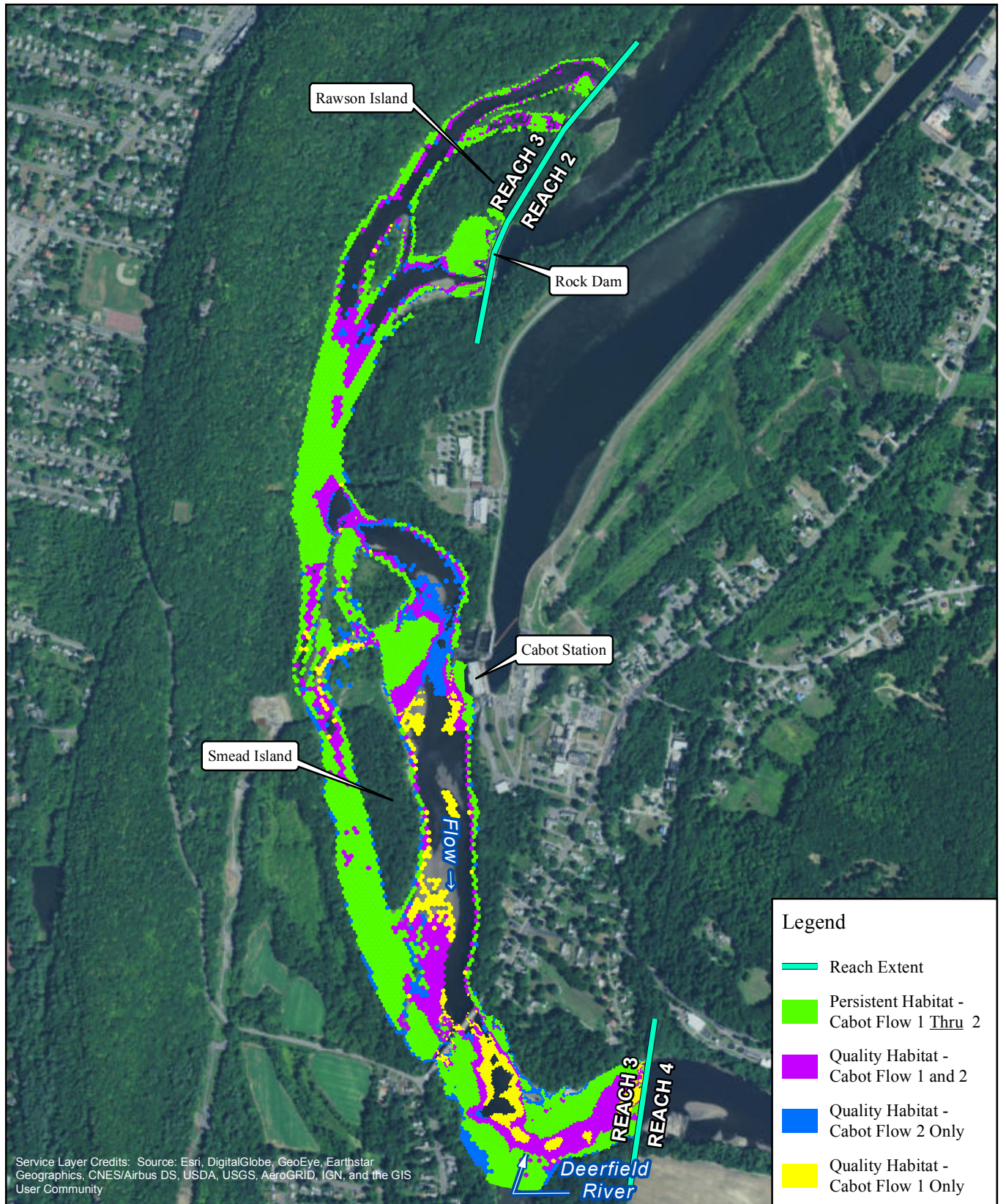
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1

0 500 1,000 2,000 Feet

**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 3000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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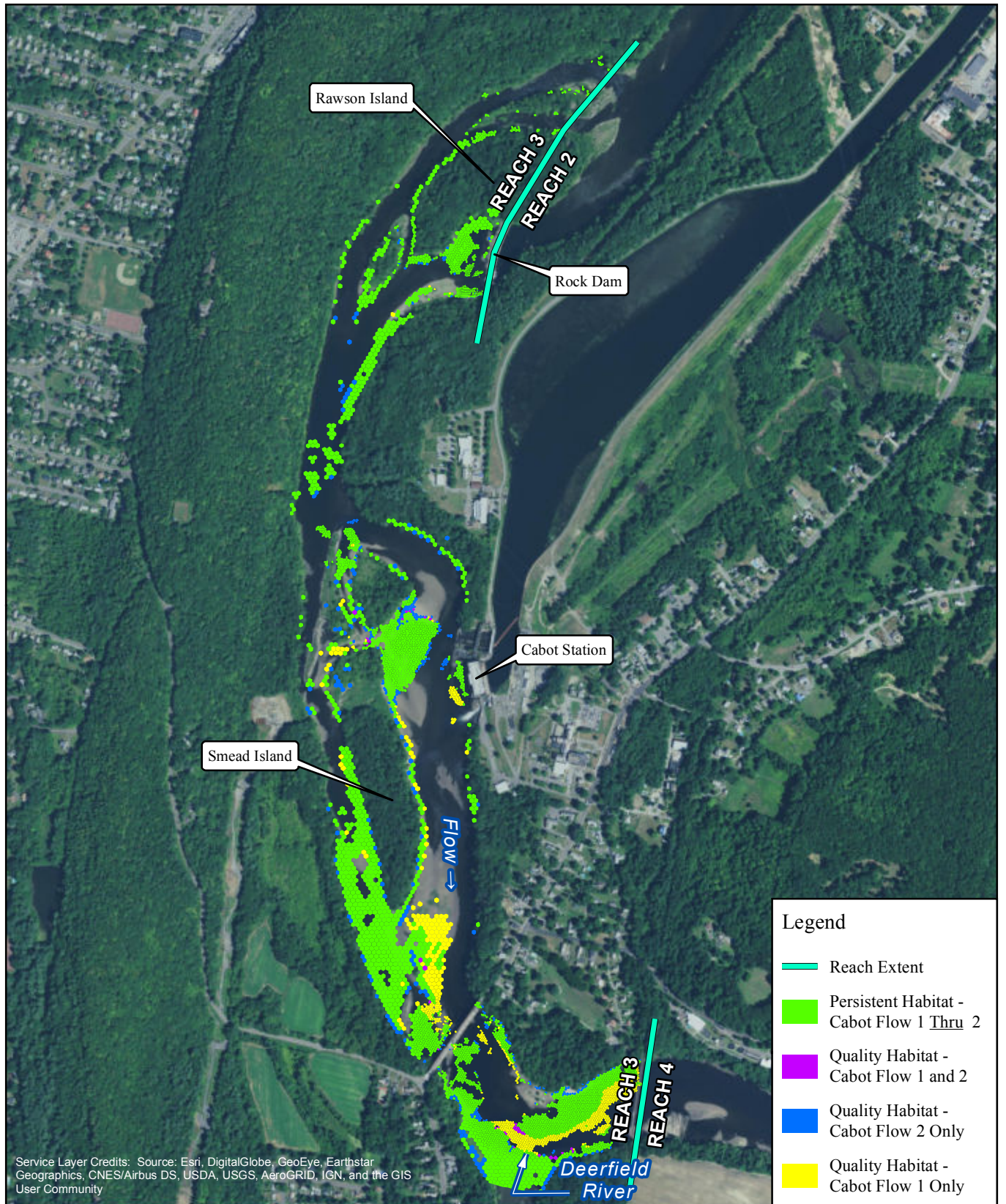
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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**RELICENSING STUDY 3.3.1**

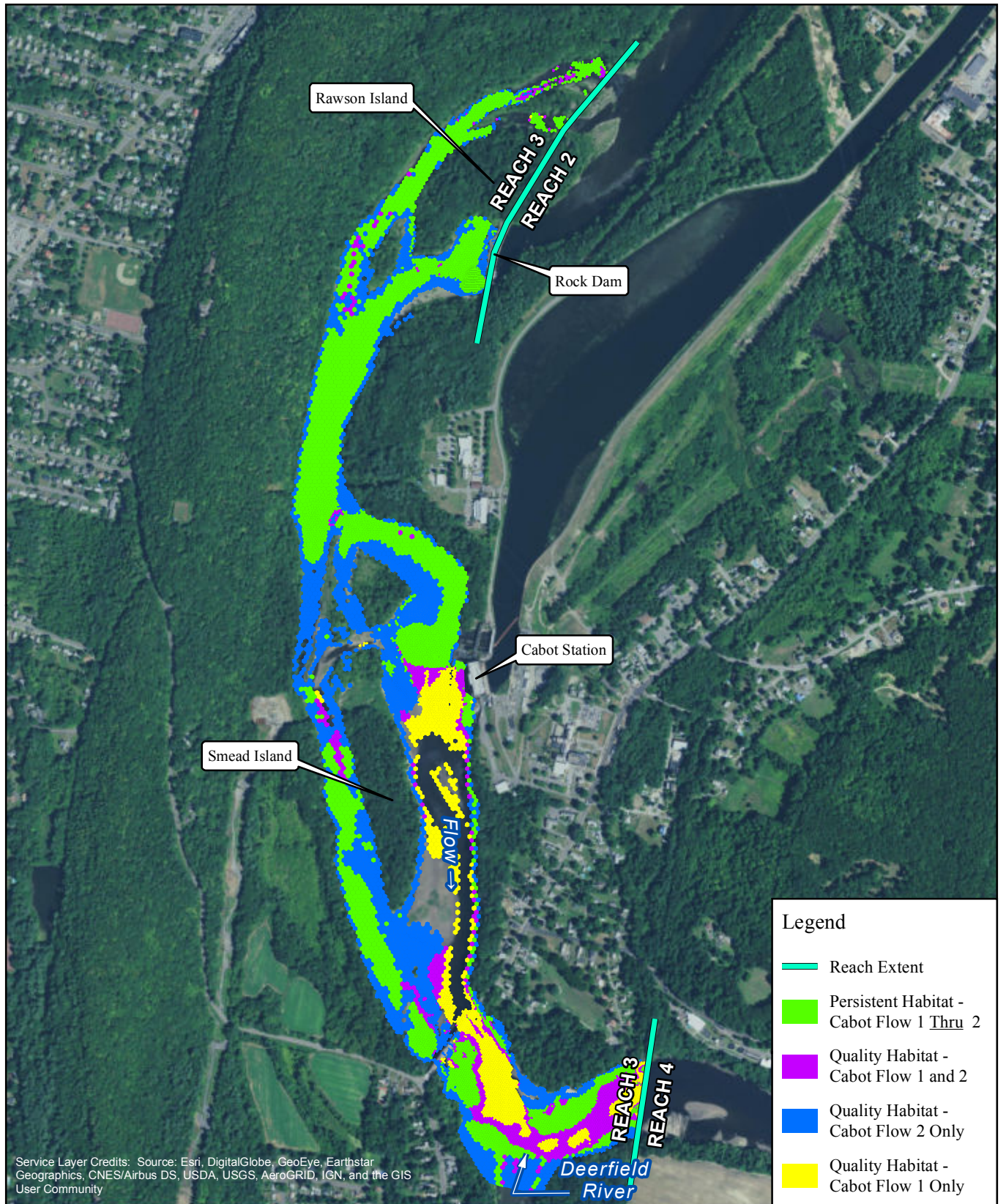
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1

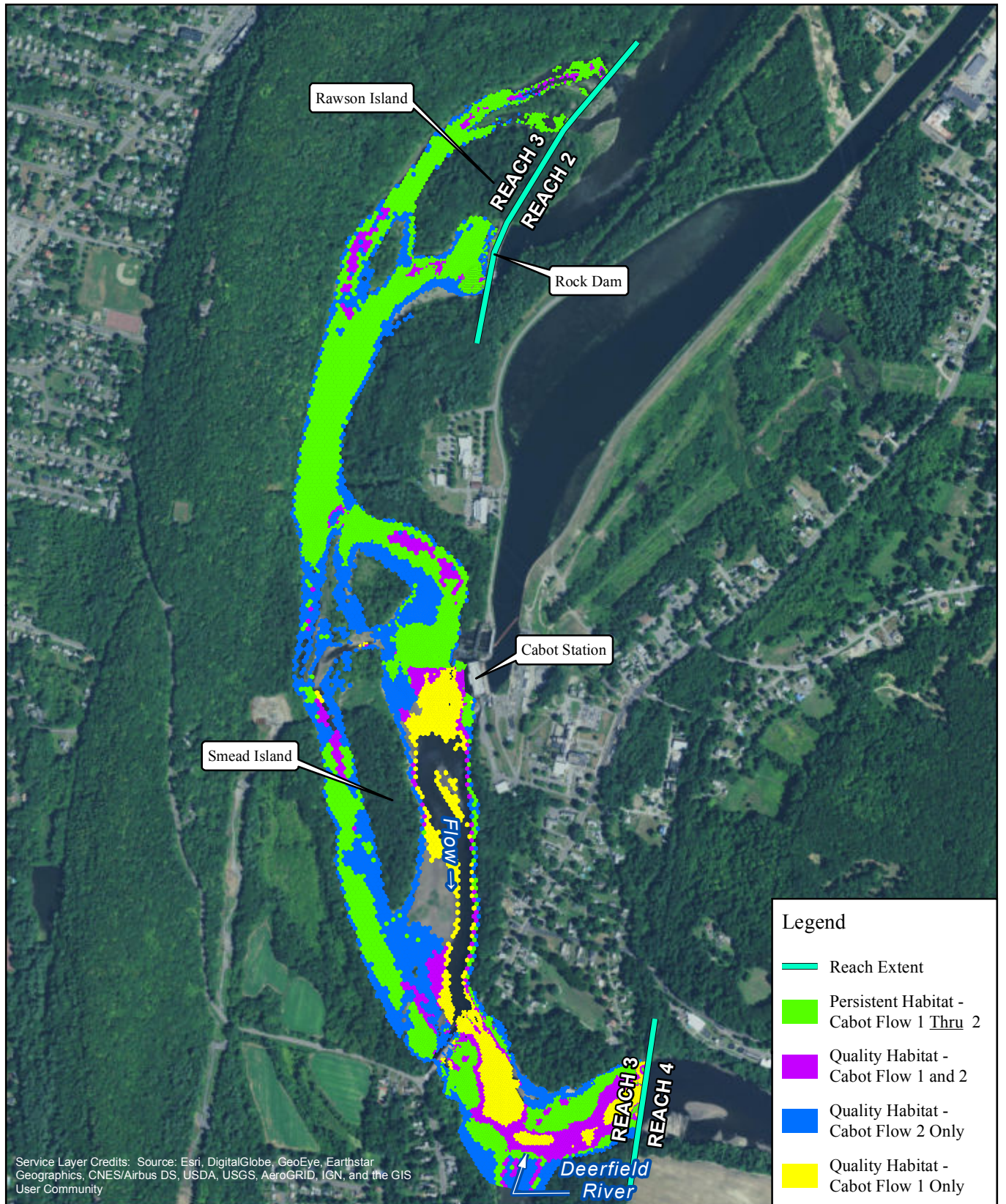
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**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

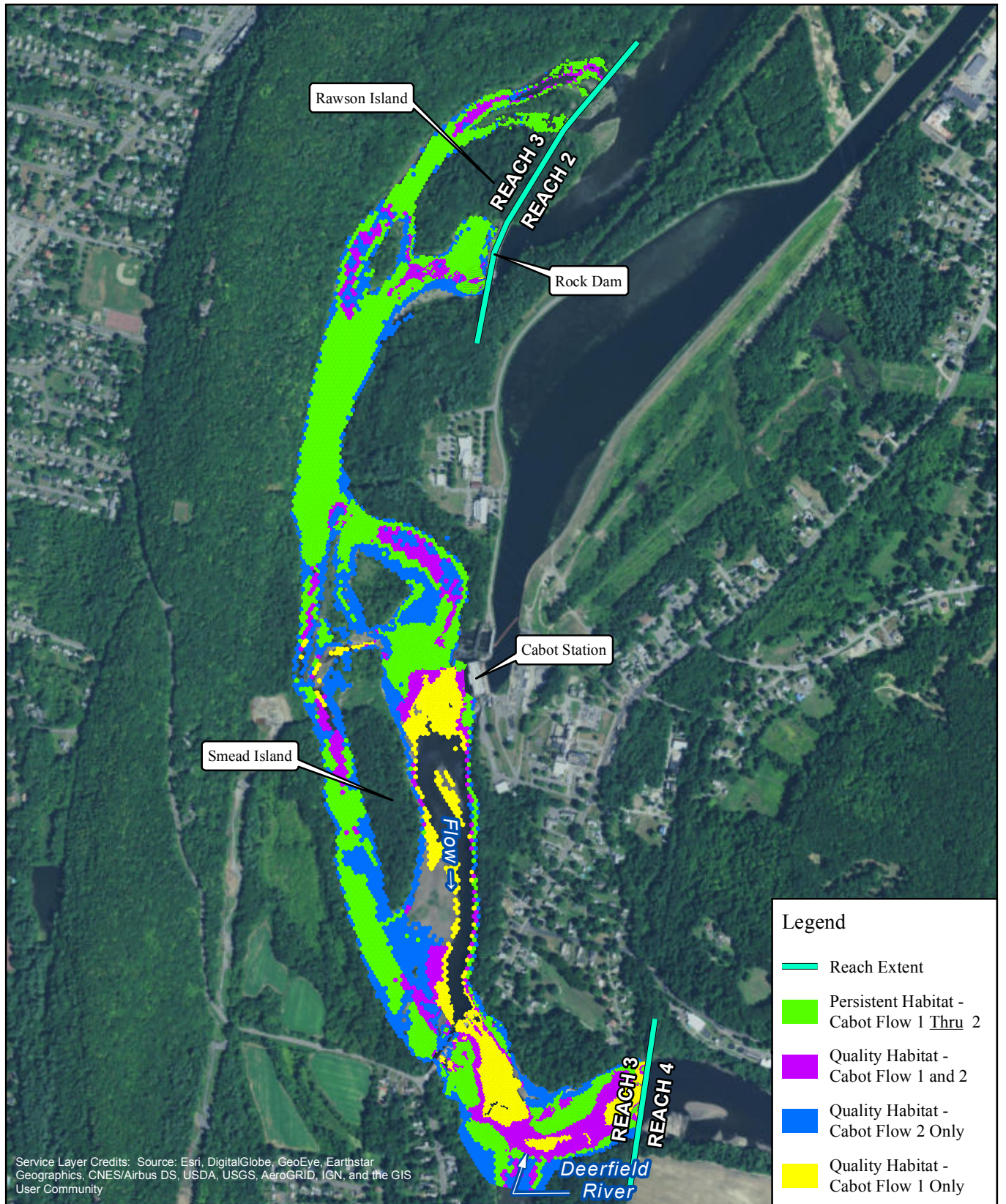
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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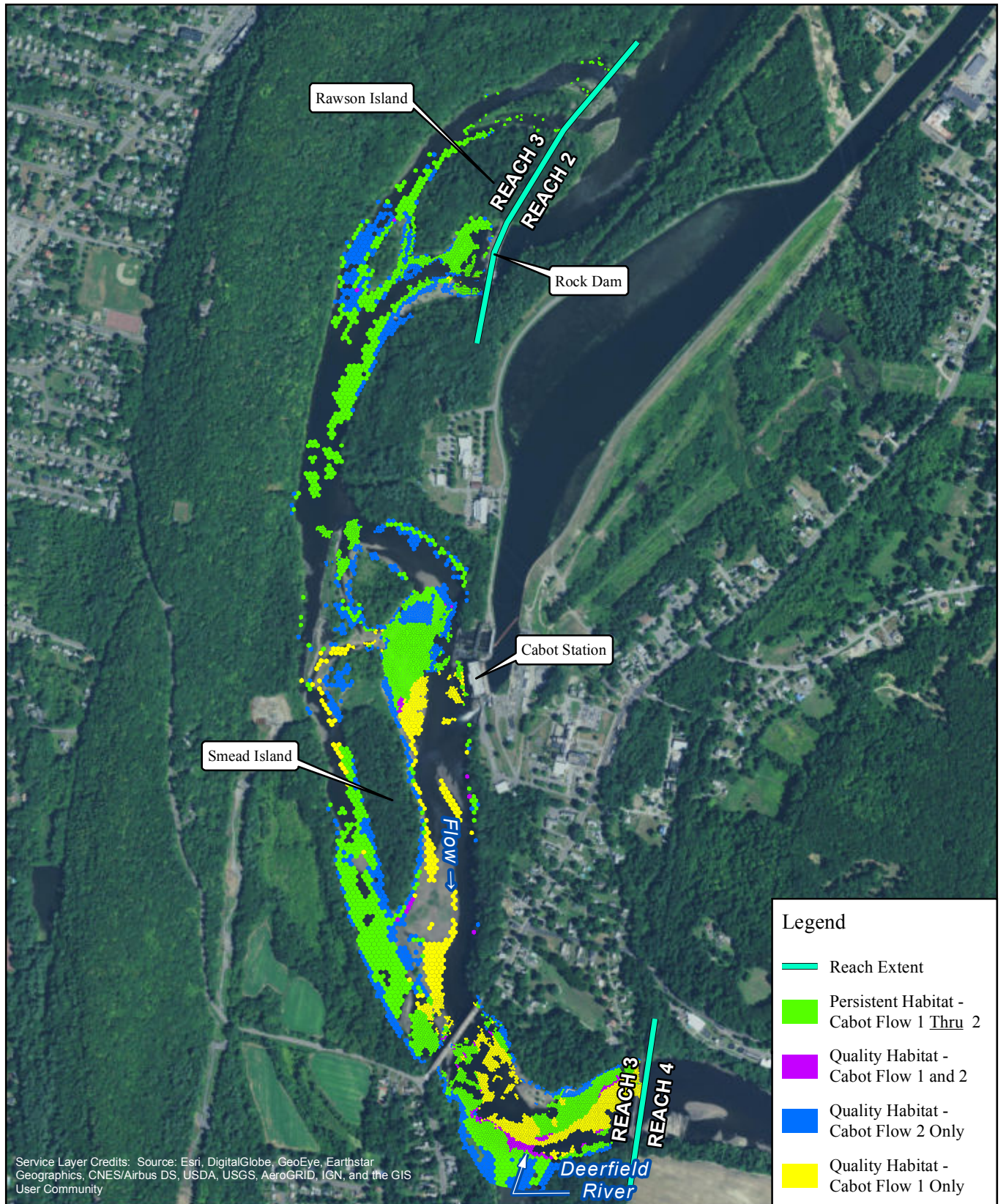
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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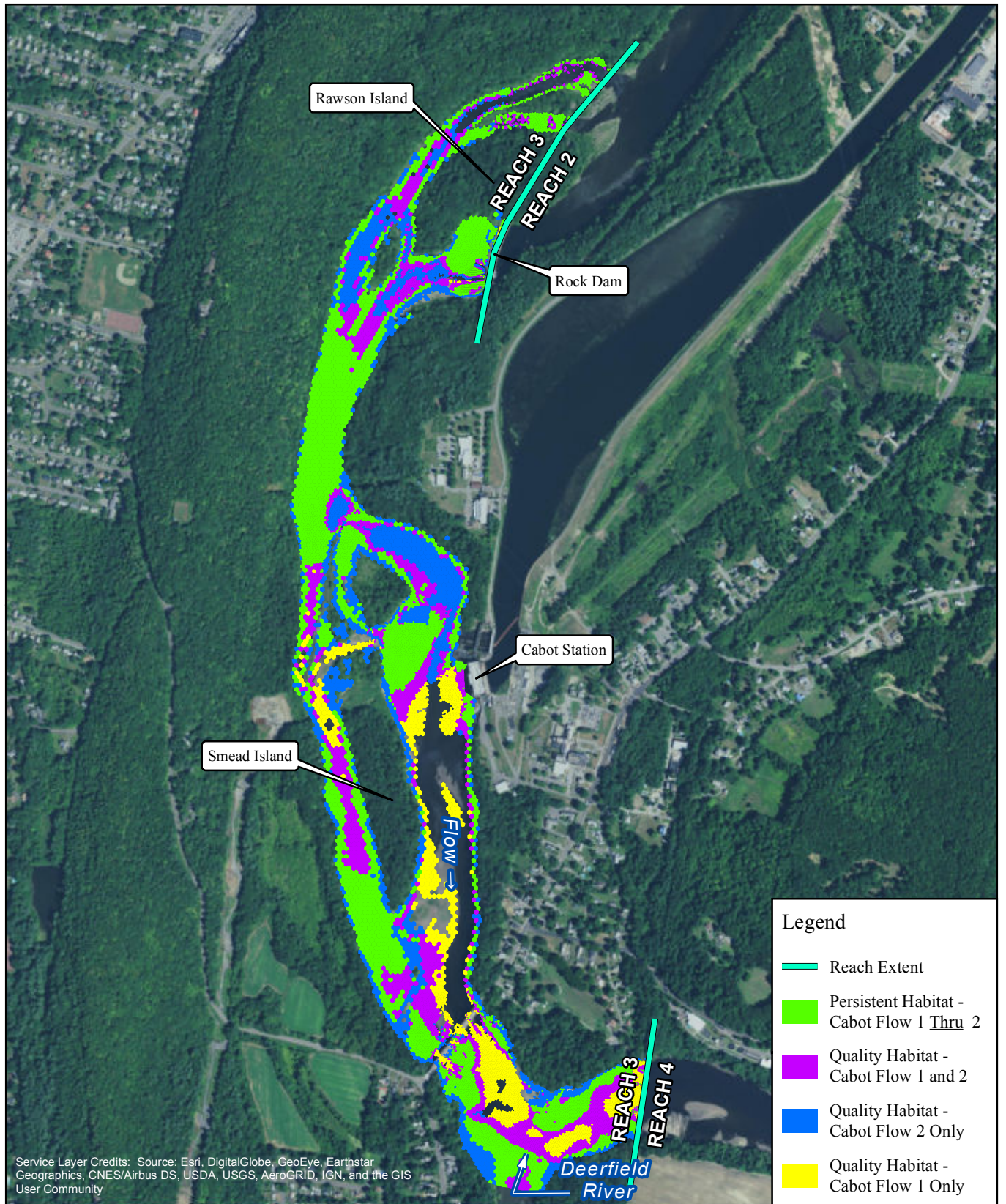
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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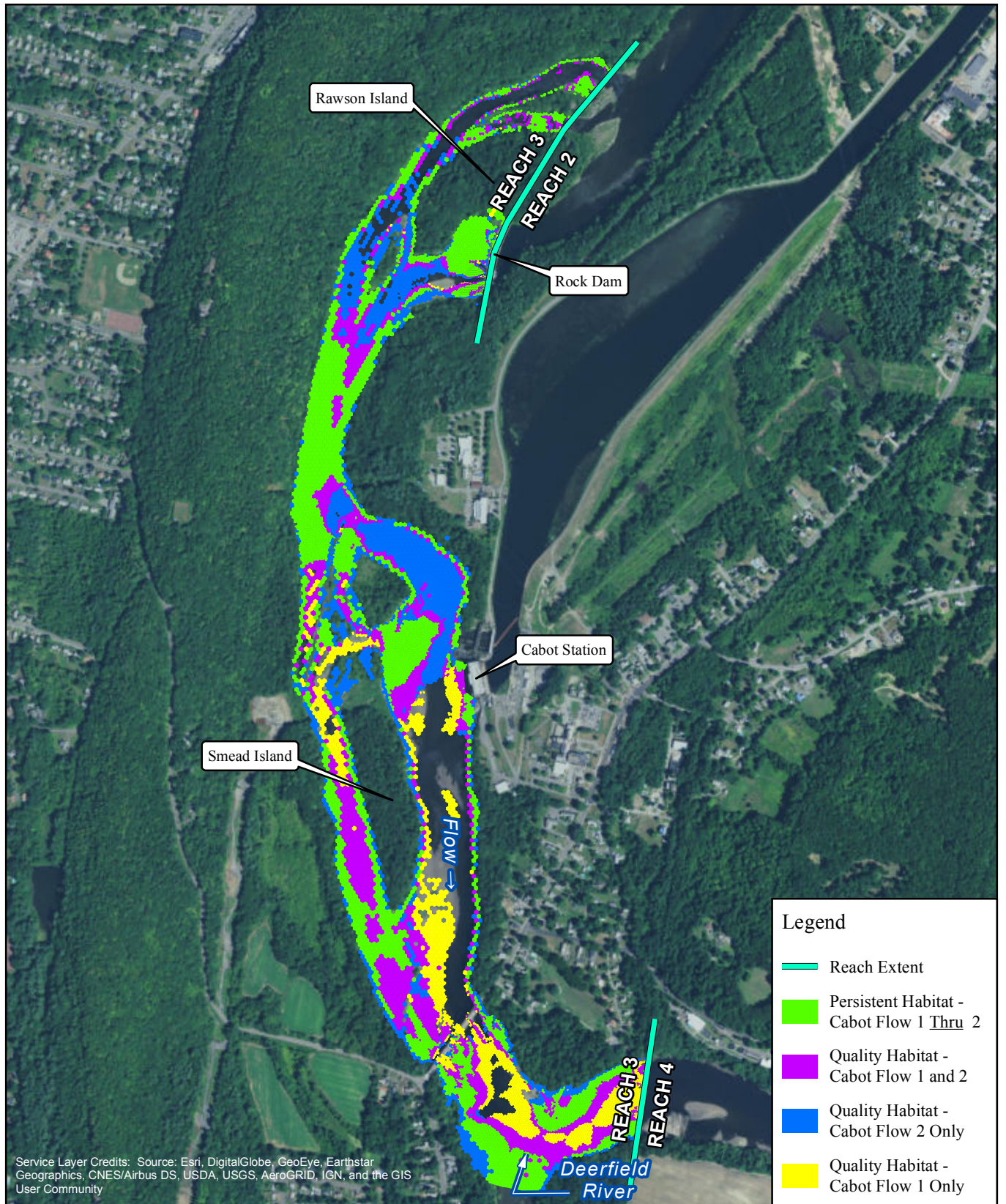
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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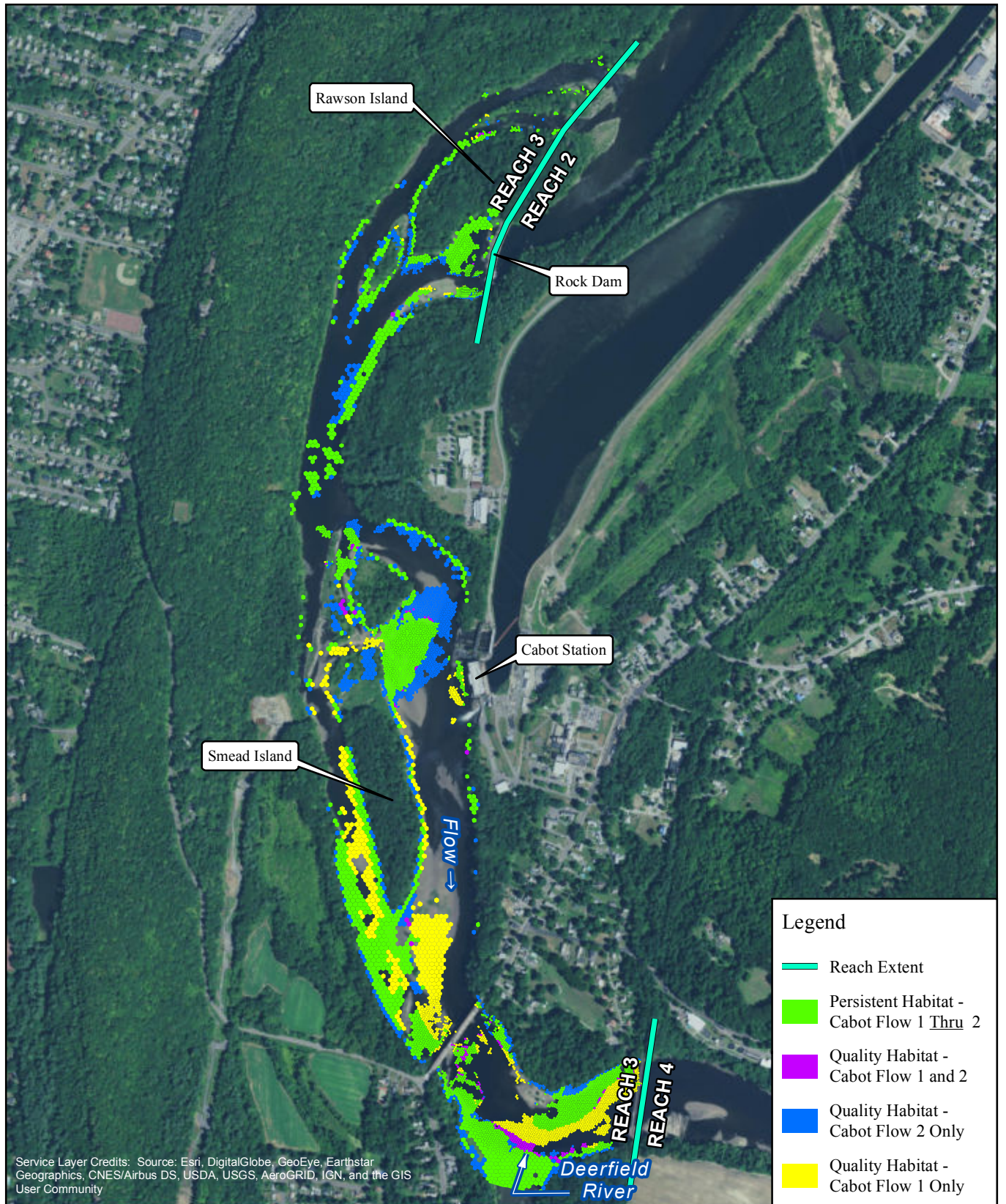
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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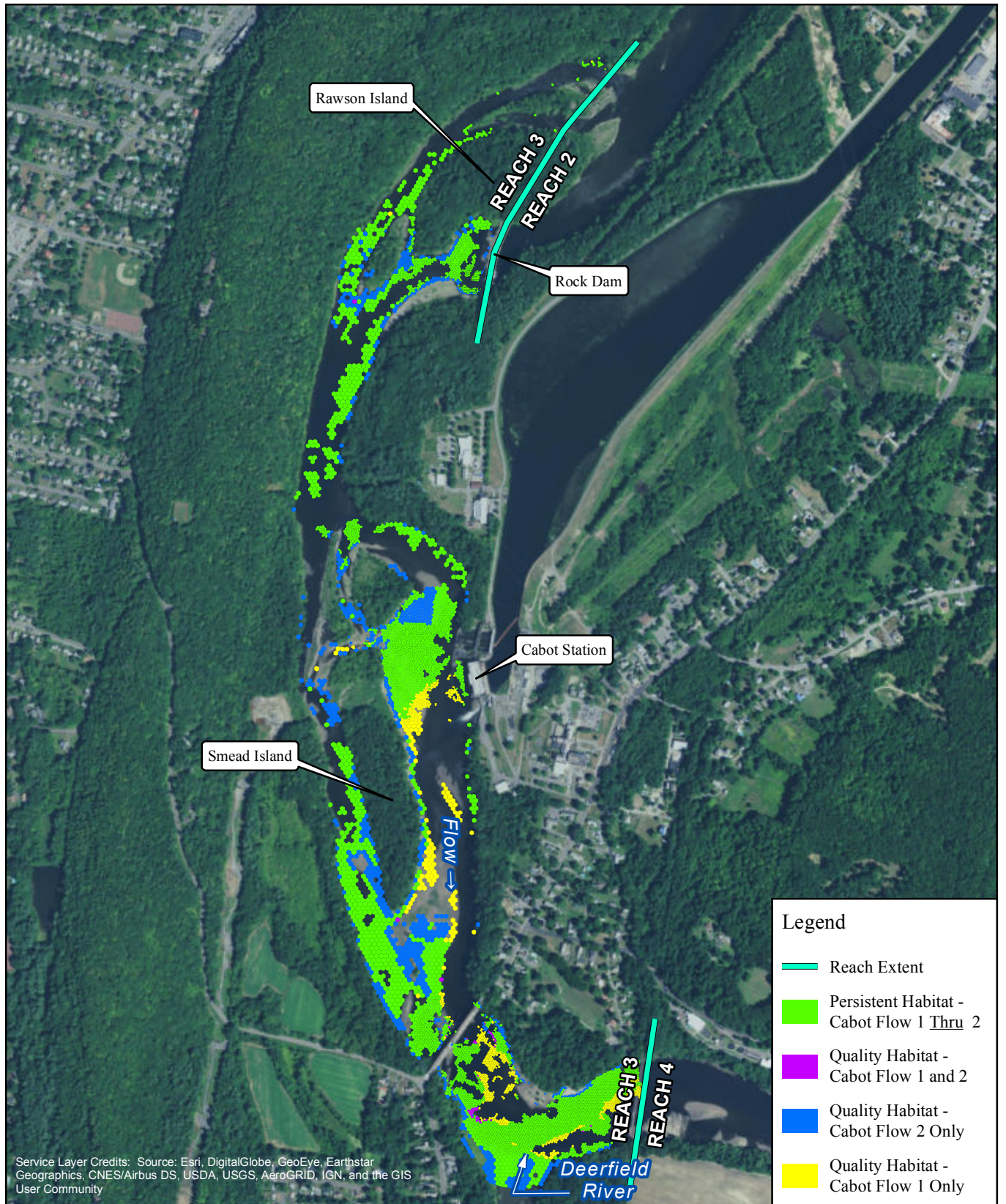
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

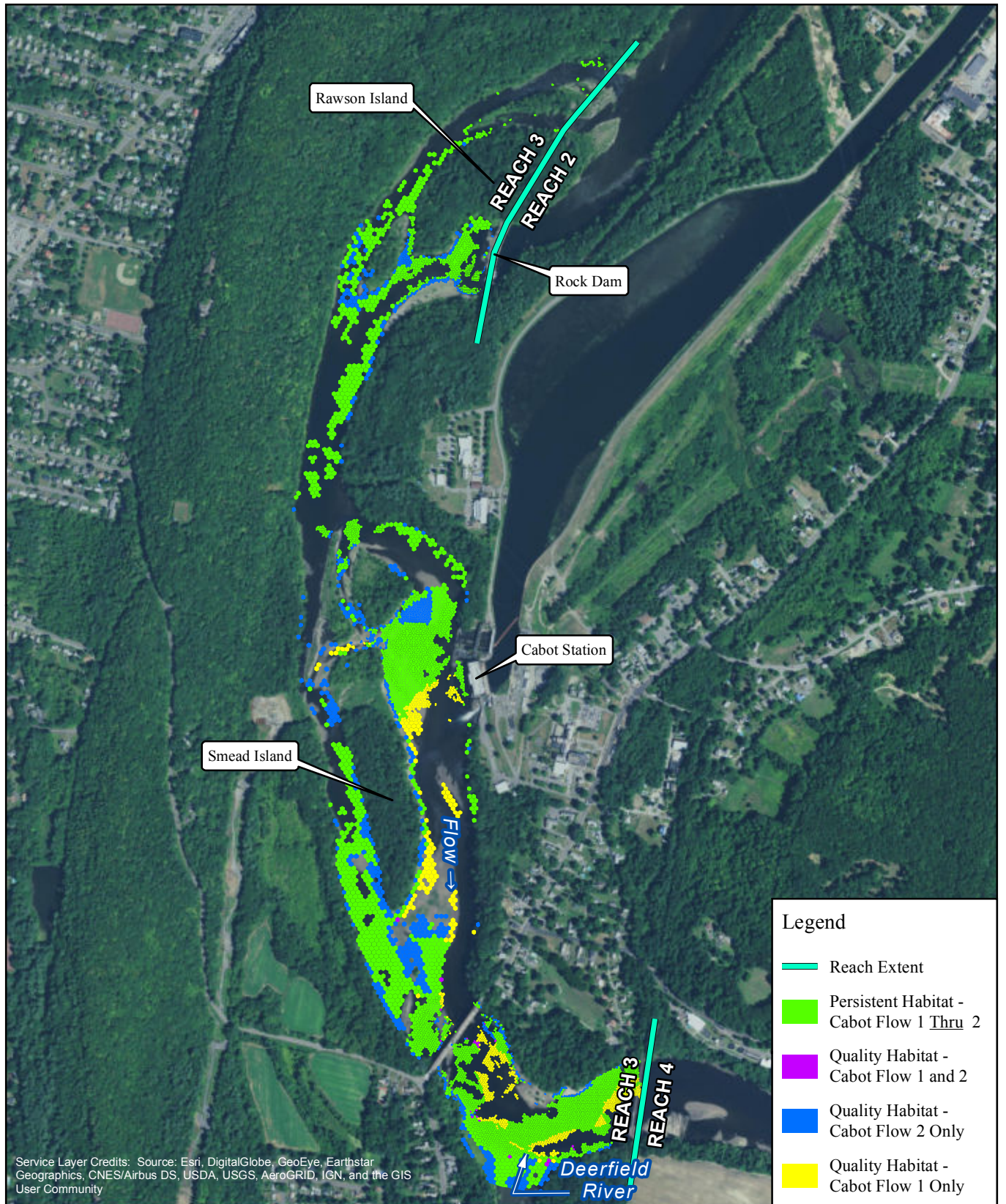
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 200 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

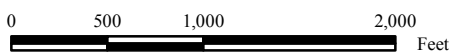
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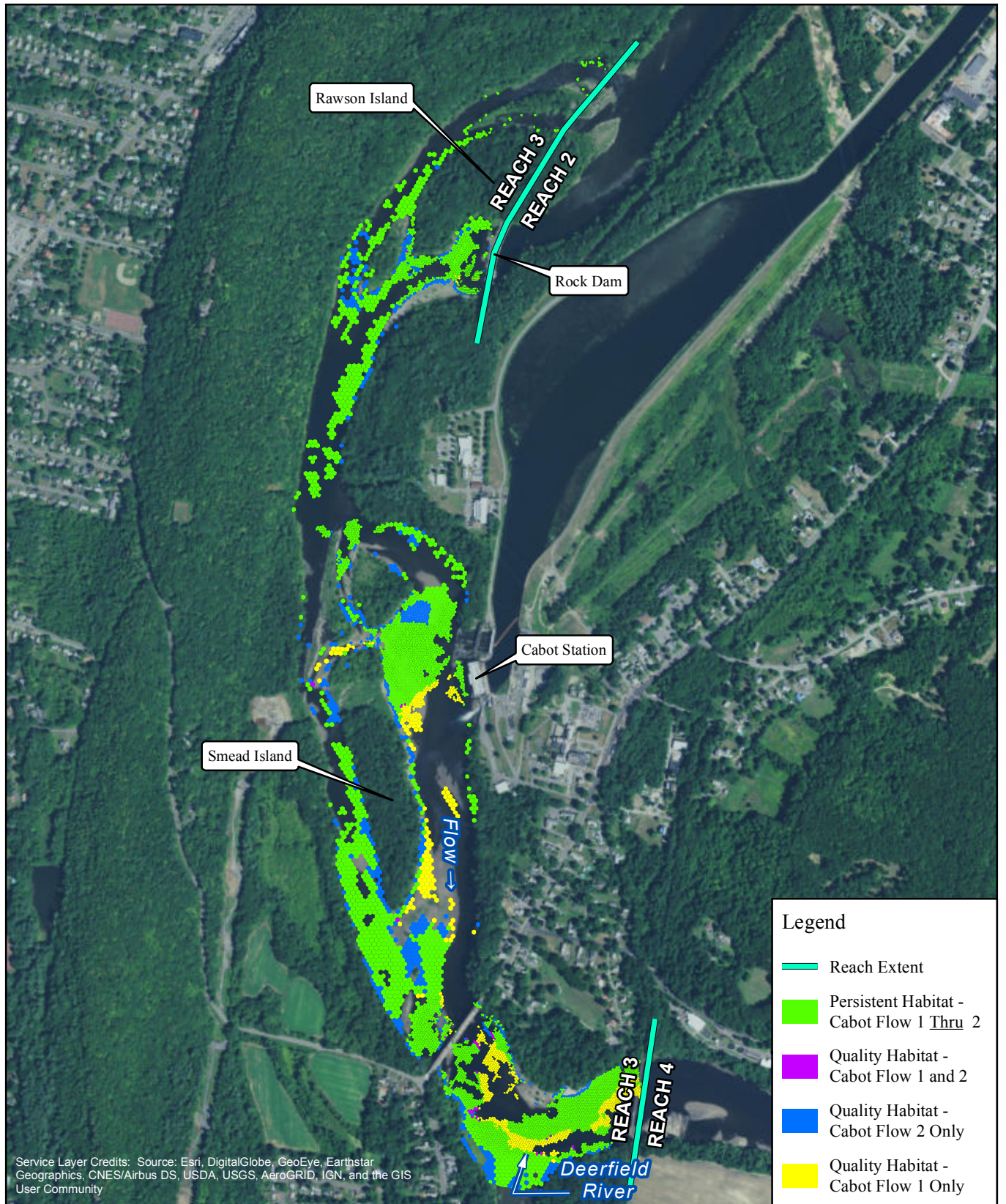
FIRSTLIGHT HYDRO GENERATING COMPANY  
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 RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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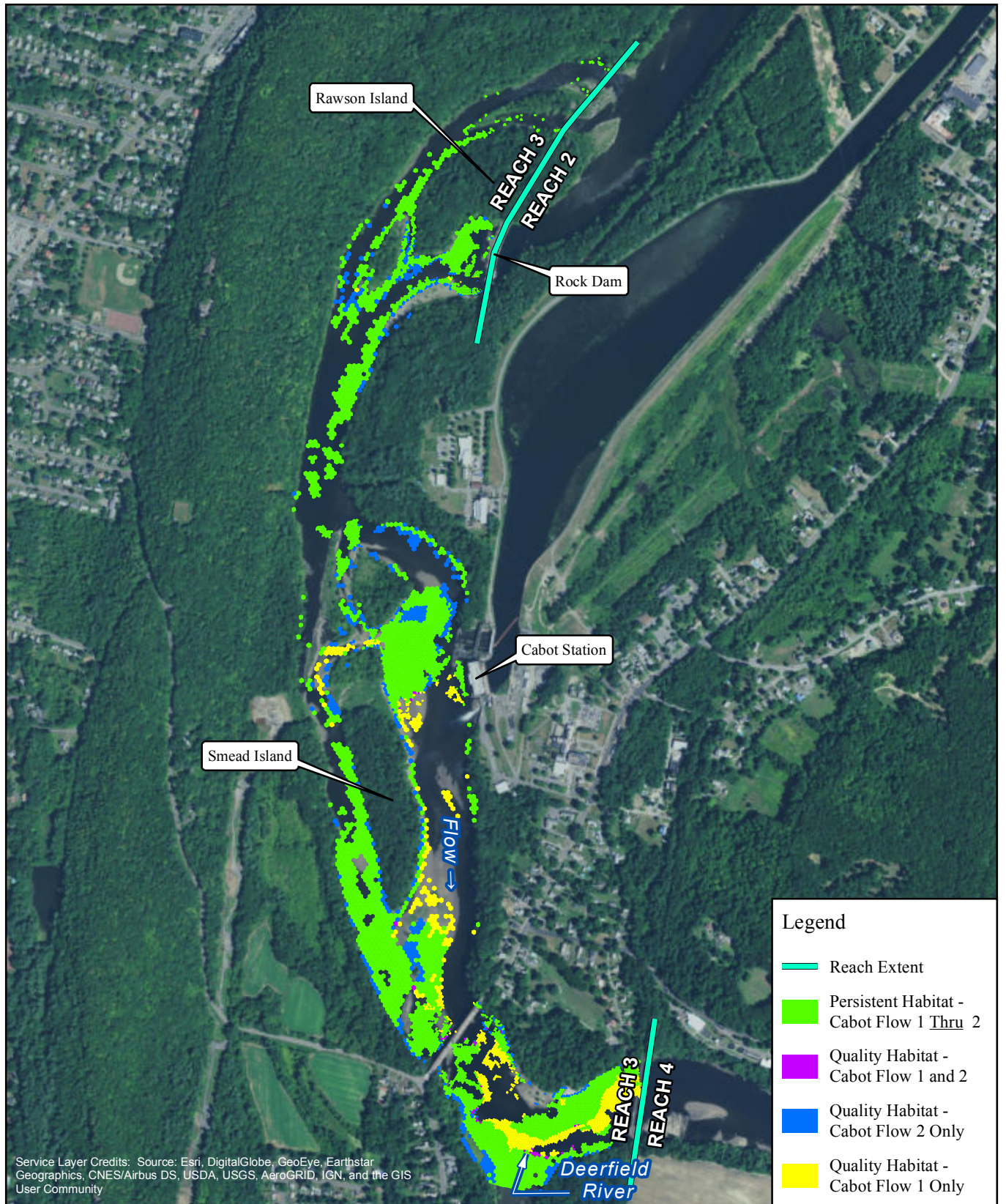
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0 500 1,000 2,000 Feet

**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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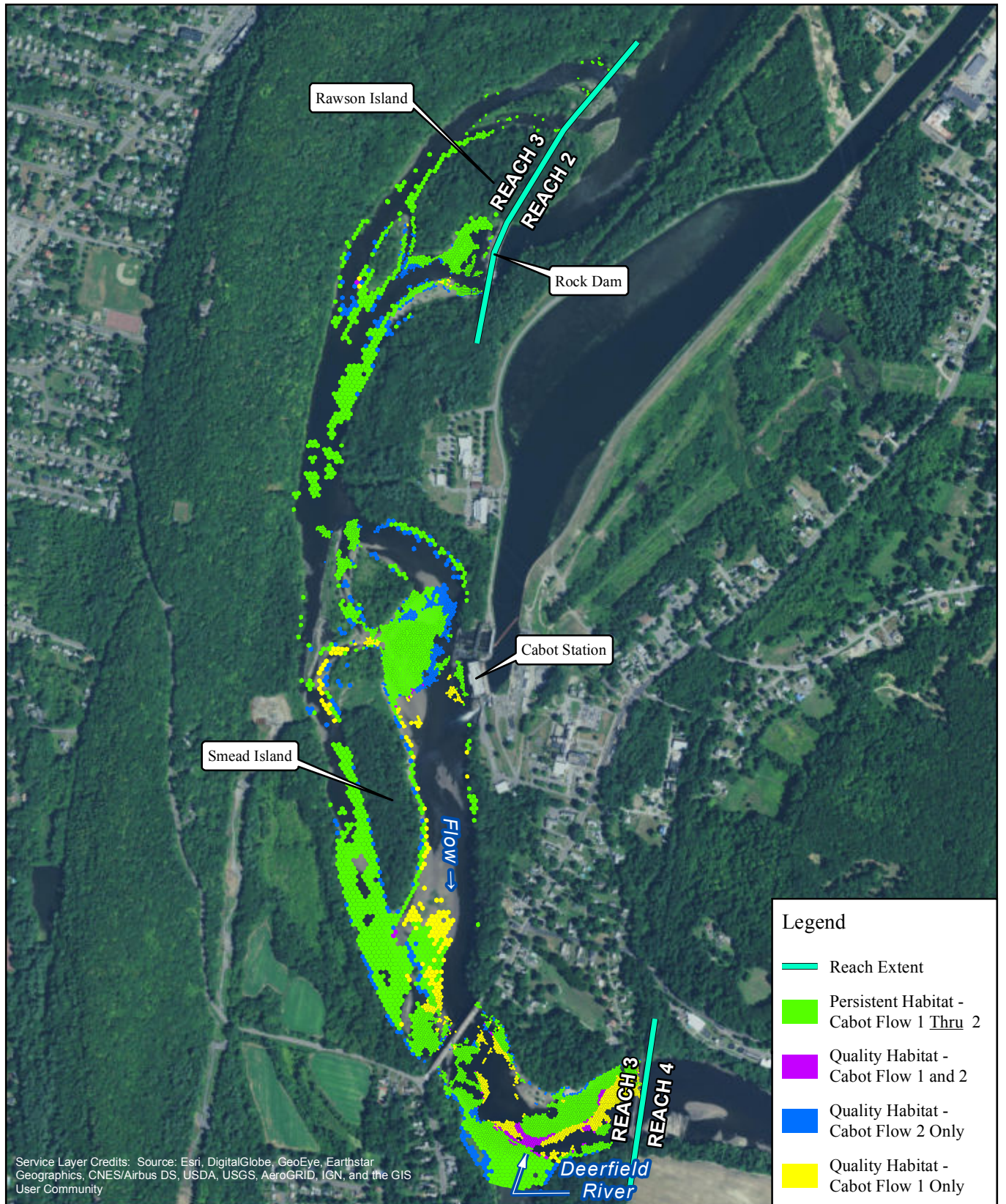
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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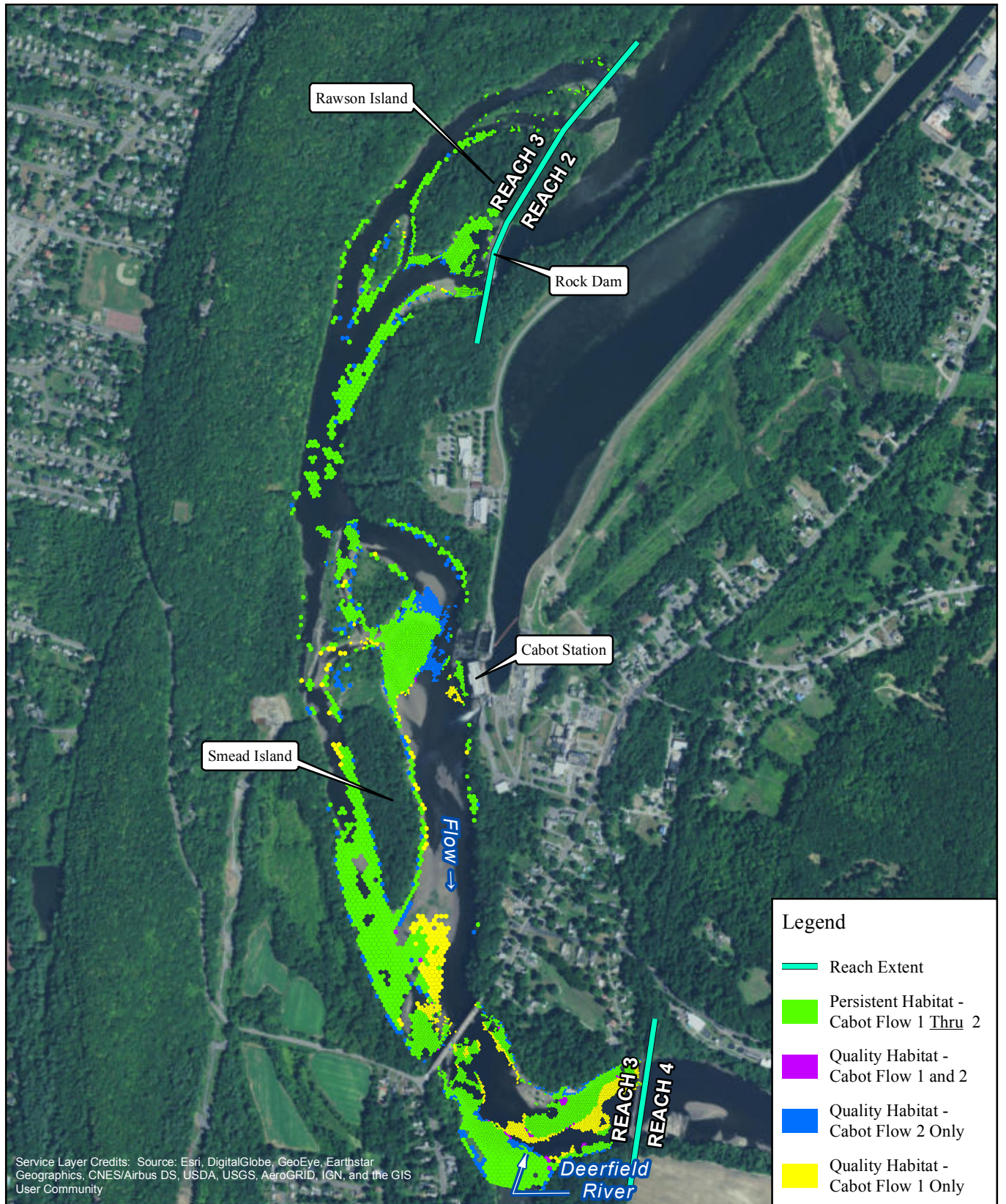
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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**RELICENSING STUDY 3.3.1**

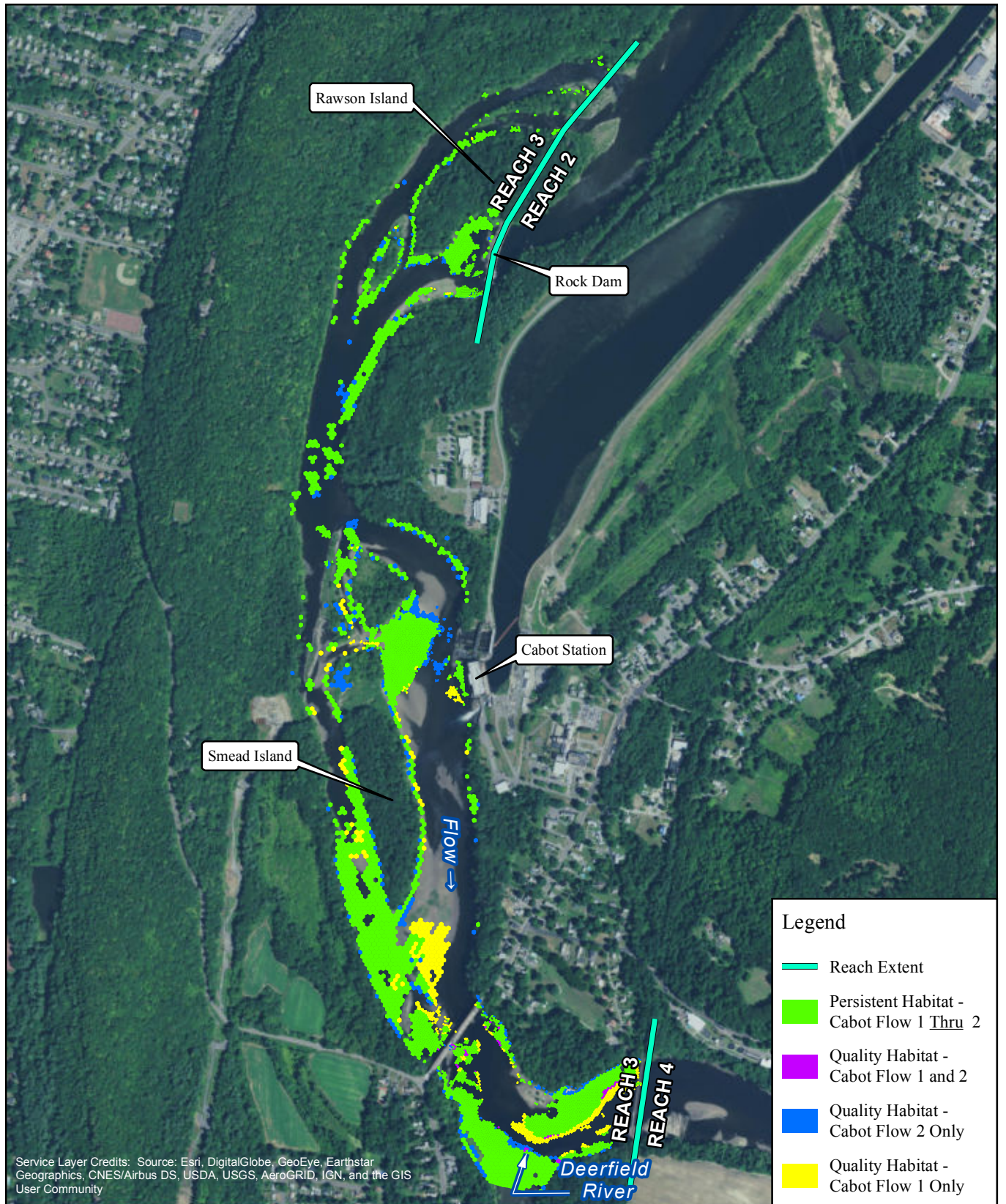
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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Turners Falls Hydroelectric Project No. 1889  
RELICENSING STUDY 3.3.1

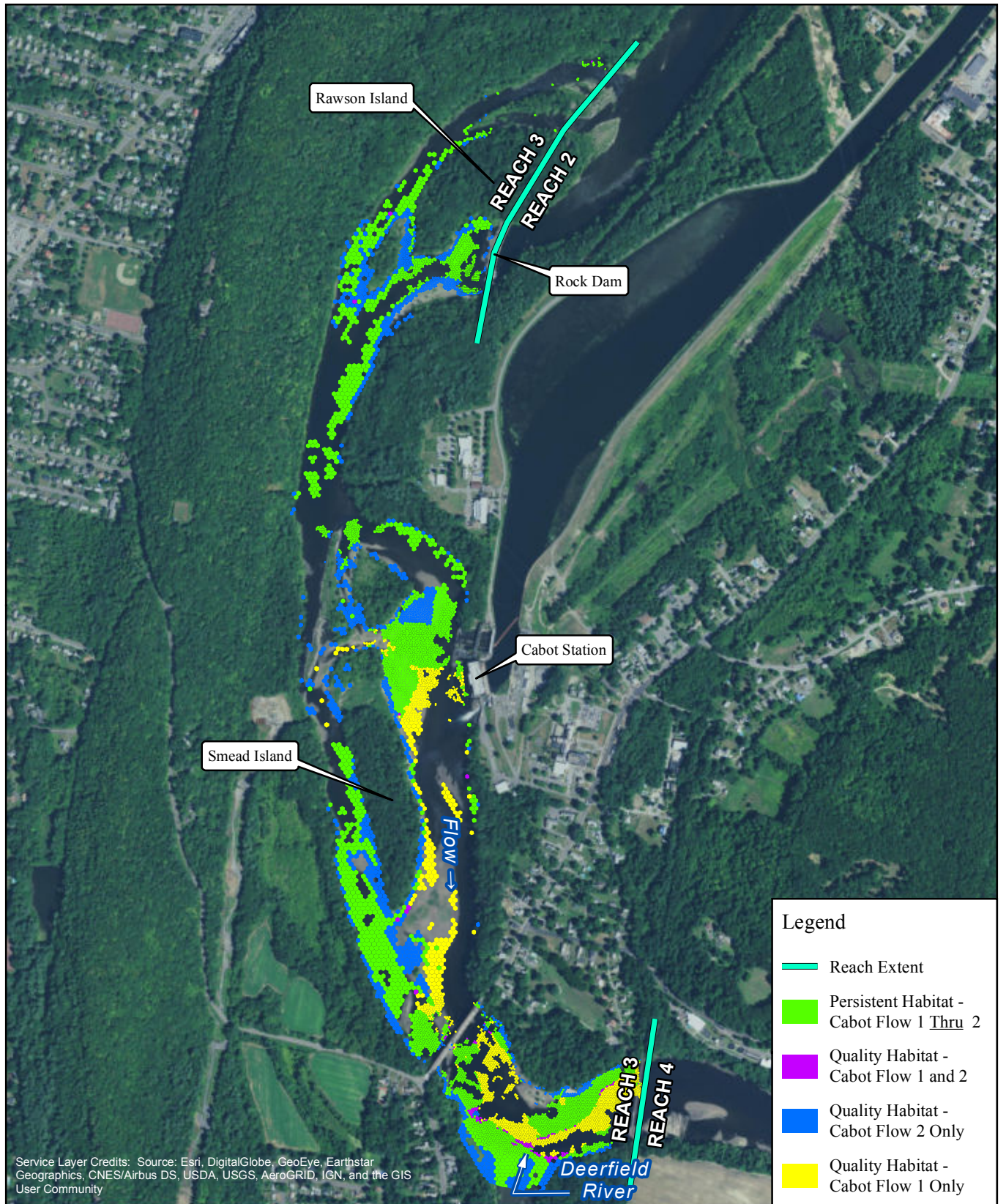
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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**RELICENSING STUDY 3.3.1**

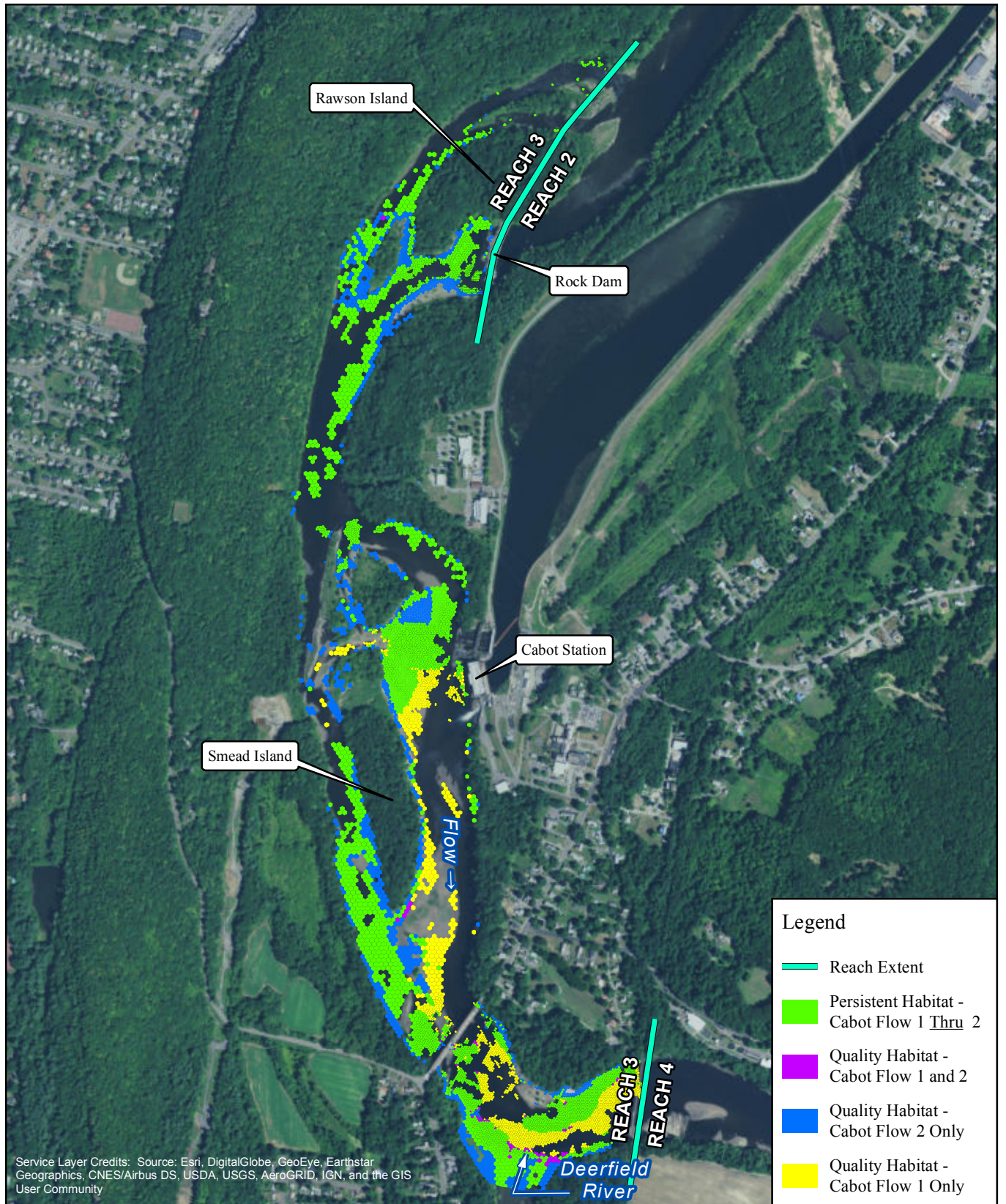
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 200 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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 RELICENSING STUDY 3.3.1

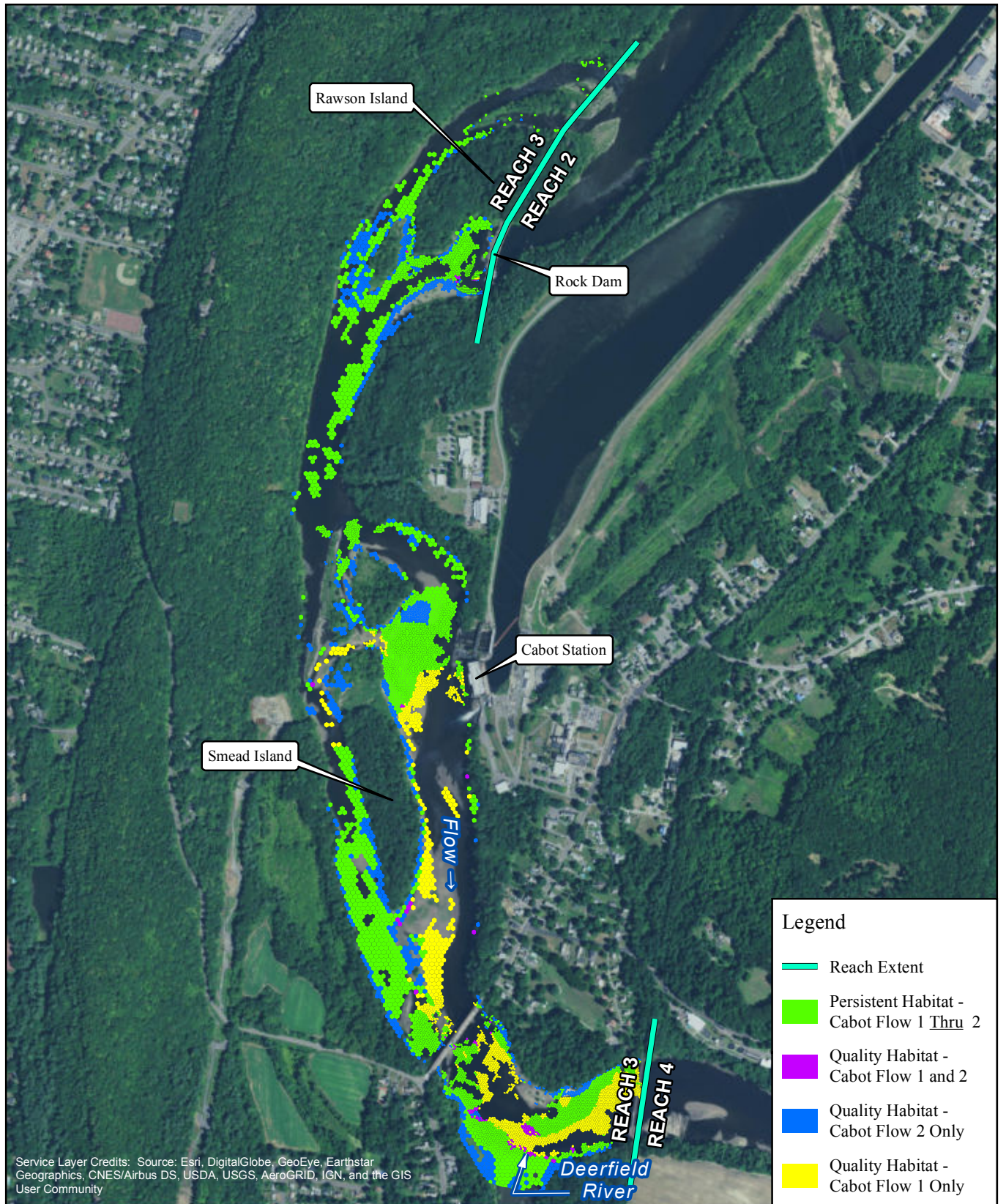
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**Persistent Habitat**  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

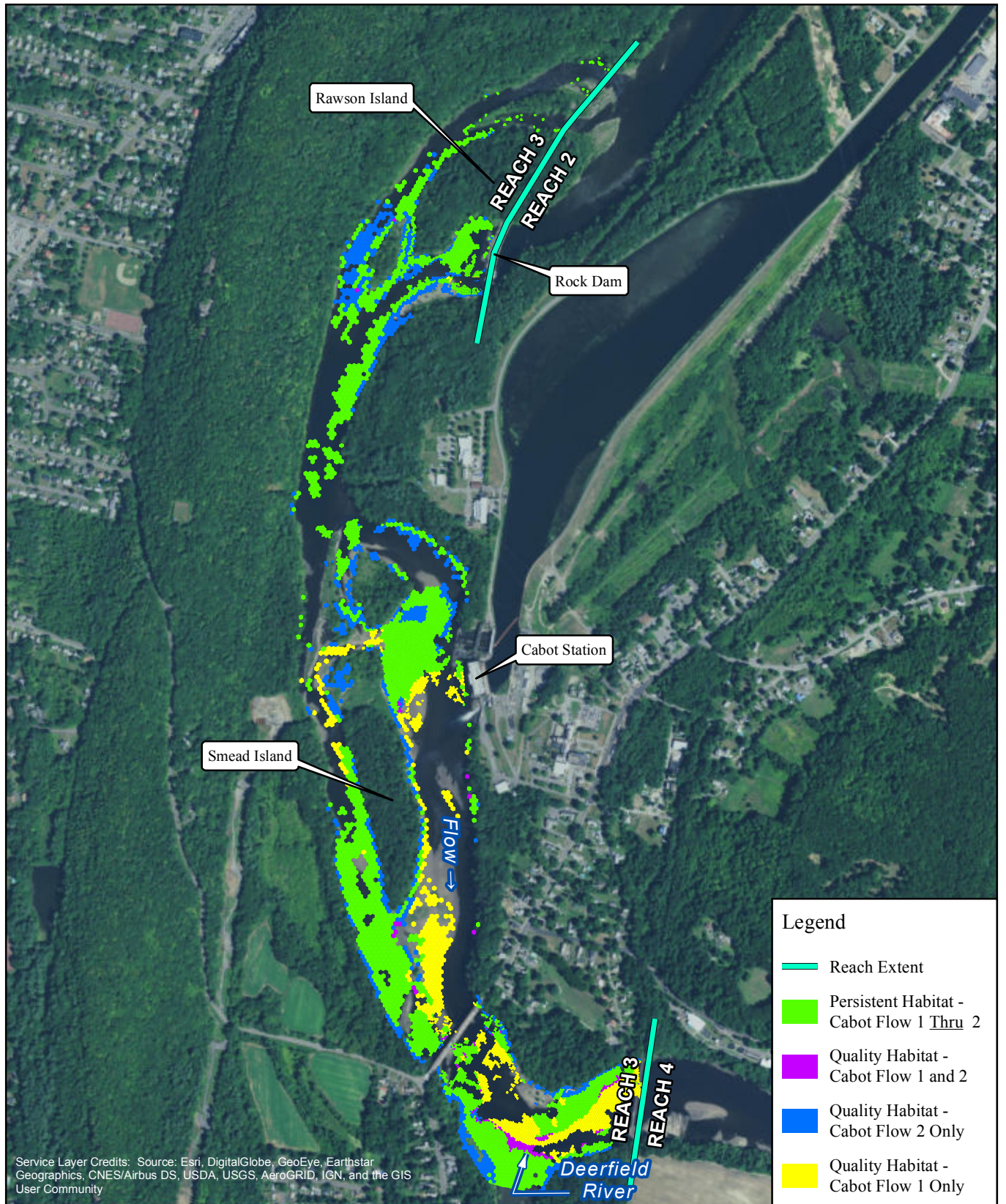
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

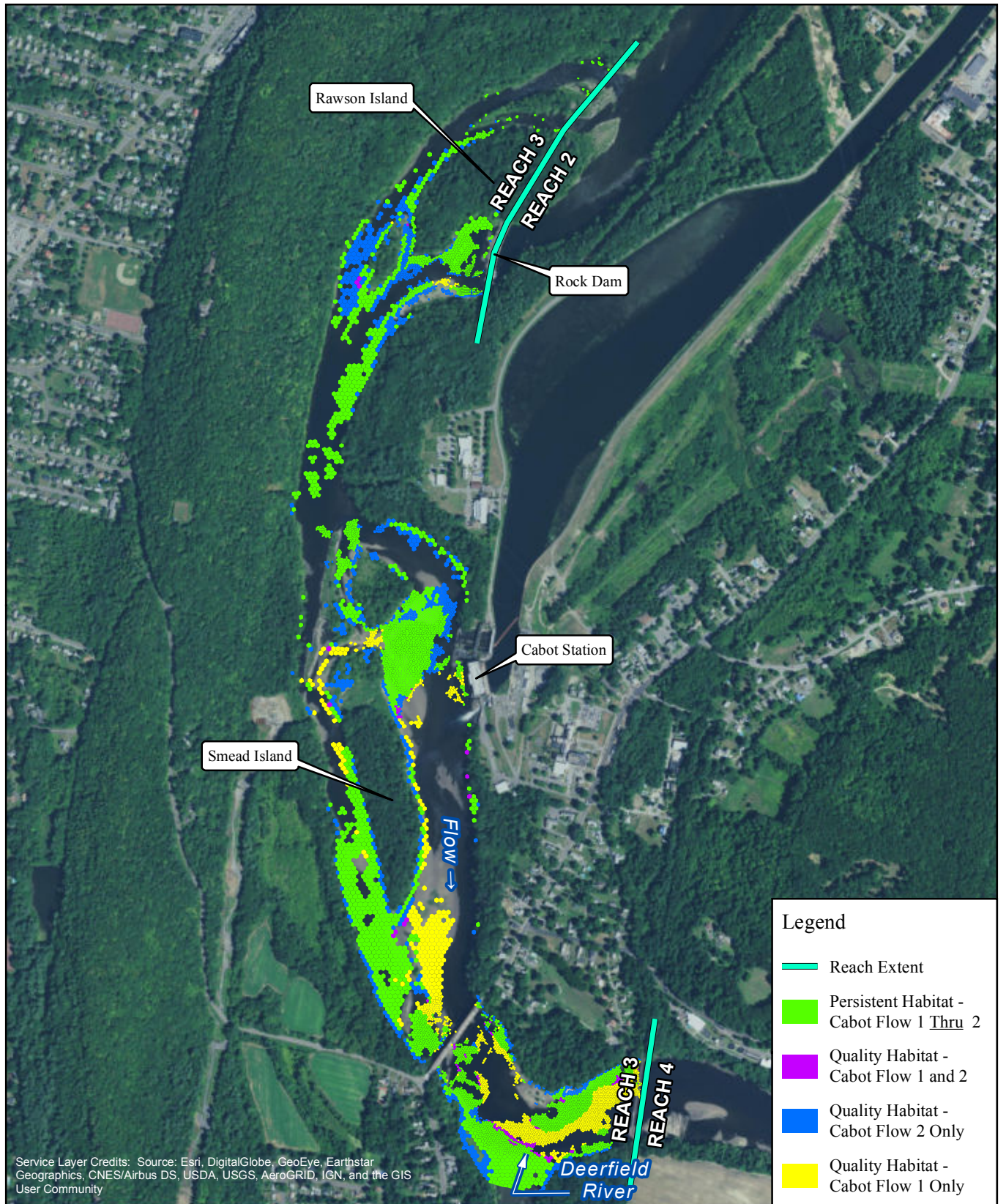
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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

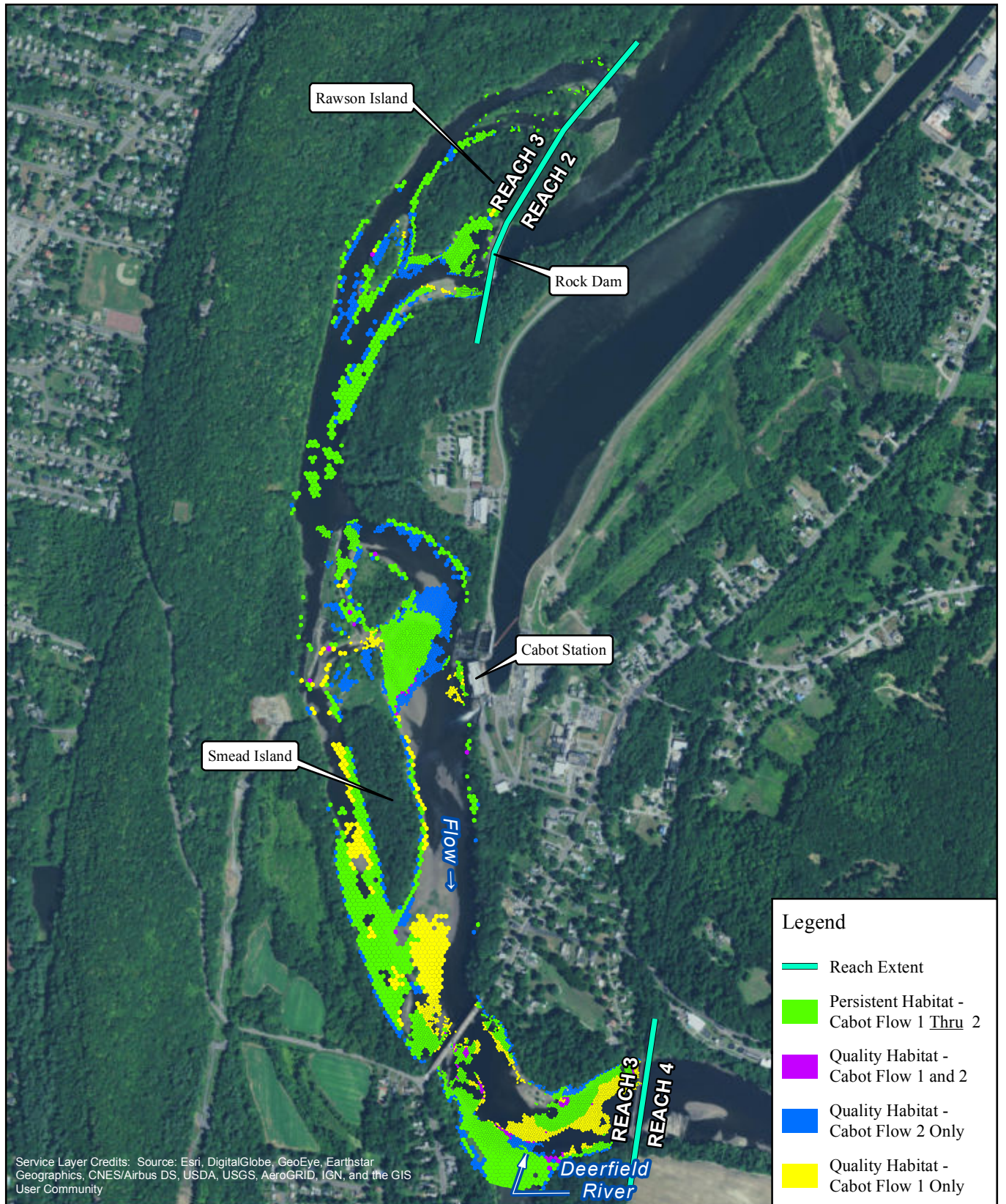
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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

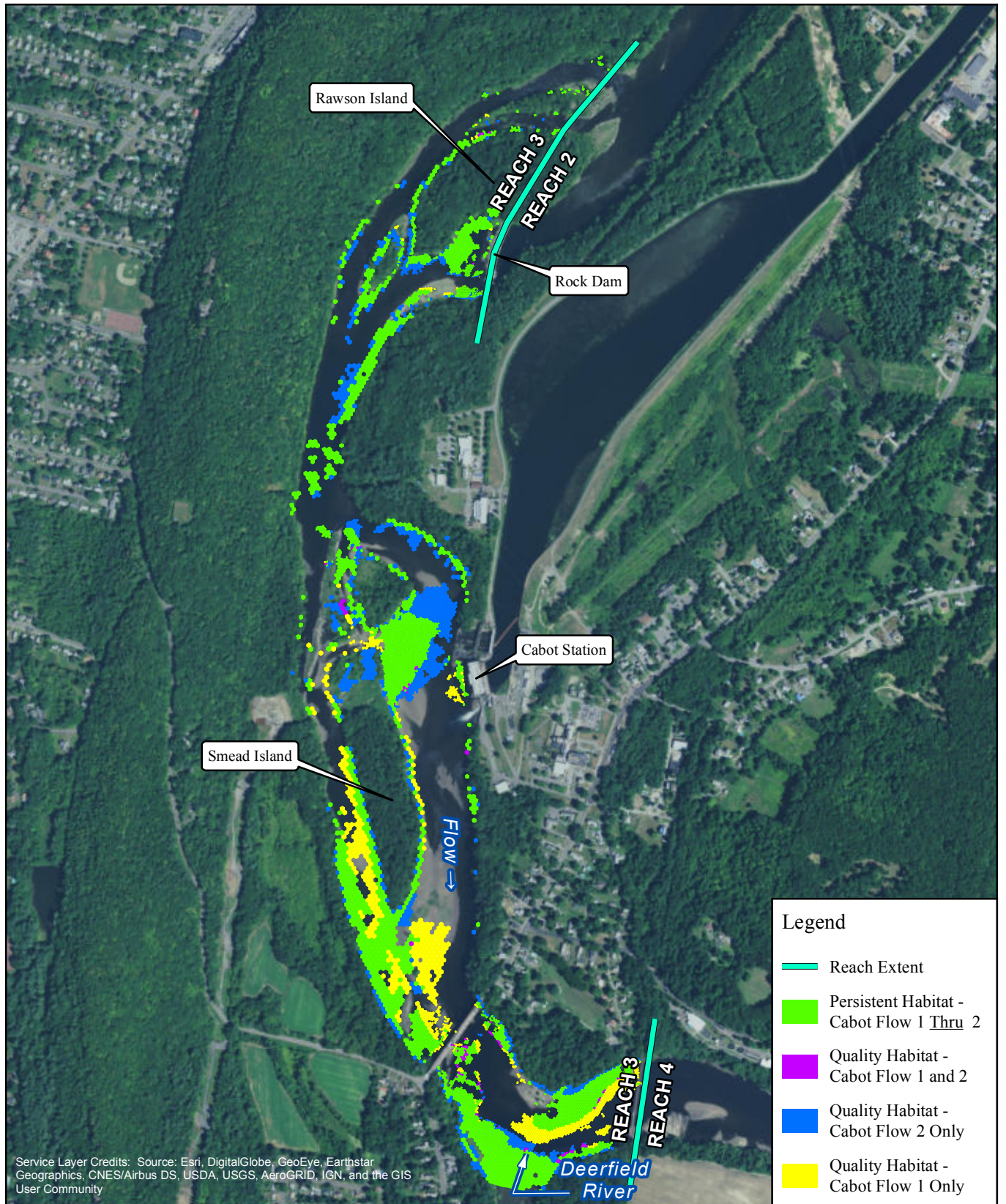
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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

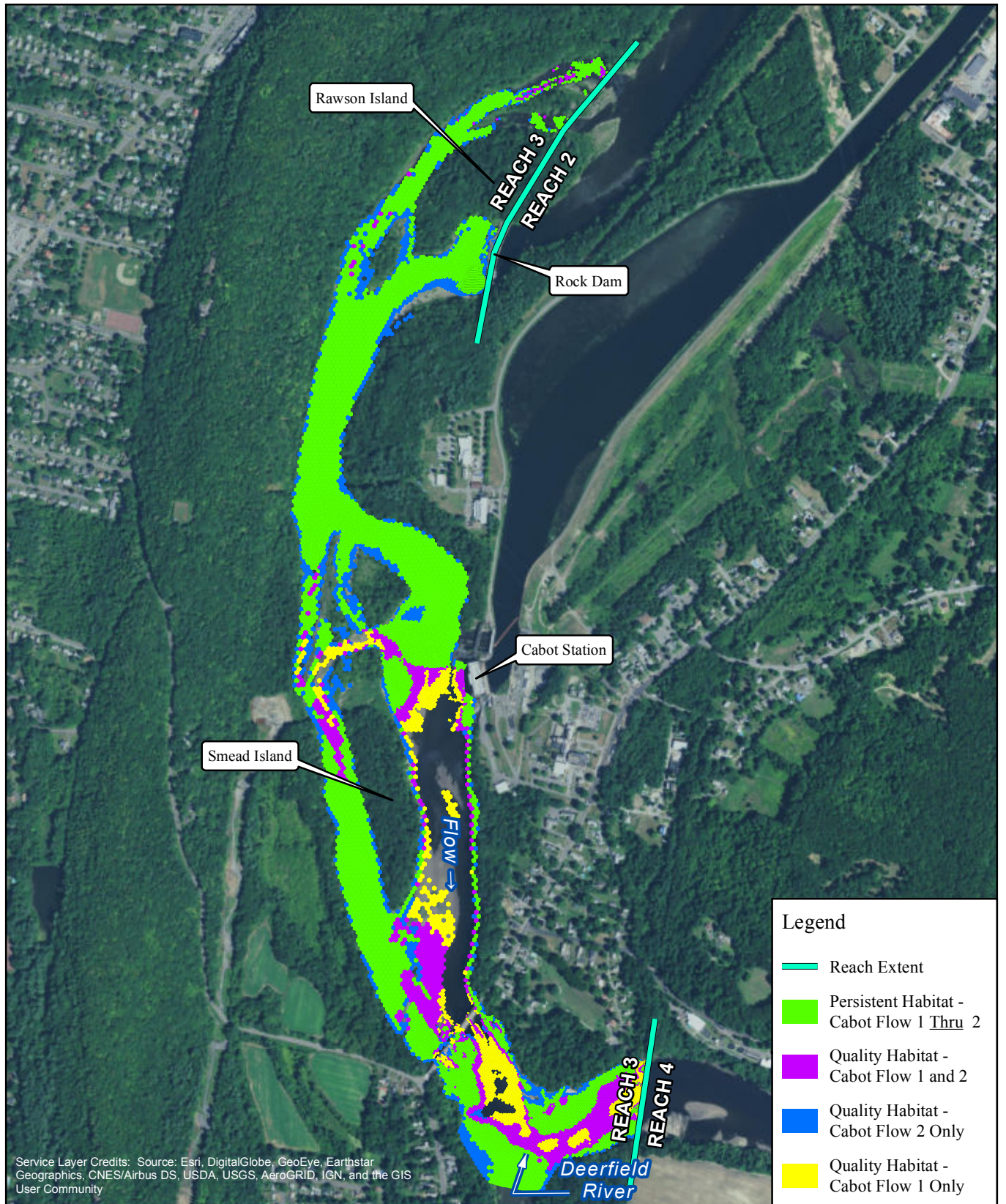
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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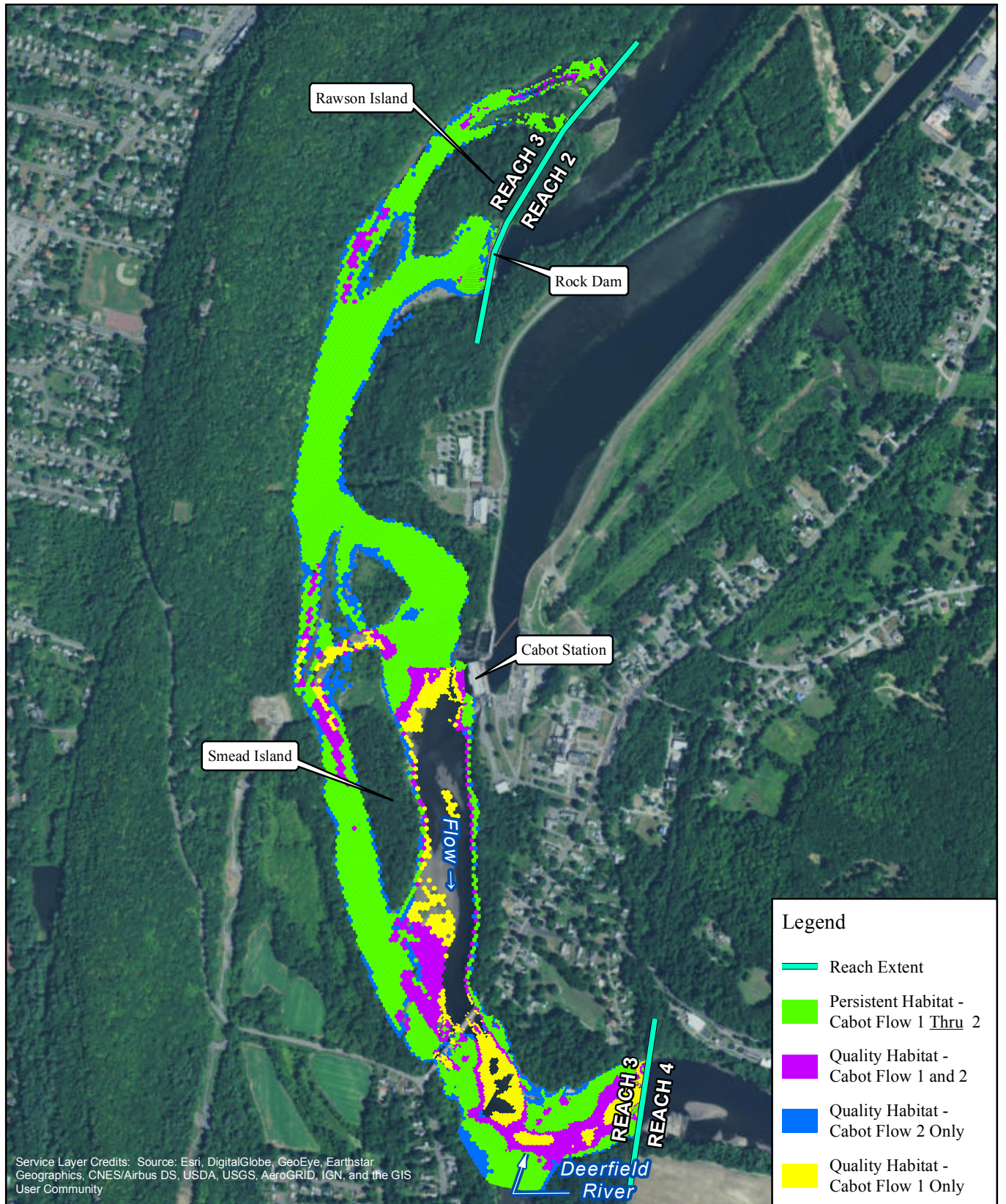
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 Northfield Mountain Pumped Storage Project No. 2485  
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 RELICENSING STUDY 3.3.1

0 500 1,000 2,000 Feet

Persistent Habitat  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 7000 cfs  
 Cabot Flow 2: 14000 cfs

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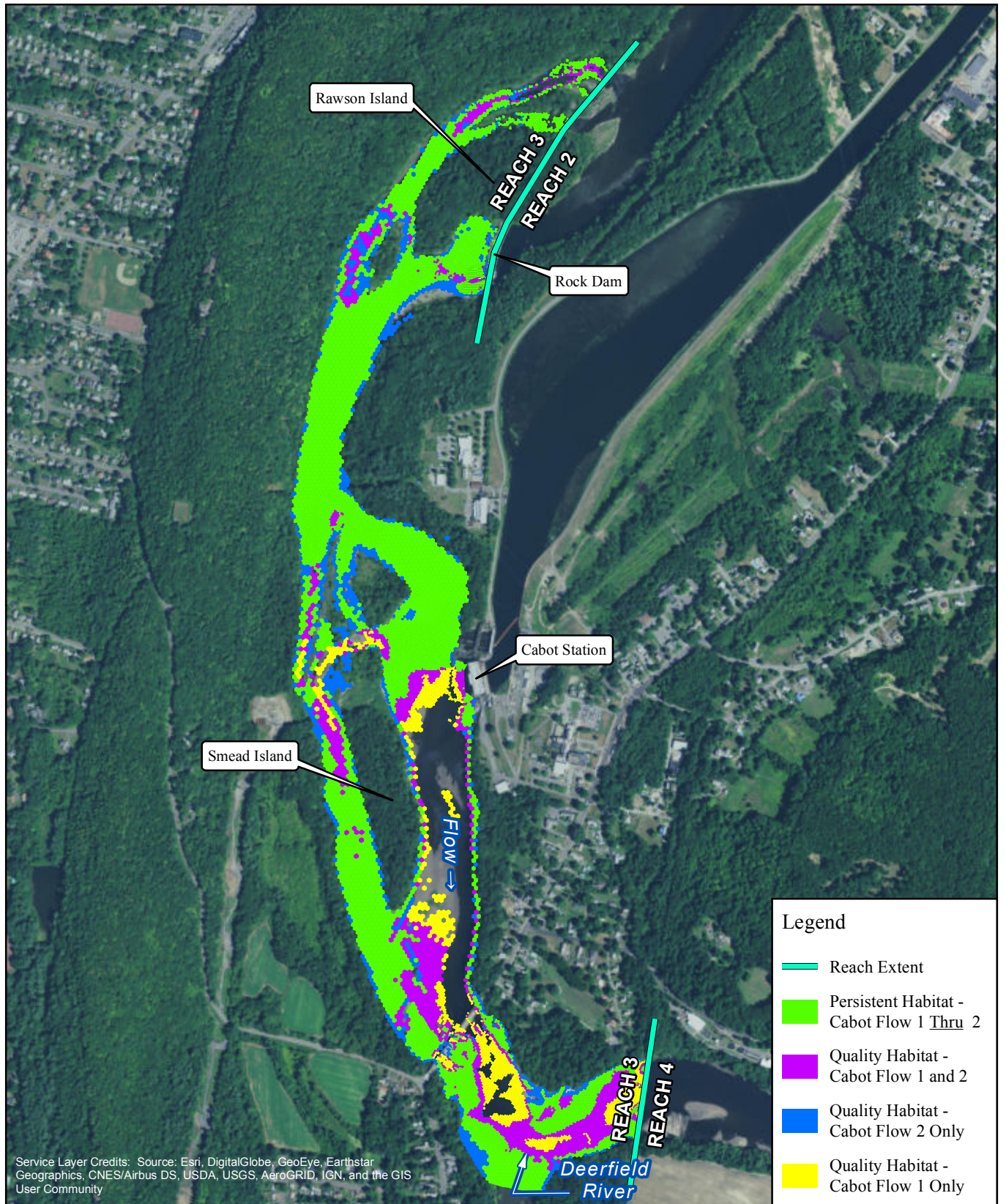
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 500 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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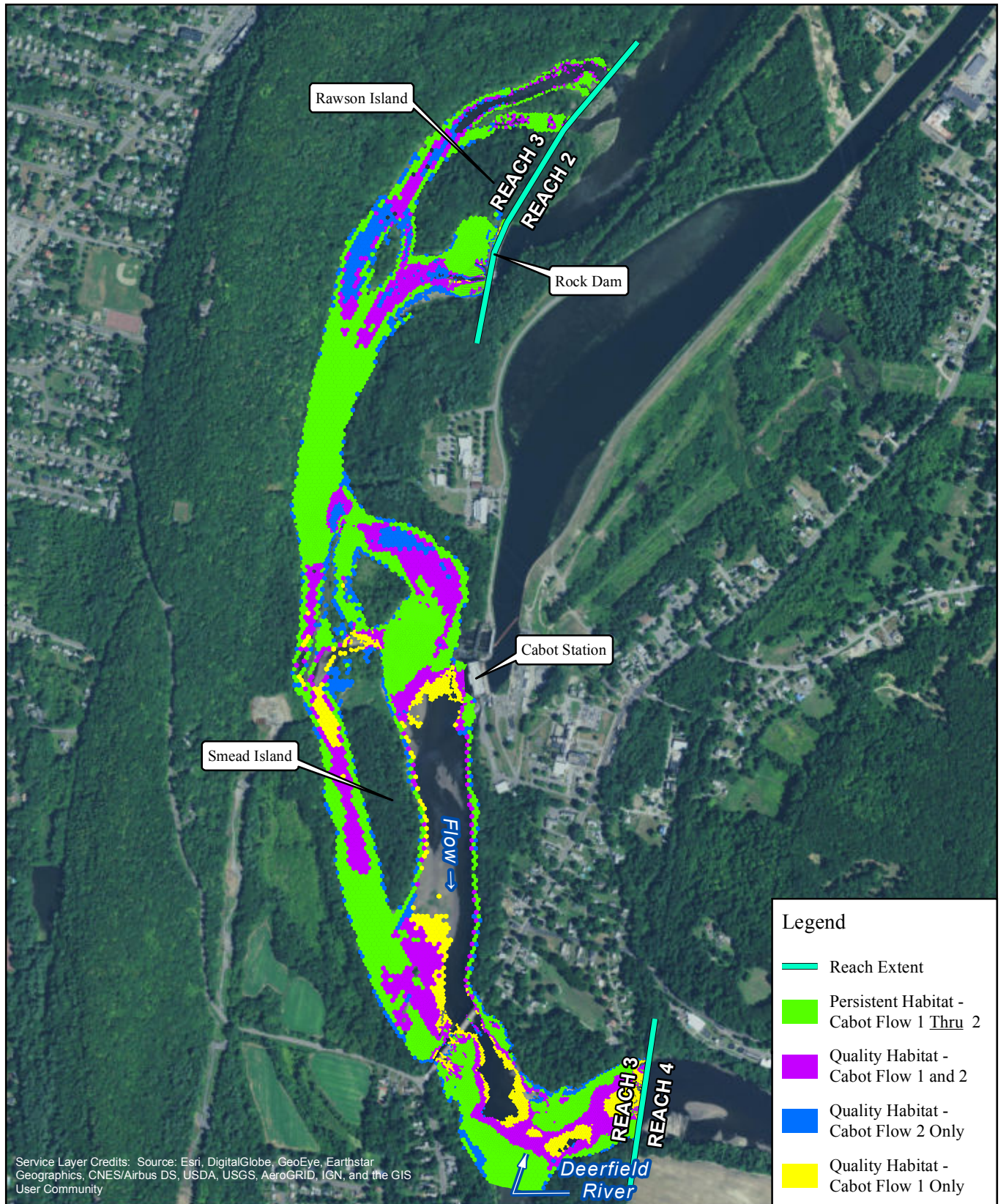
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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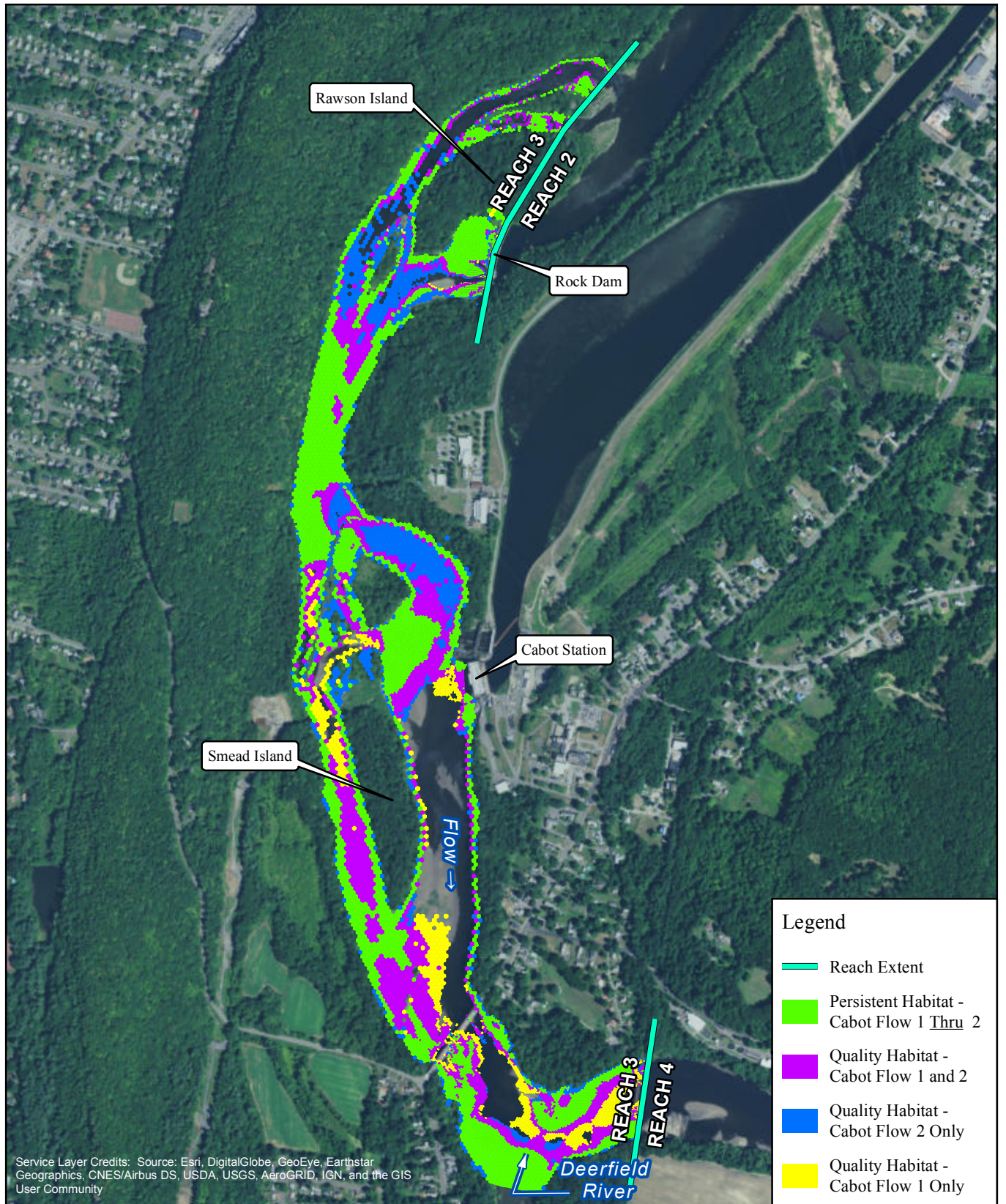
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

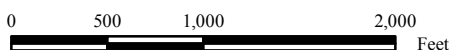
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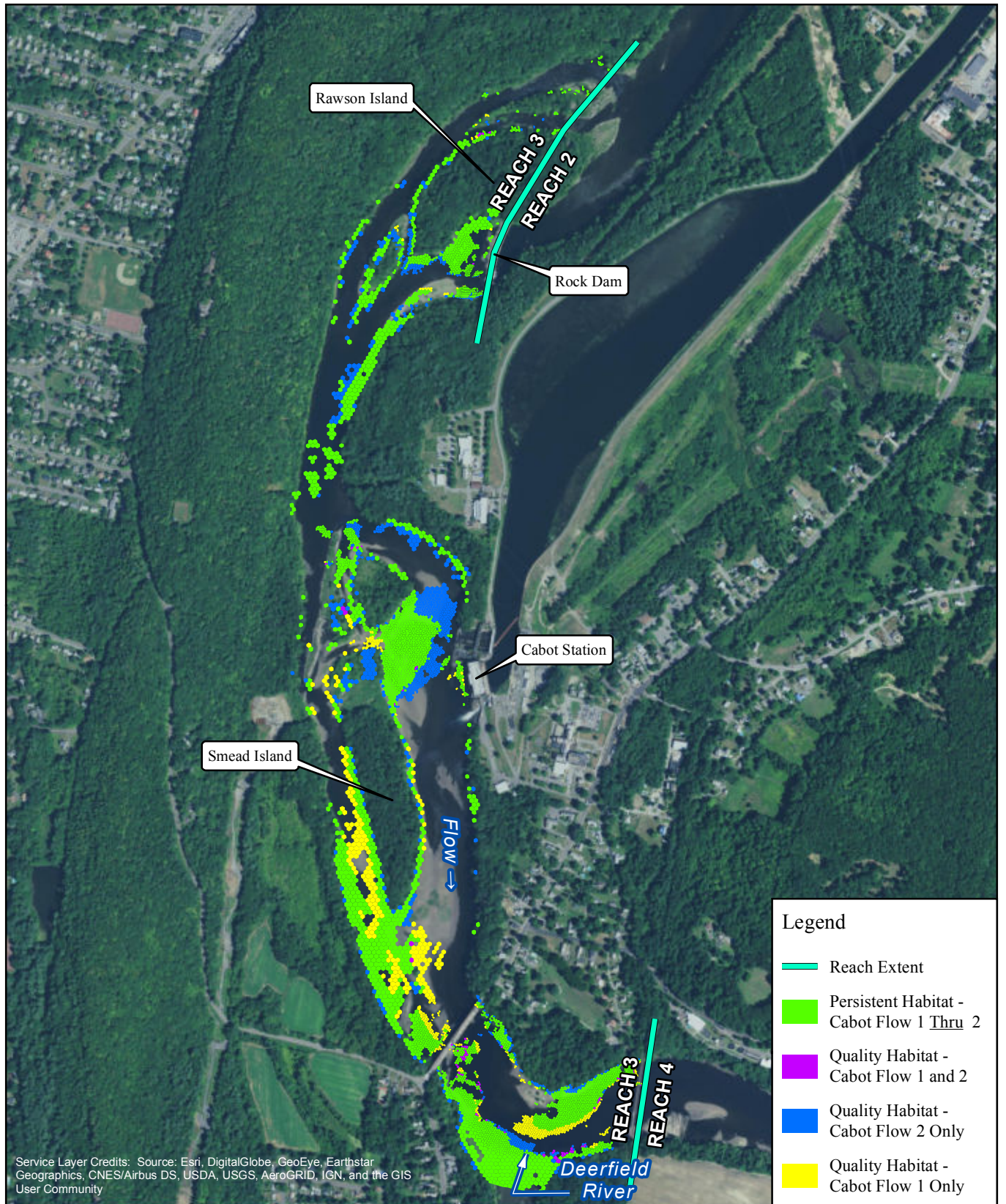
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 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



Persistent Habitat  
 Yellow Lampmussel-Juvenile  
 Bypass Flow: 5000 cfs  
 Cabot Flow 1: 7000 cfs  
 Cabot Flow 2: 14000 cfs

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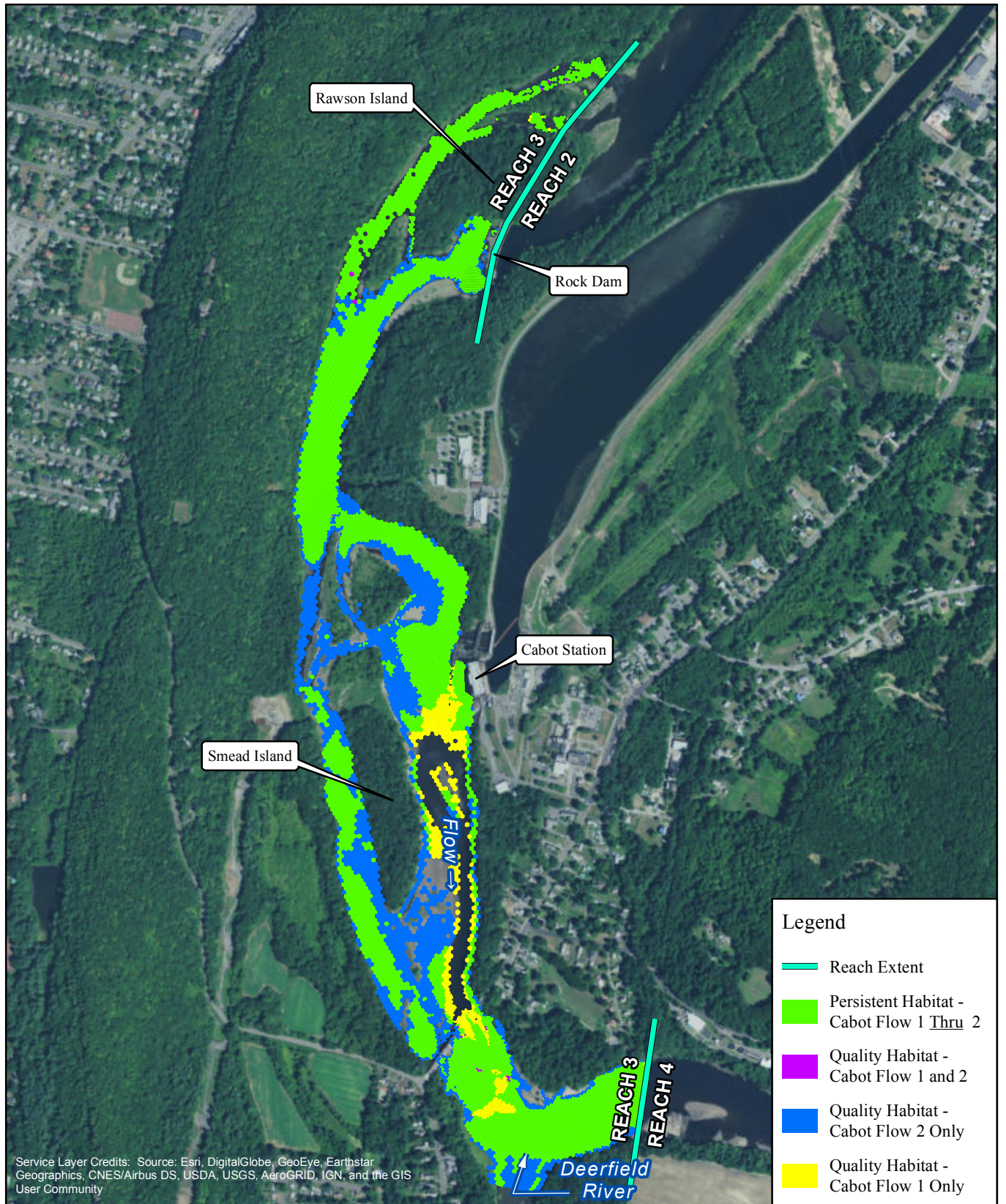
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**Persistent Habitat**  
Yellow Lampmussel-Juvenile  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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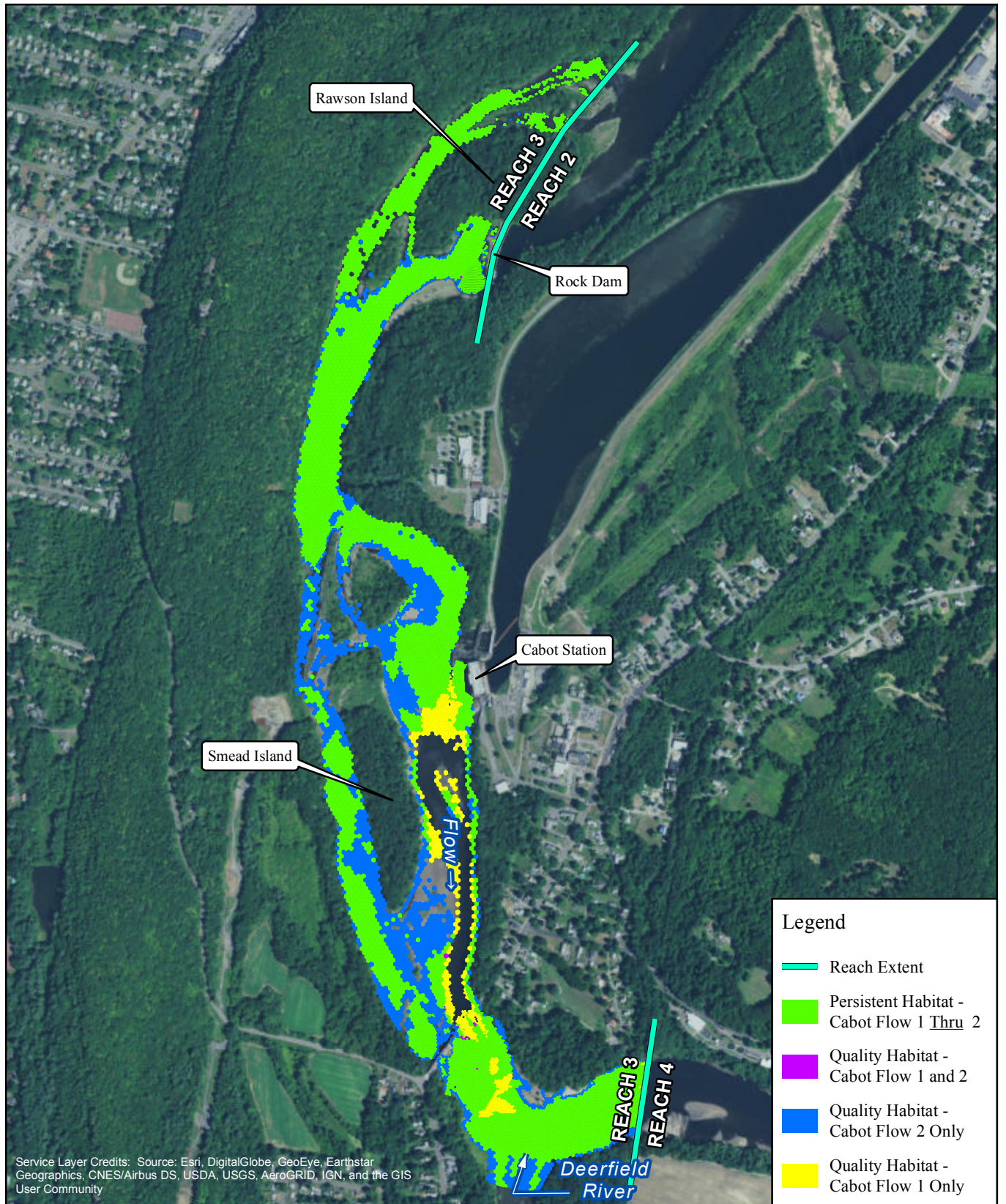
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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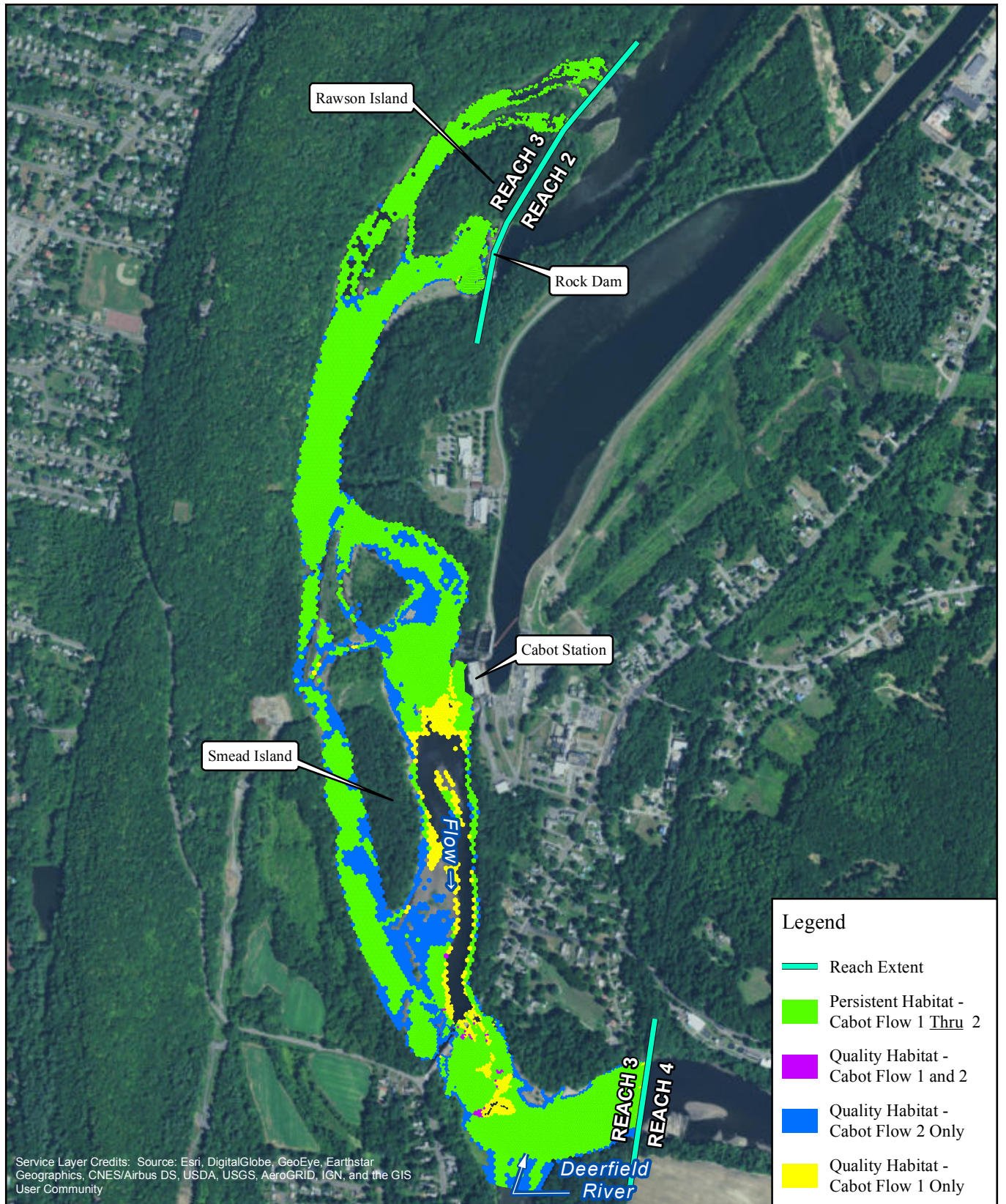
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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**RELICENSING STUDY 3.3.1**

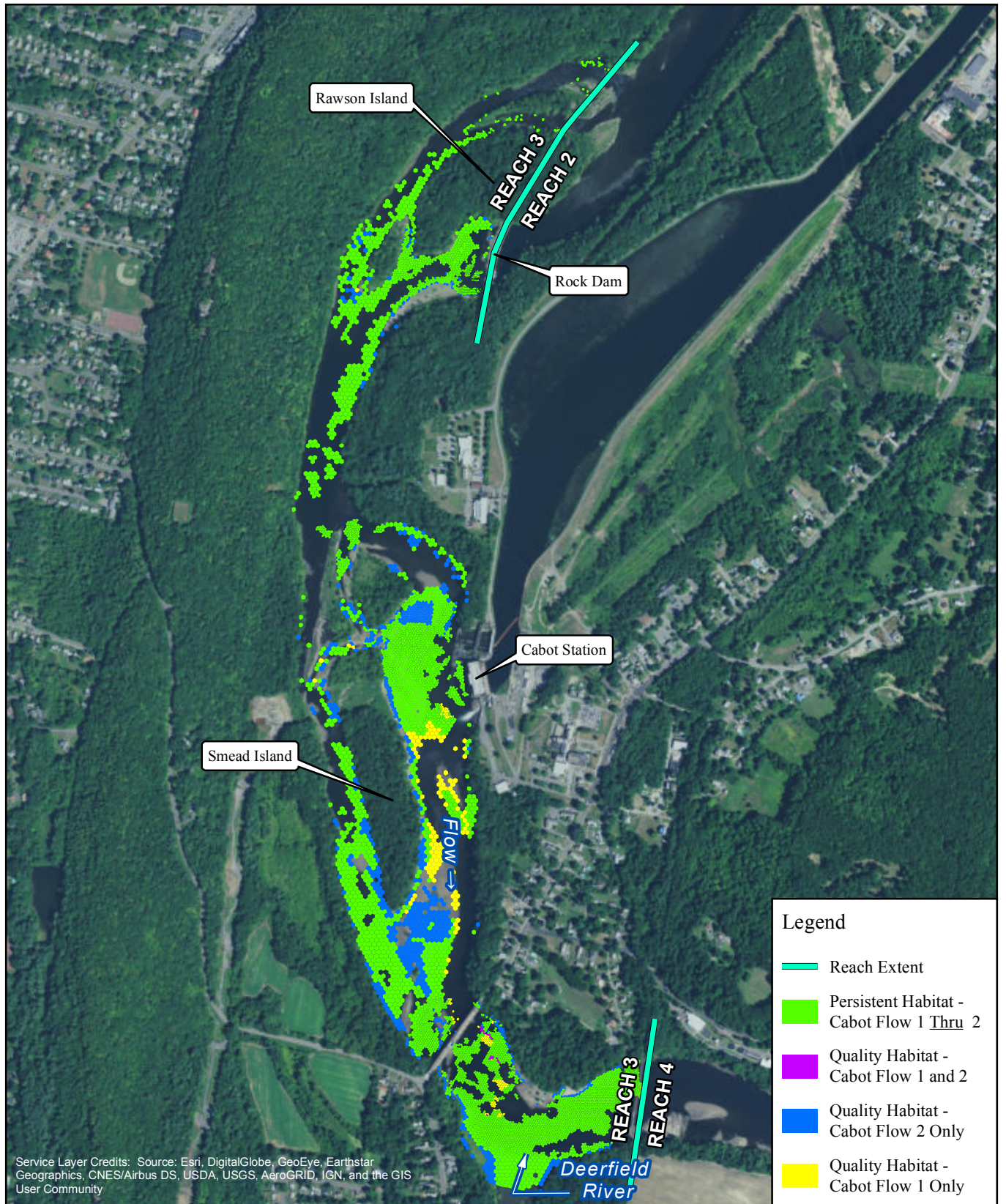
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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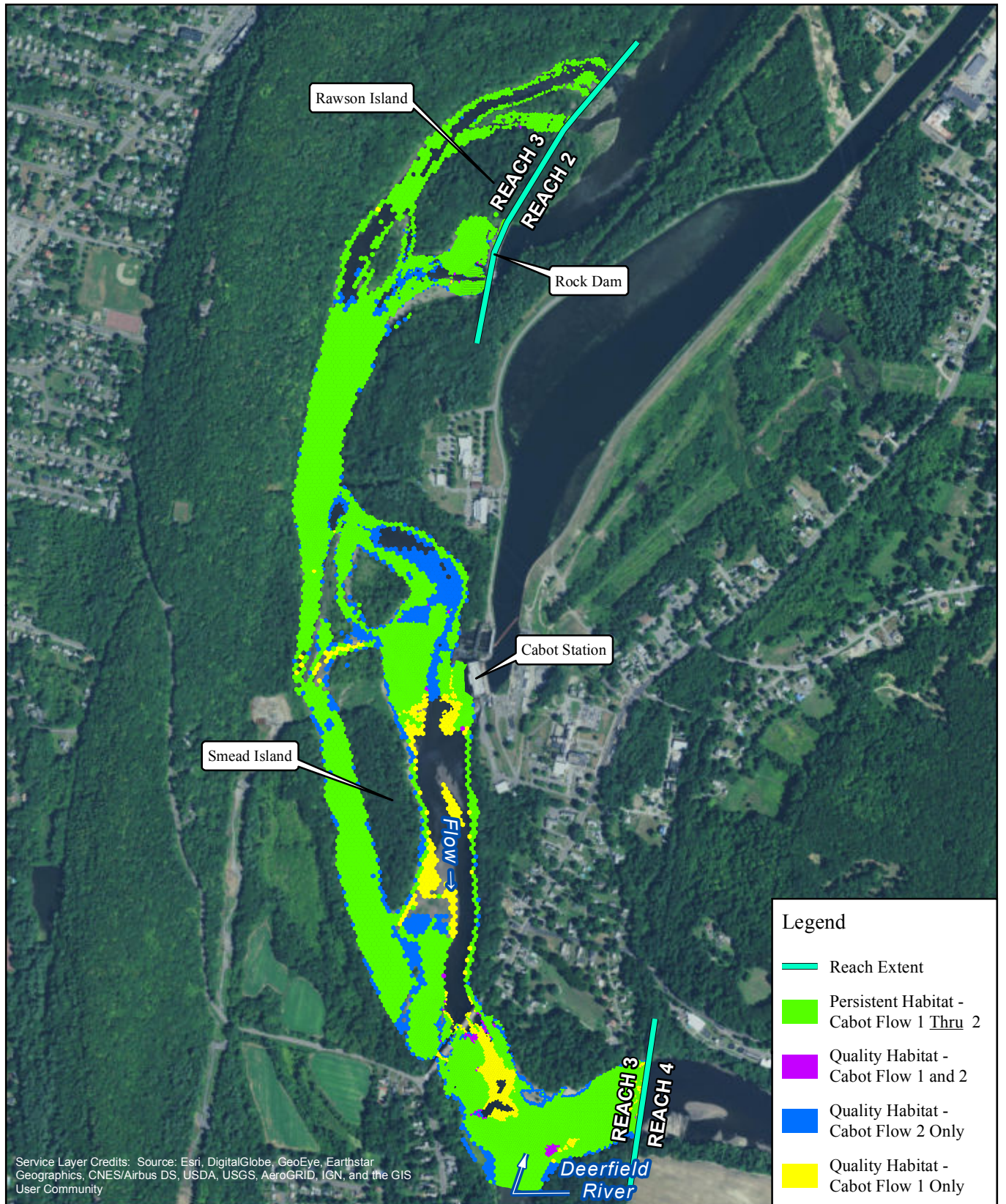
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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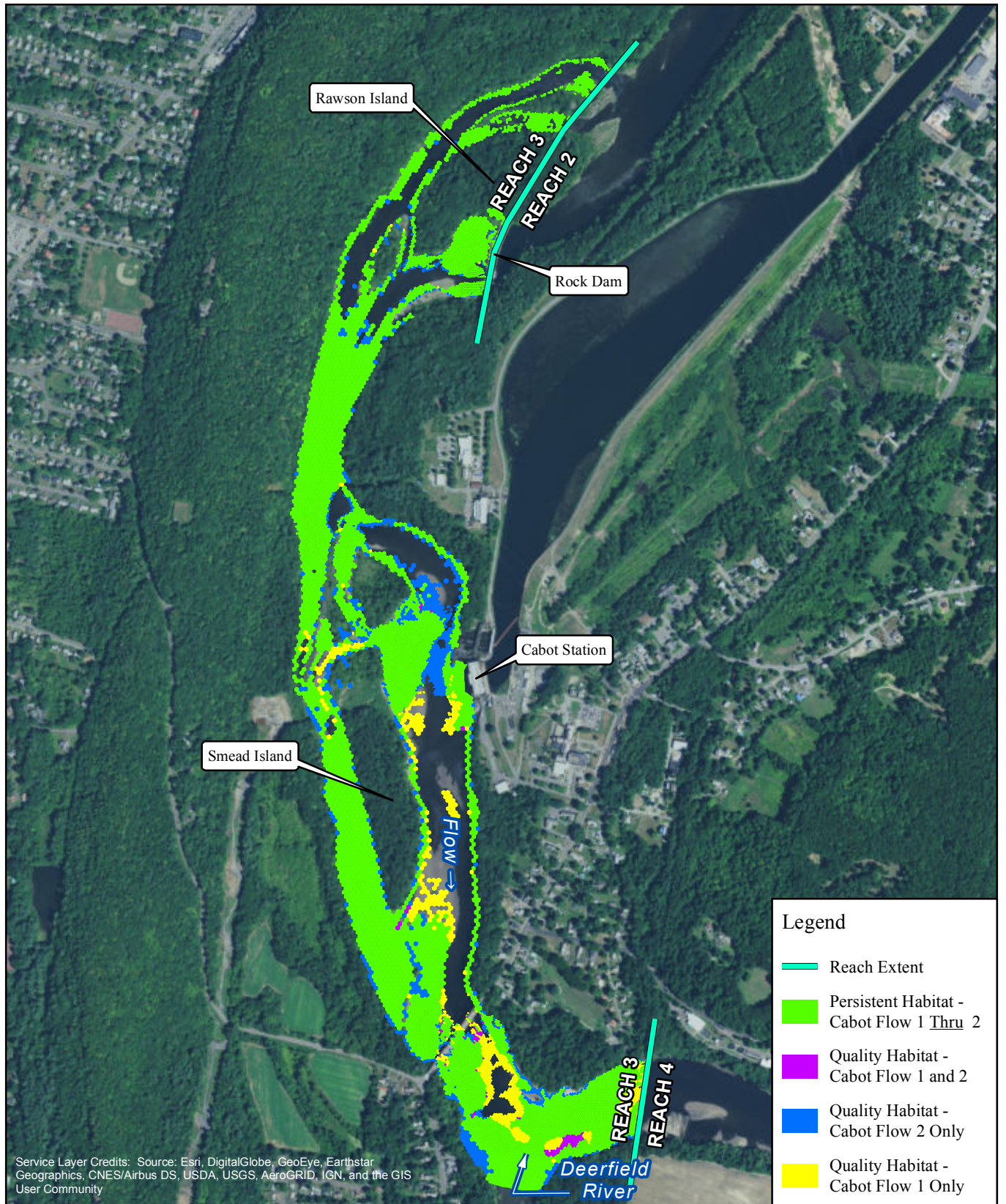
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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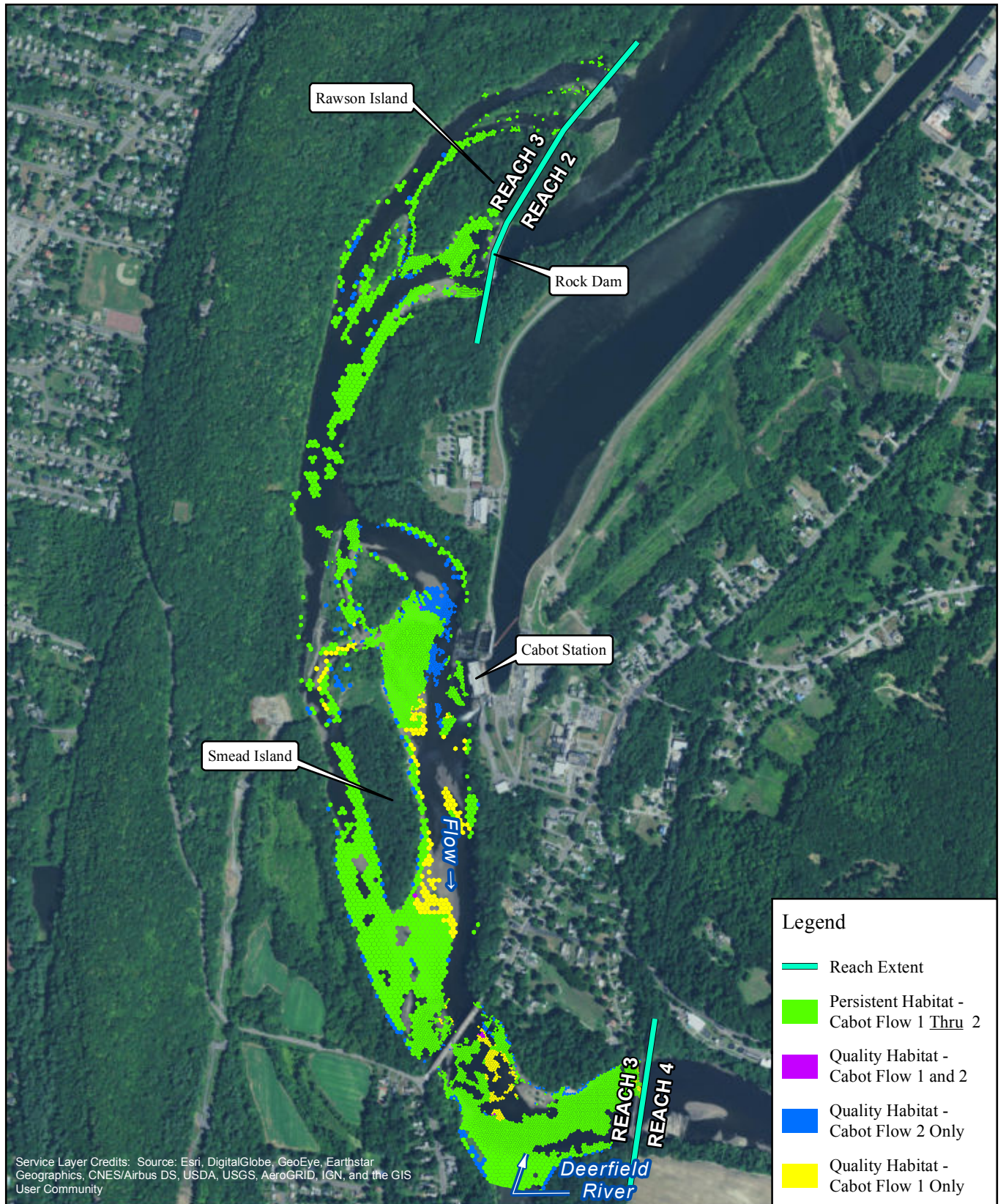
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

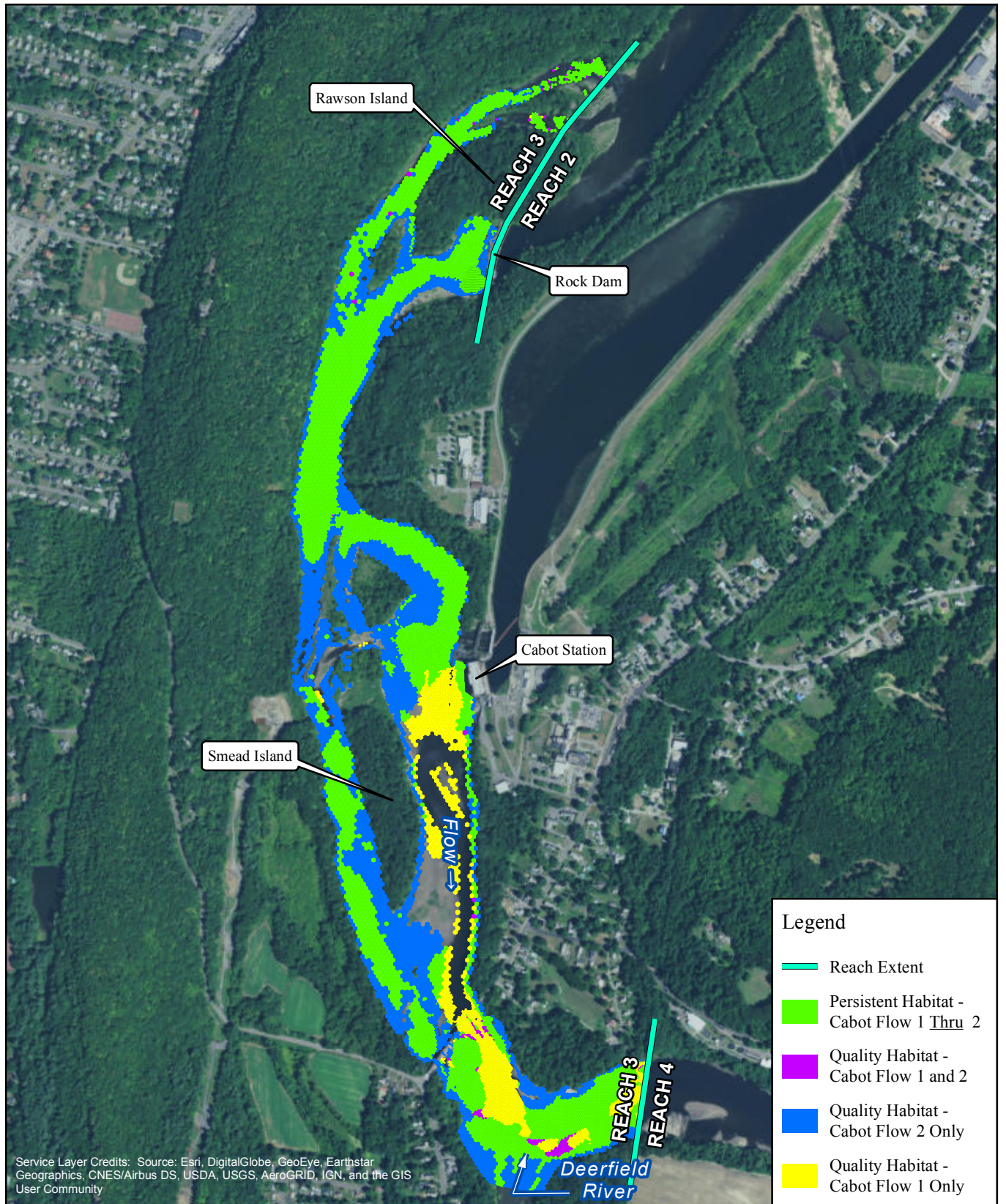
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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 RELICENSING STUDY 3.3.1

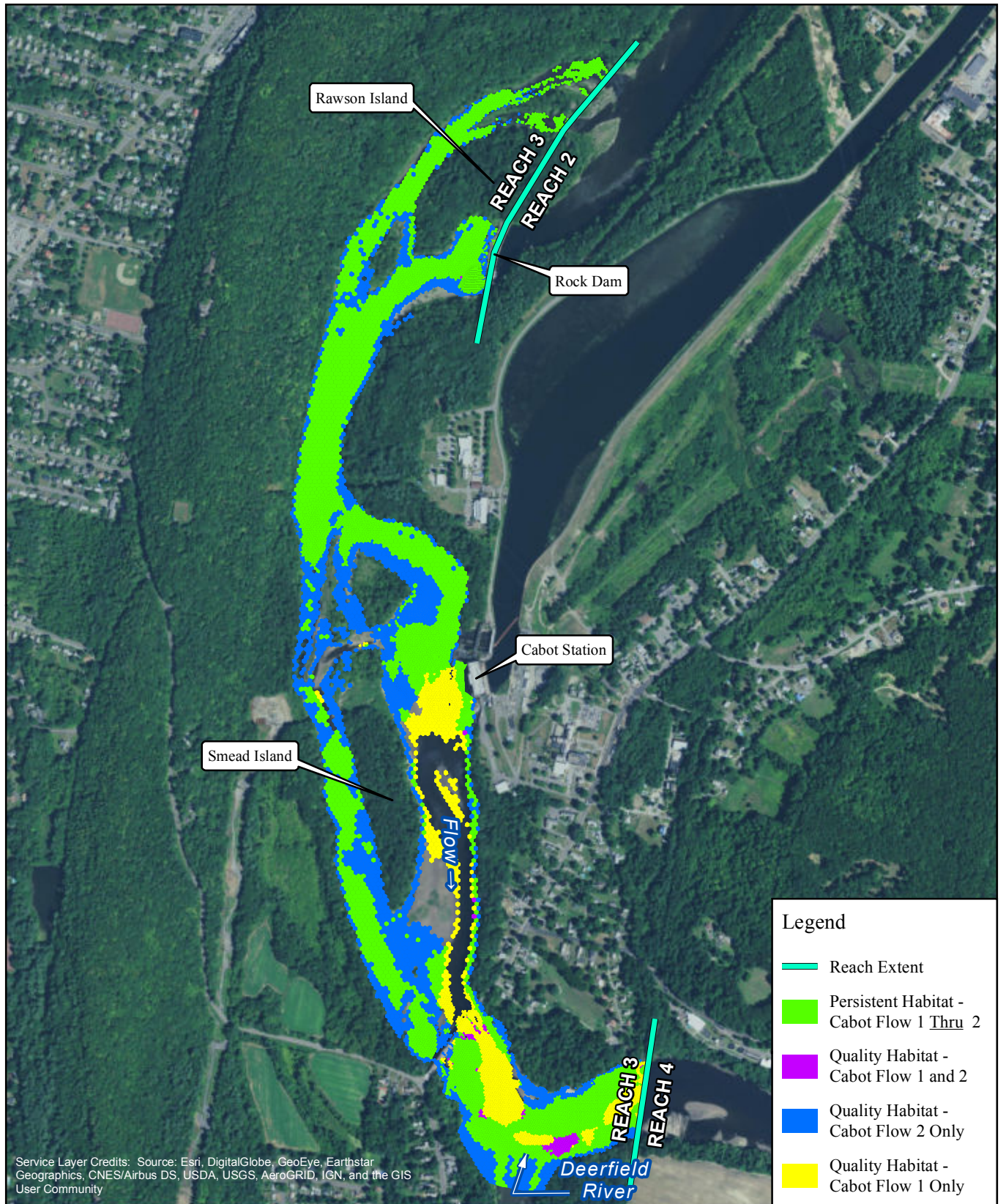
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**Persistent Habitat**  
 Yellow Lampmussel-Adult  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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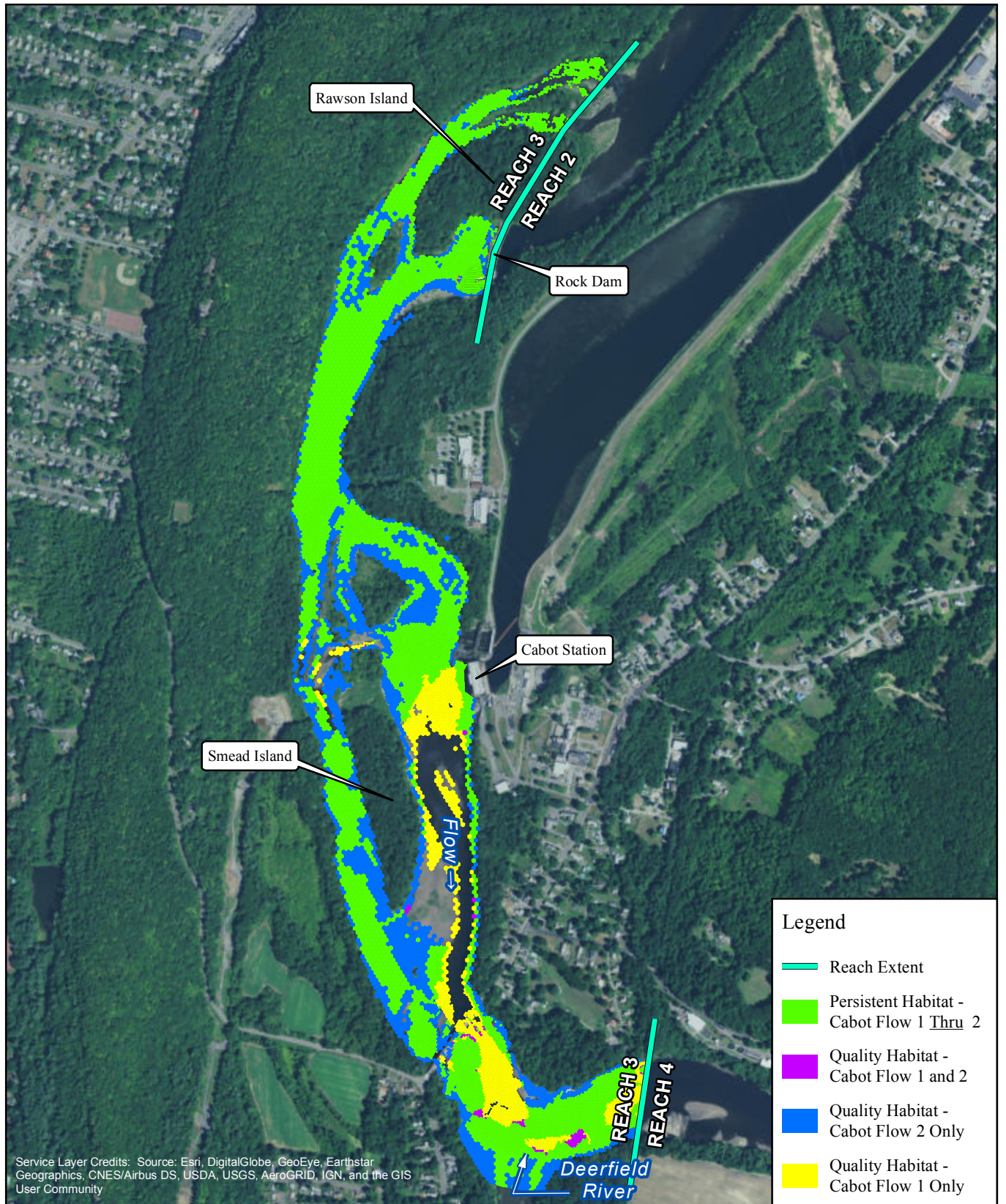
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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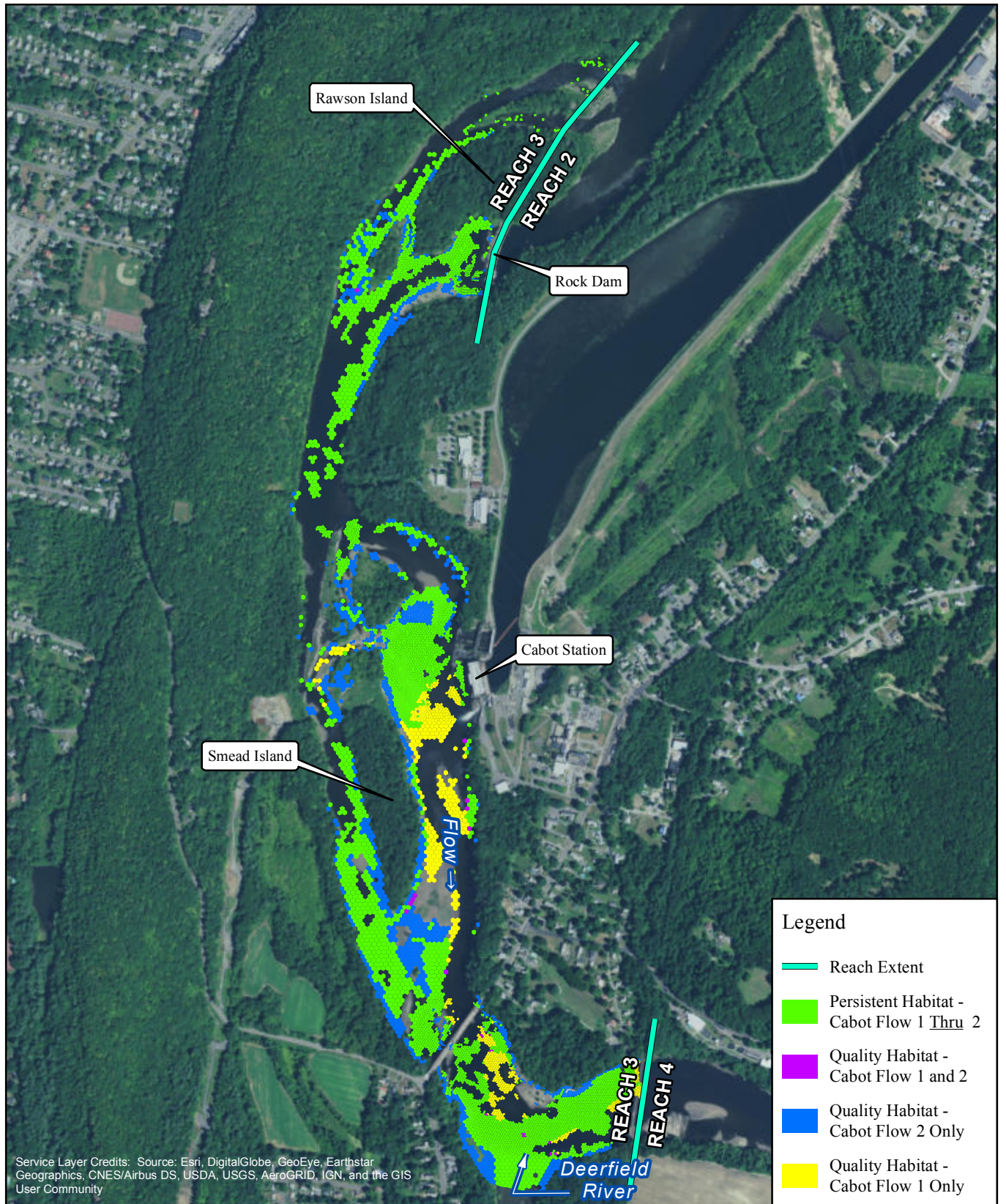
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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

0 500 1,000 2,000 Feet

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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs





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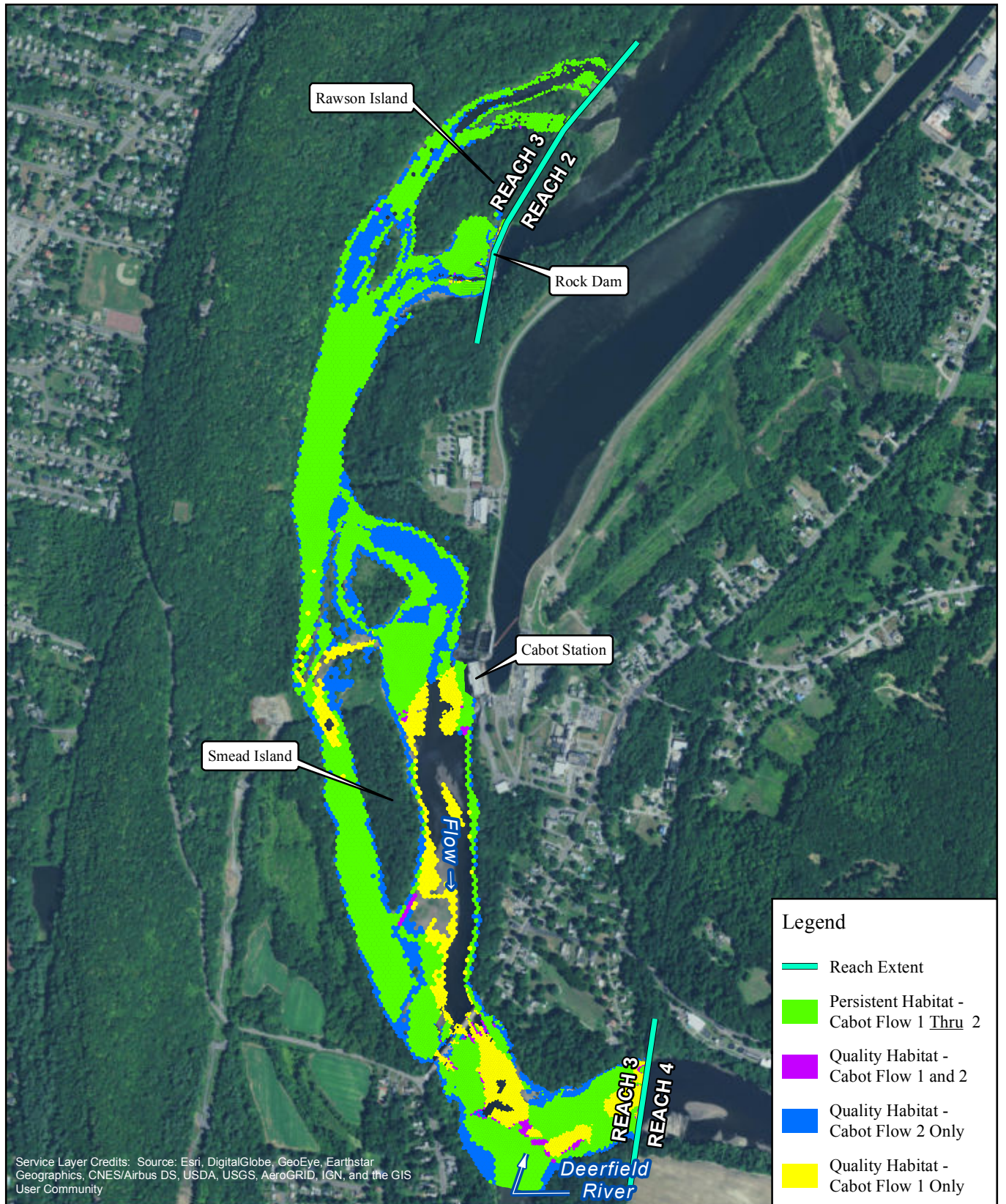
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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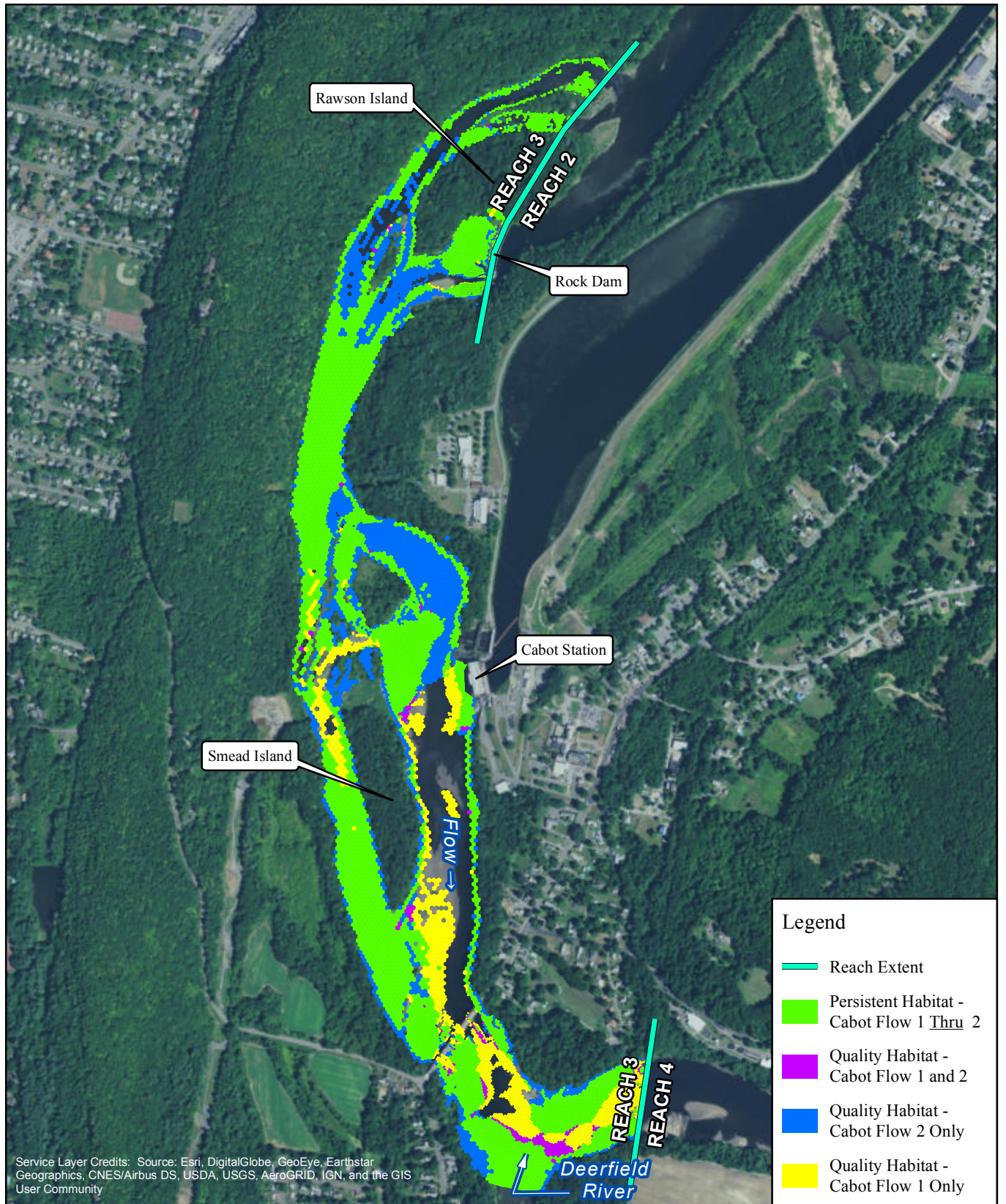
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

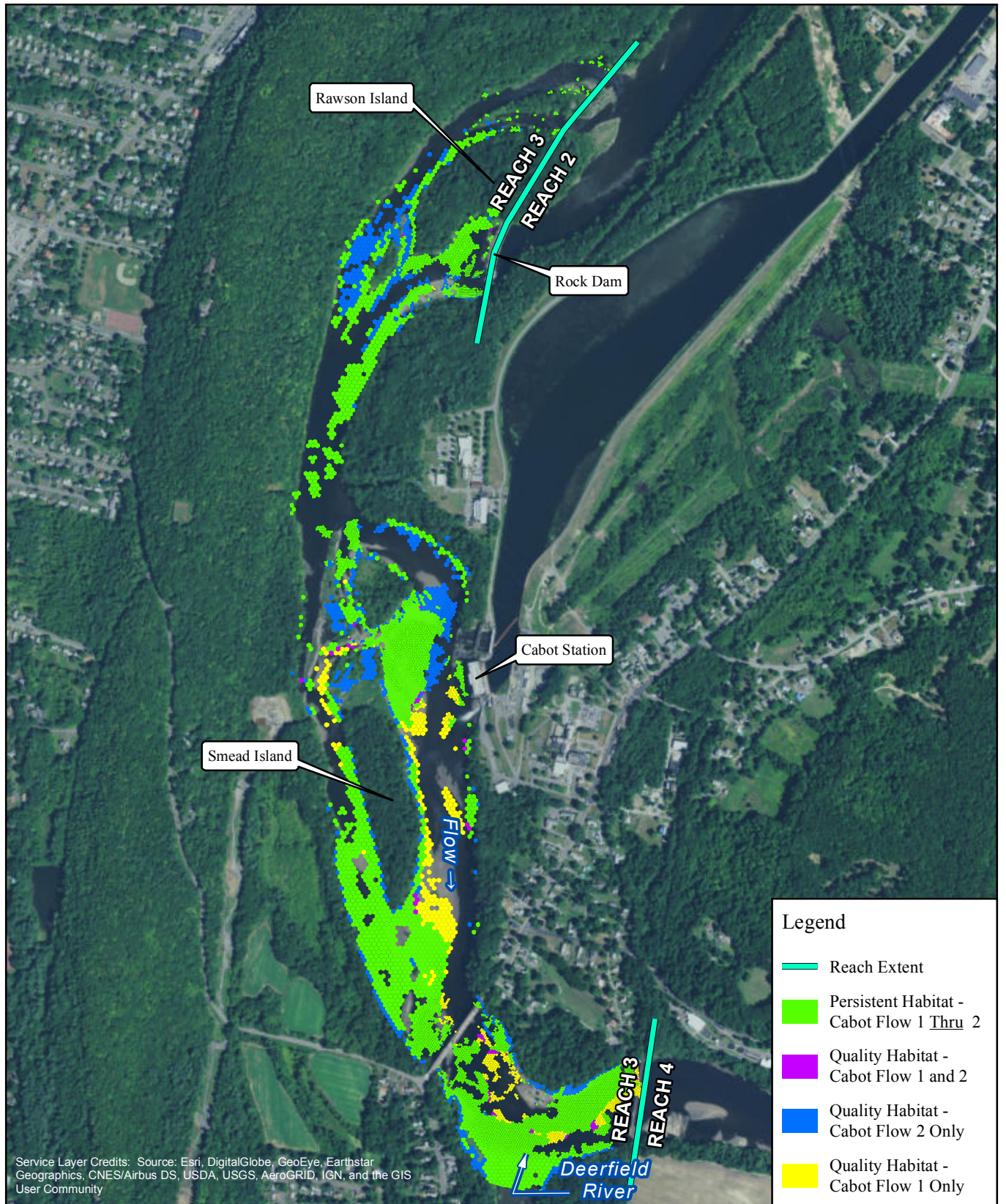
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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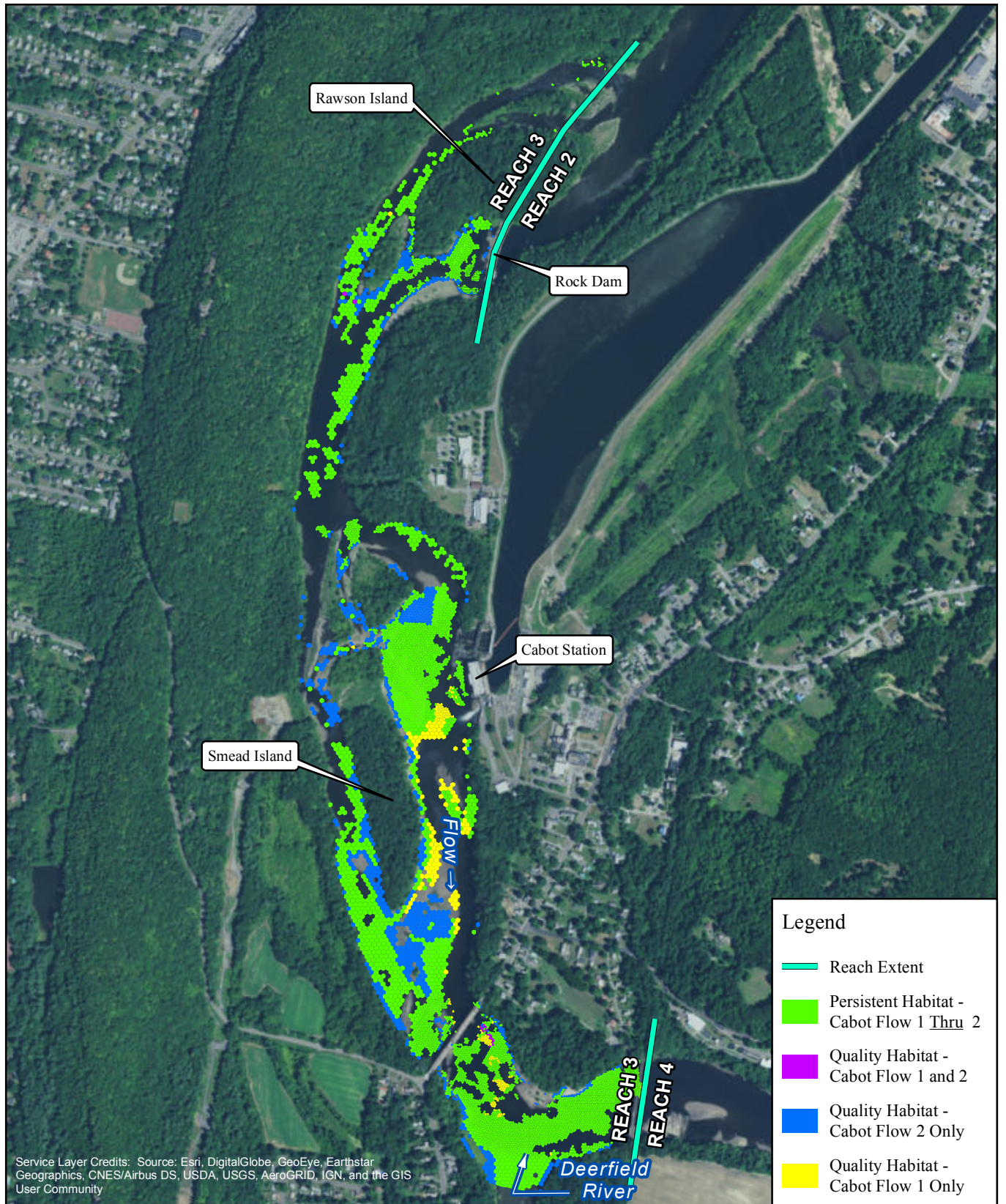
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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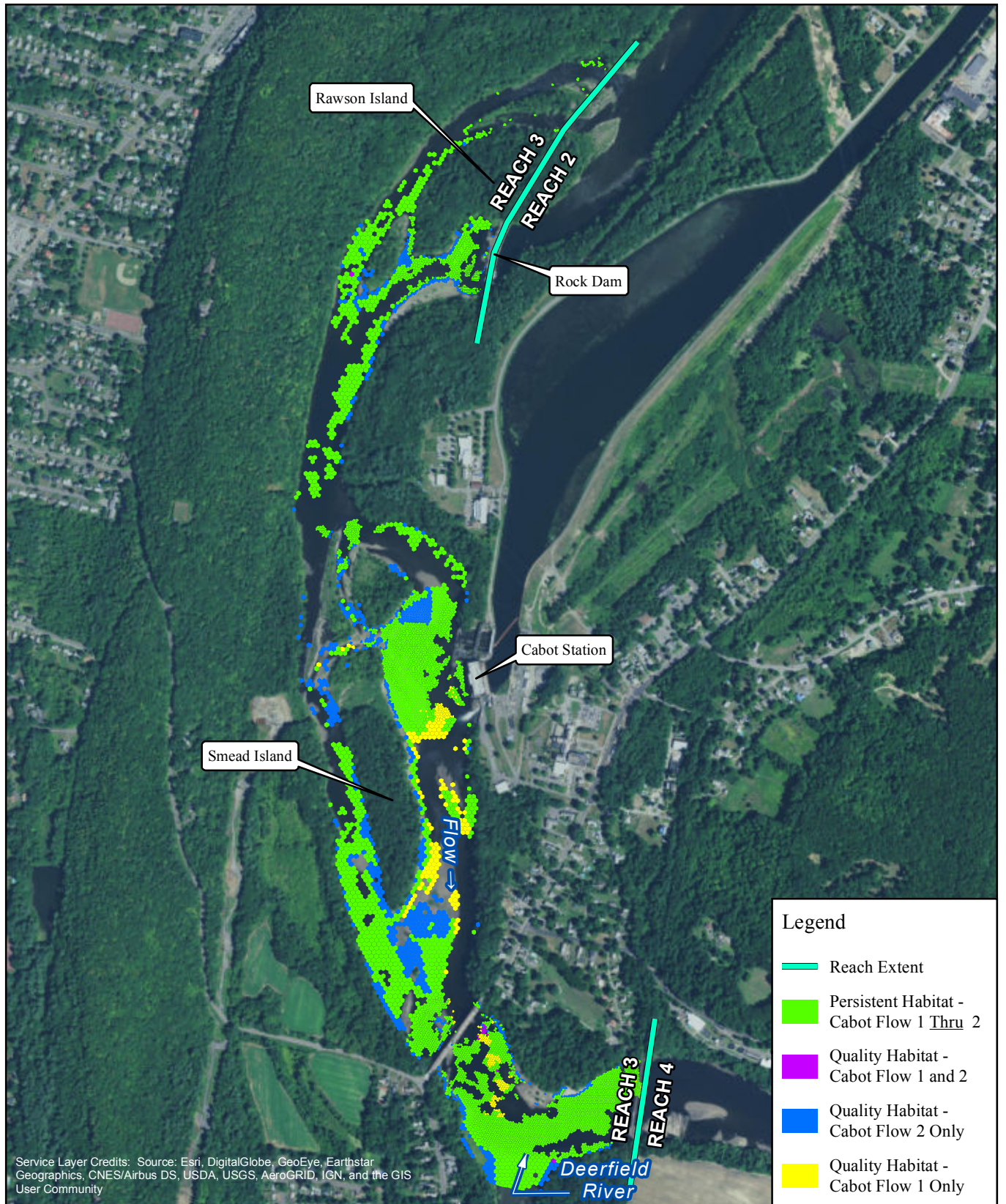
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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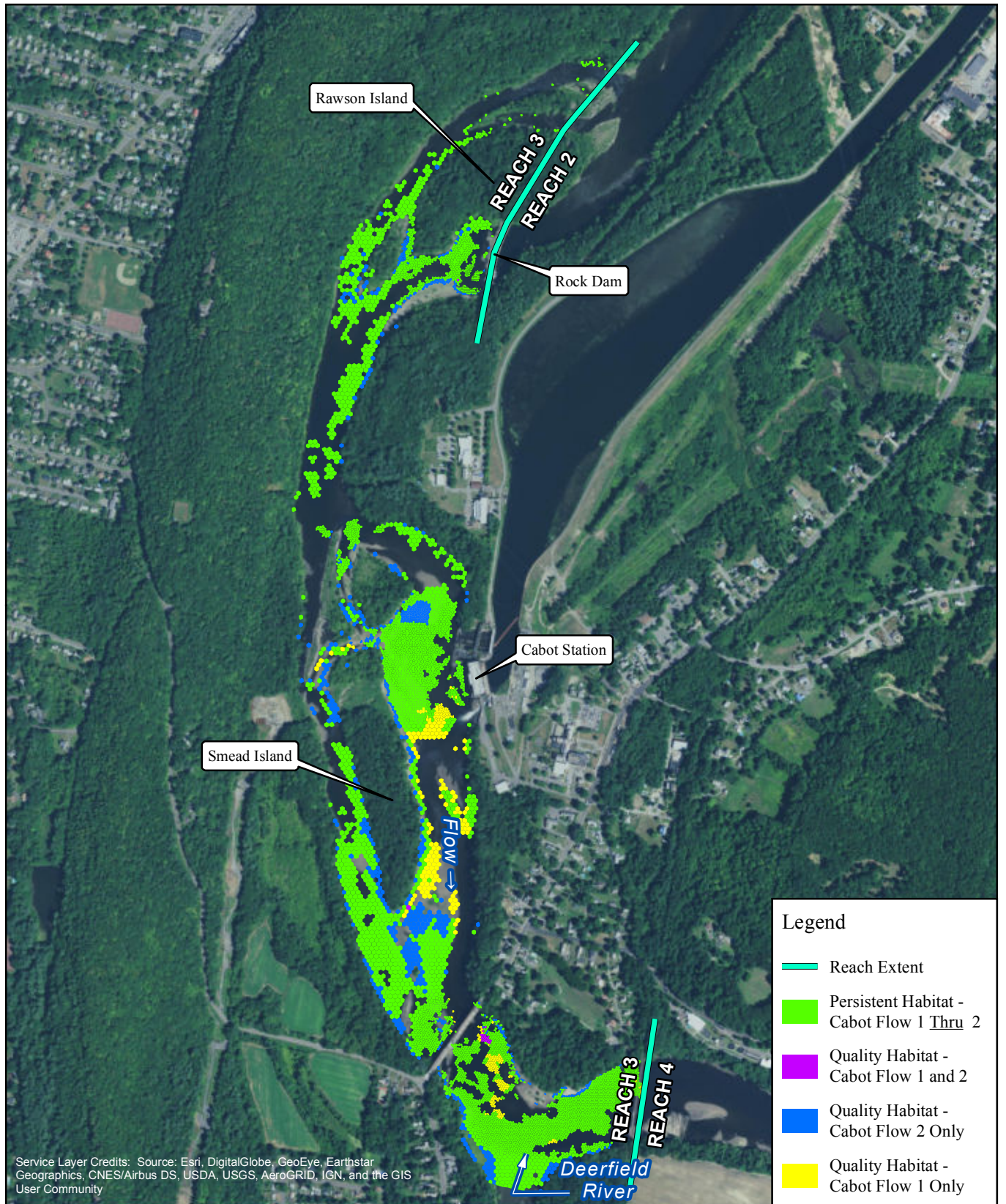
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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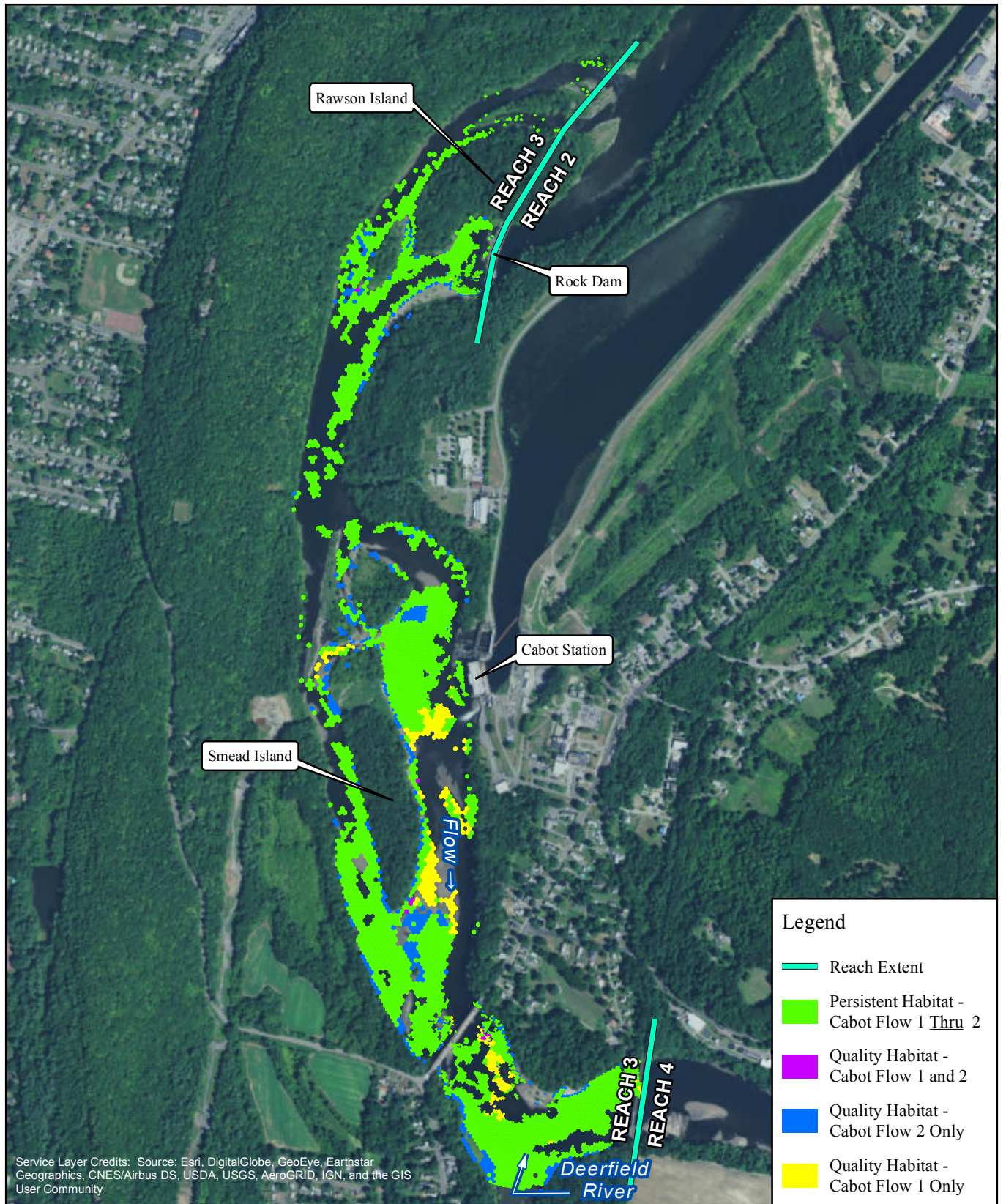
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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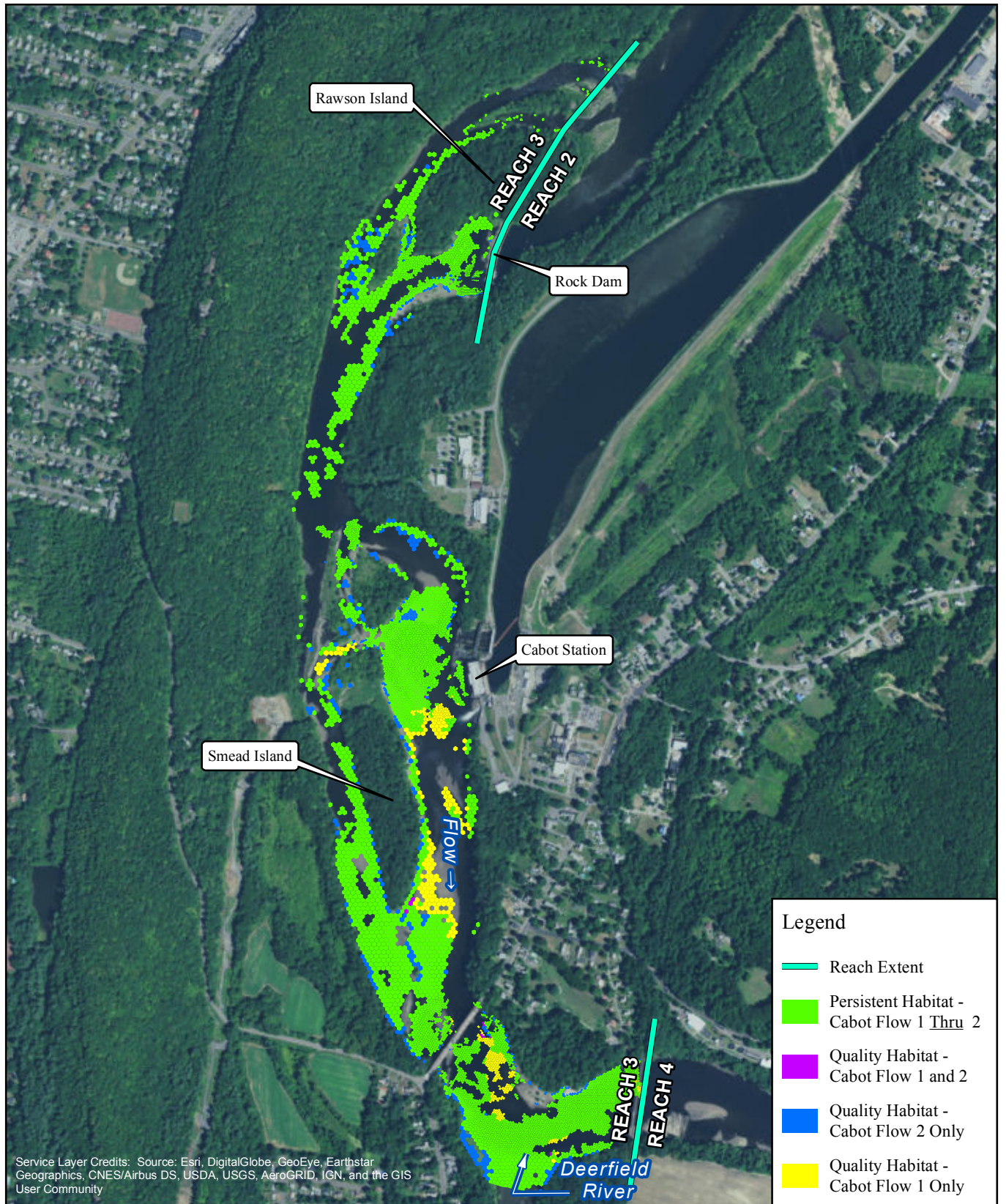
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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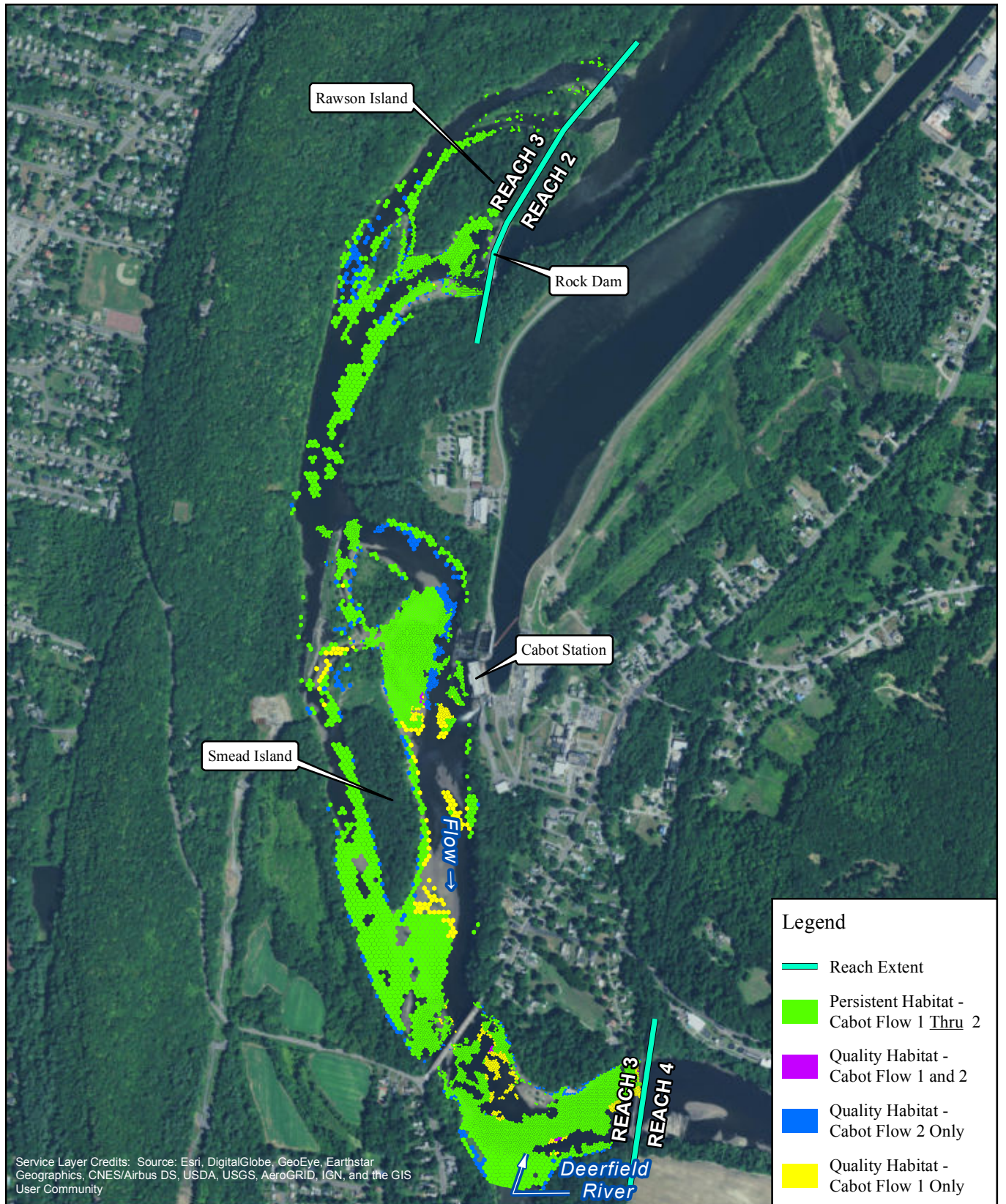
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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**RELICENSING STUDY 3.3.1**

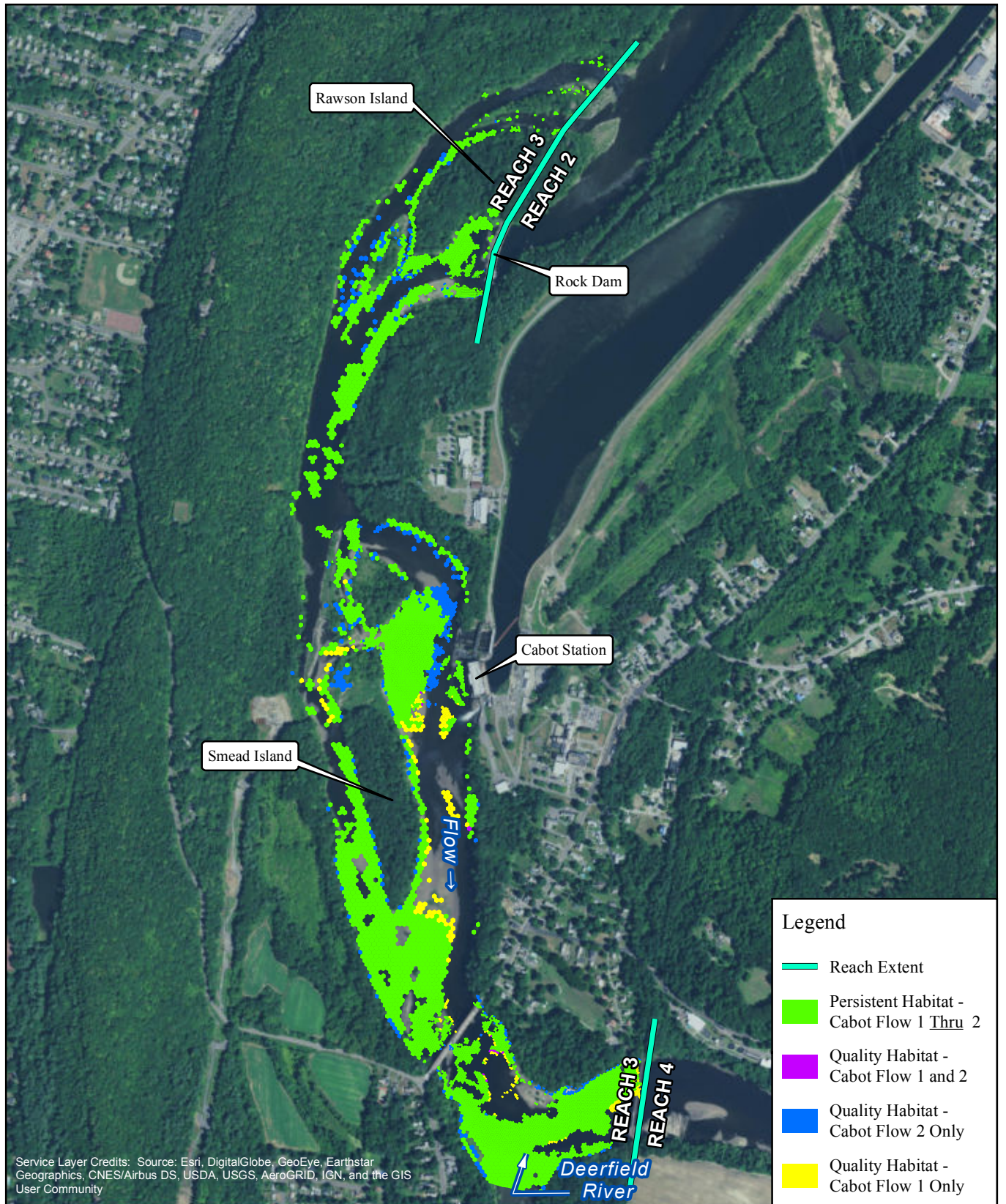
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

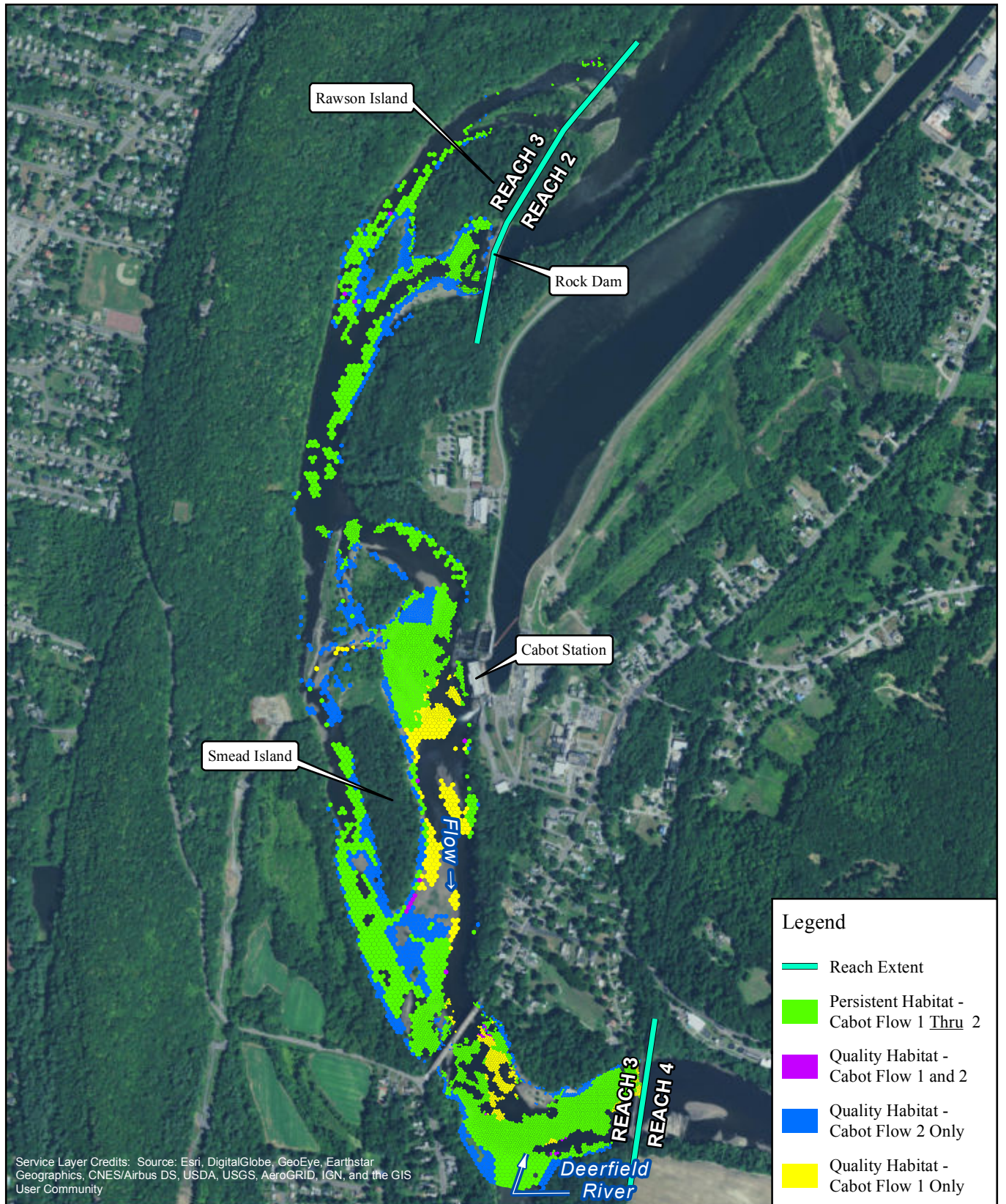
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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 RELICENSING STUDY 3.3.1

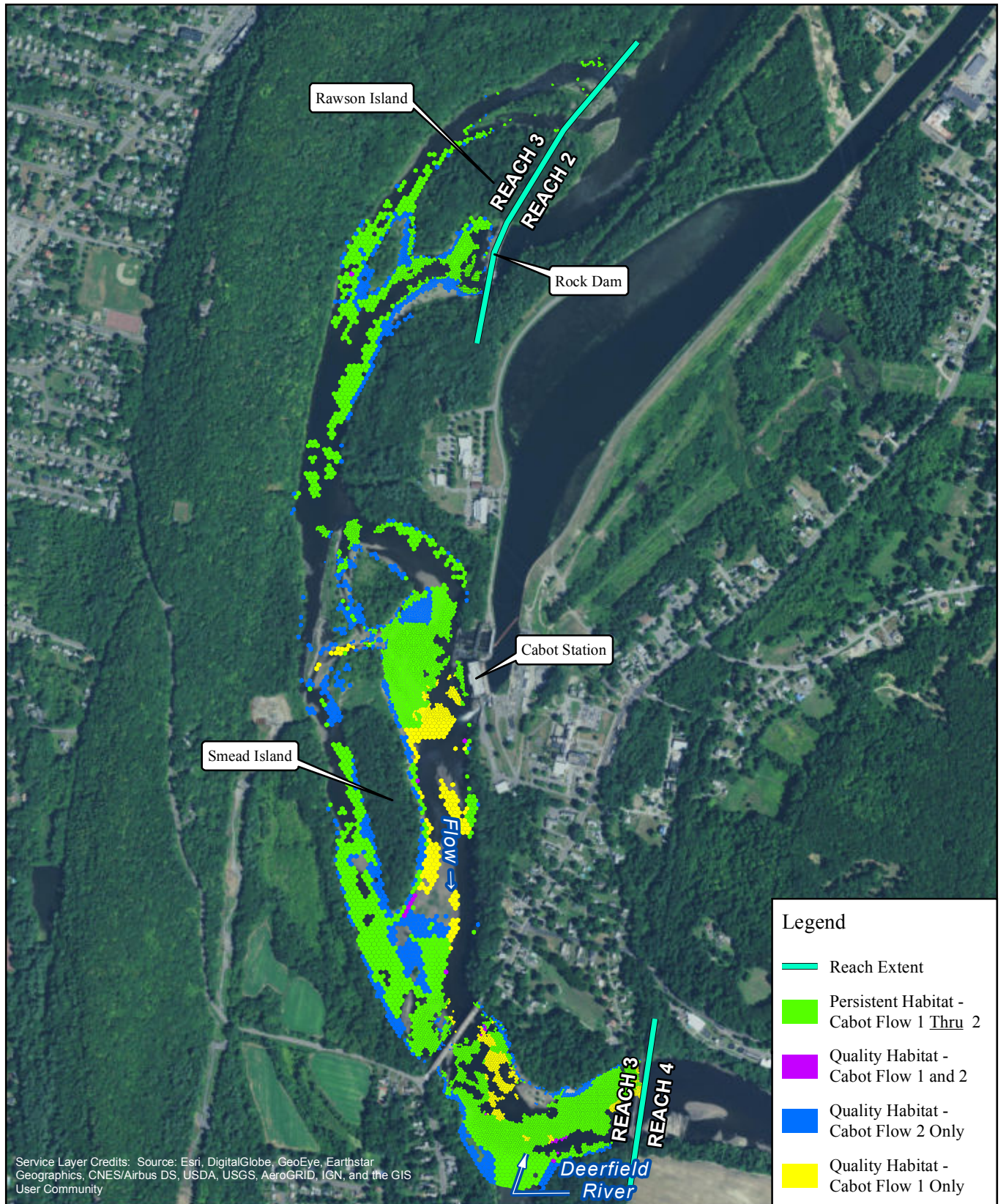
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**Persistent Habitat**  
 Yellow Lampmussel-Adult  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

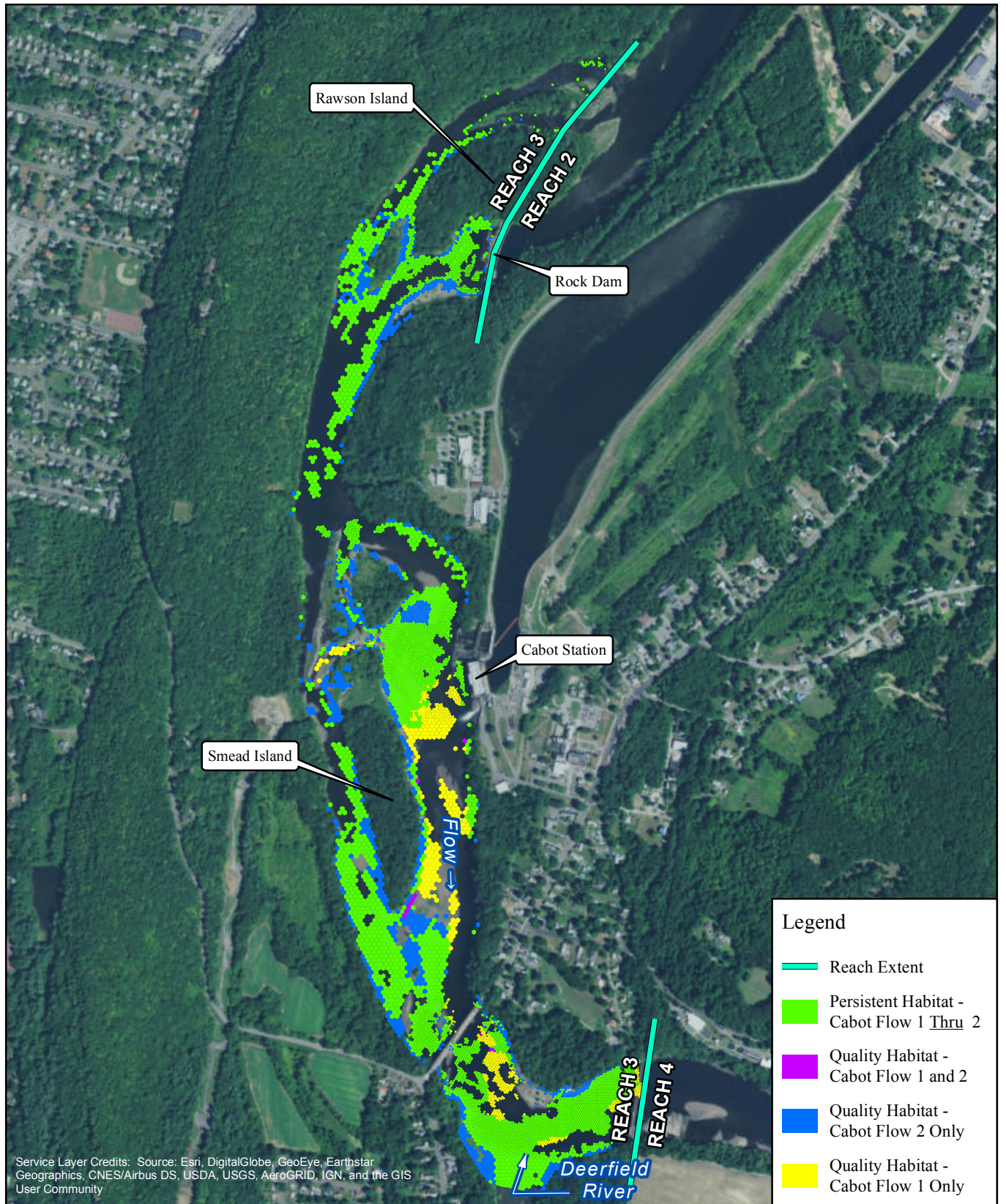
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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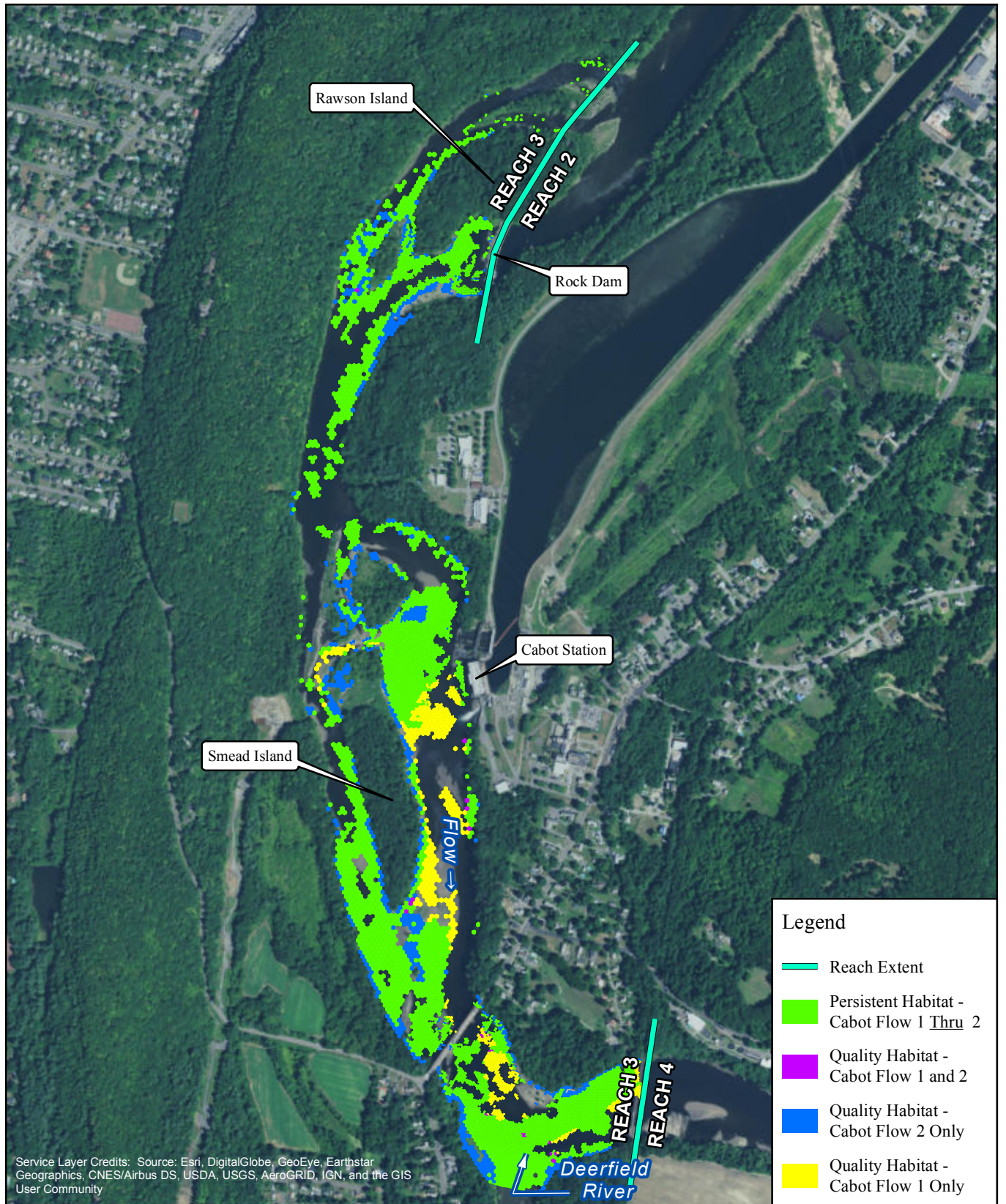
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Northfield Mountain Pumped Storage Project No. 2485  
Turners Falls Hydroelectric Project No. 1889  
RELICENSING STUDY 3.3.1

0 500 1,000 2,000 Feet

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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs





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Northfield Mountain Pumped Storage Project No. 2485  
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**RELICENSING STUDY 3.3.1**

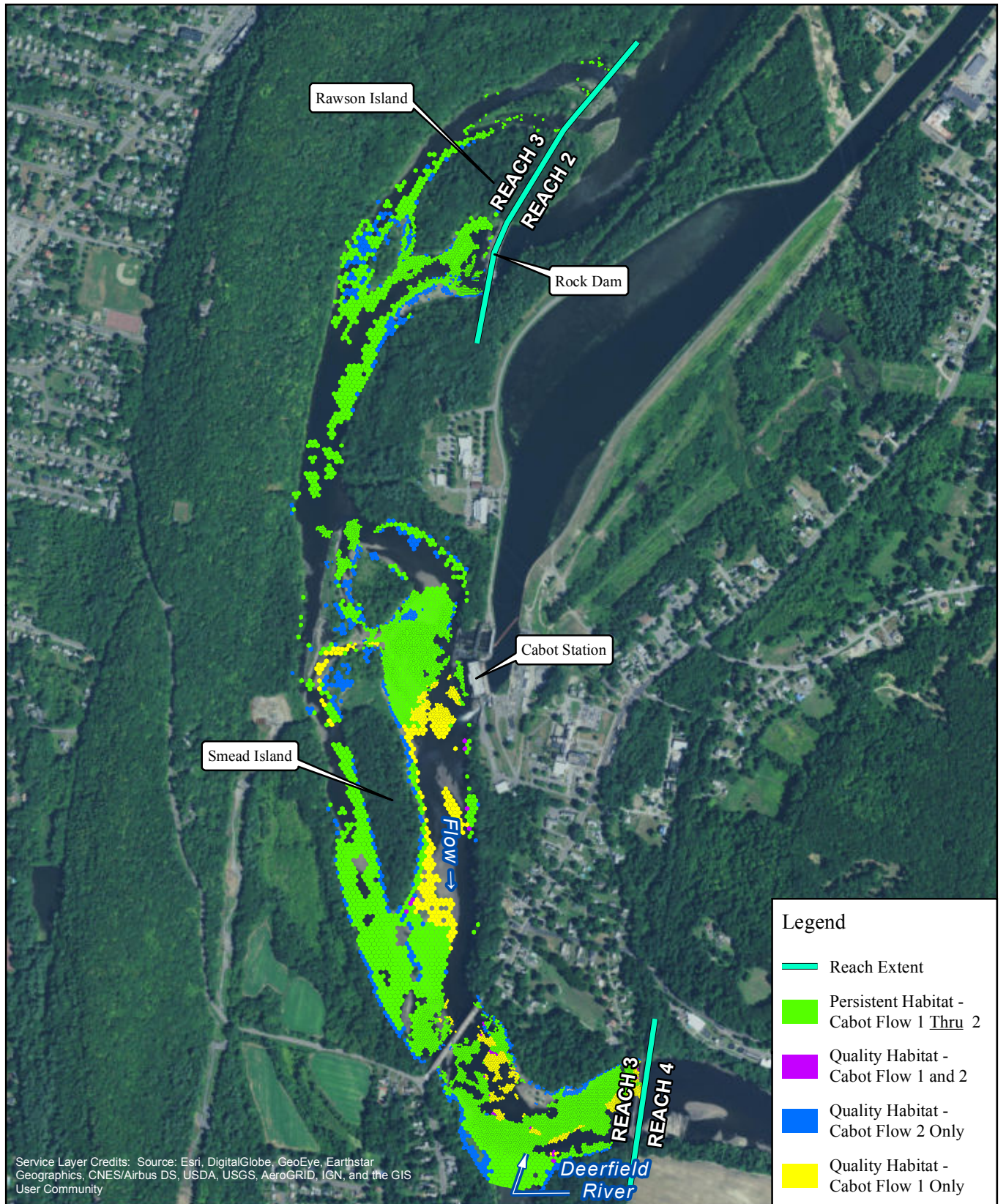
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

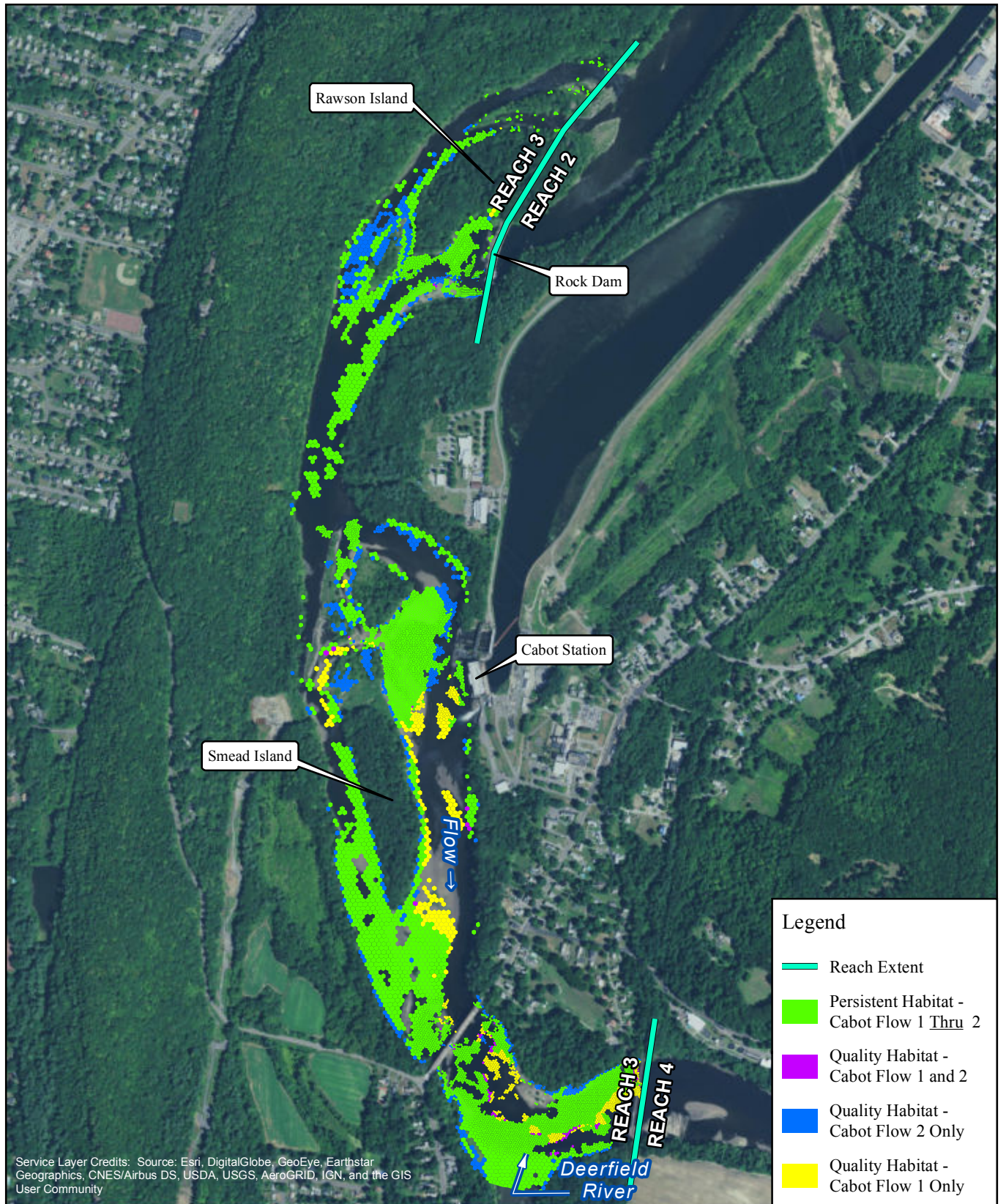
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

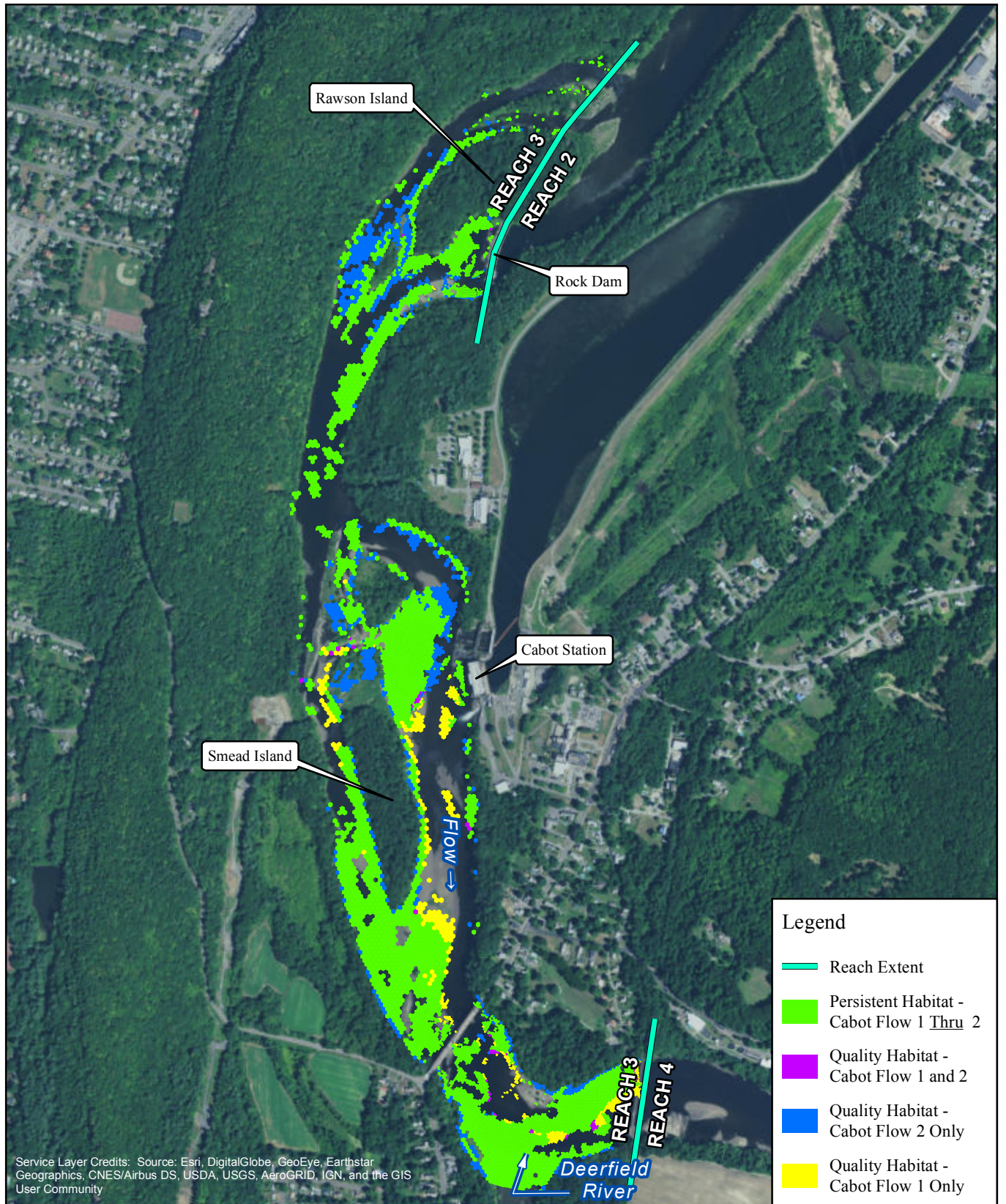
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

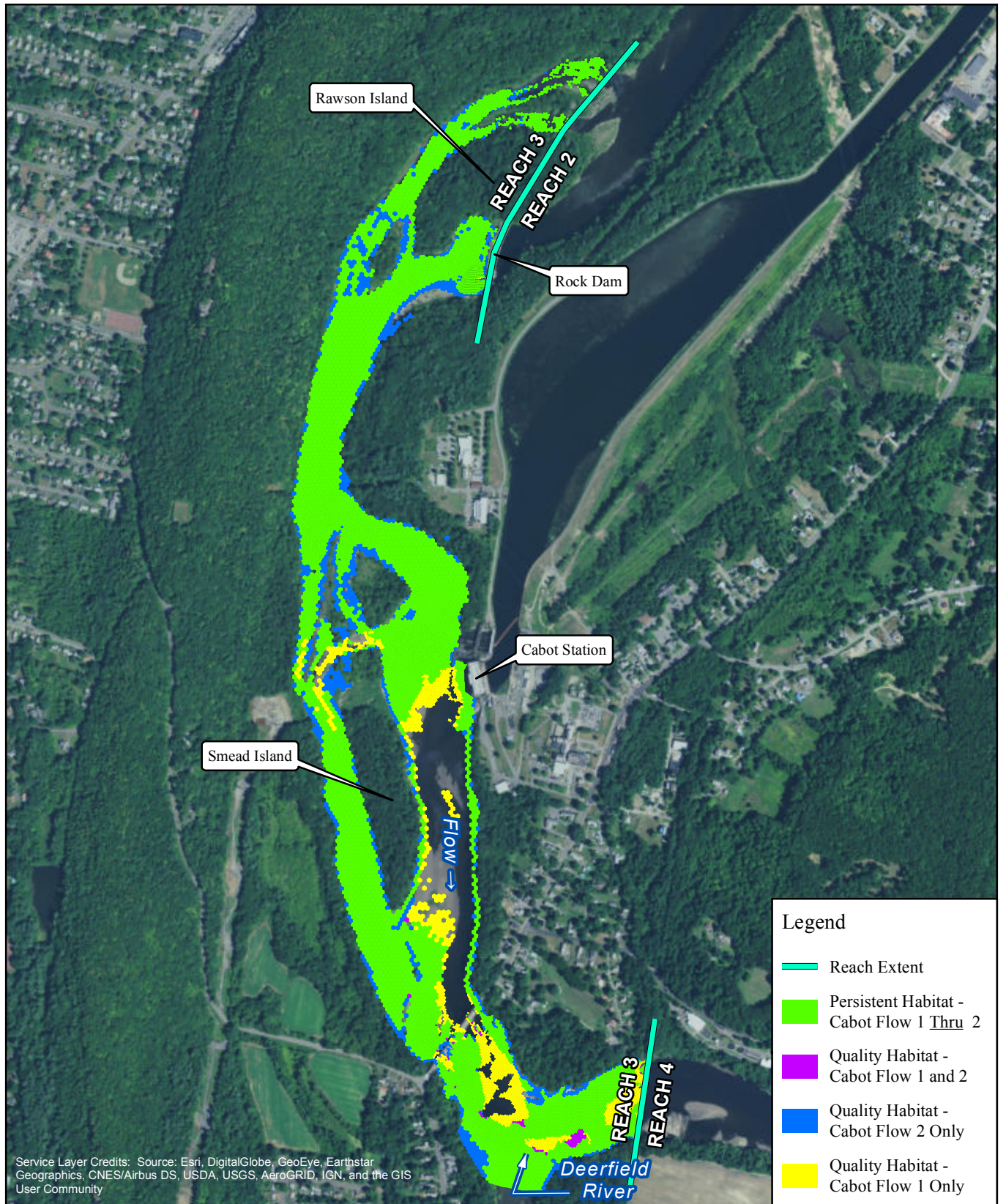
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

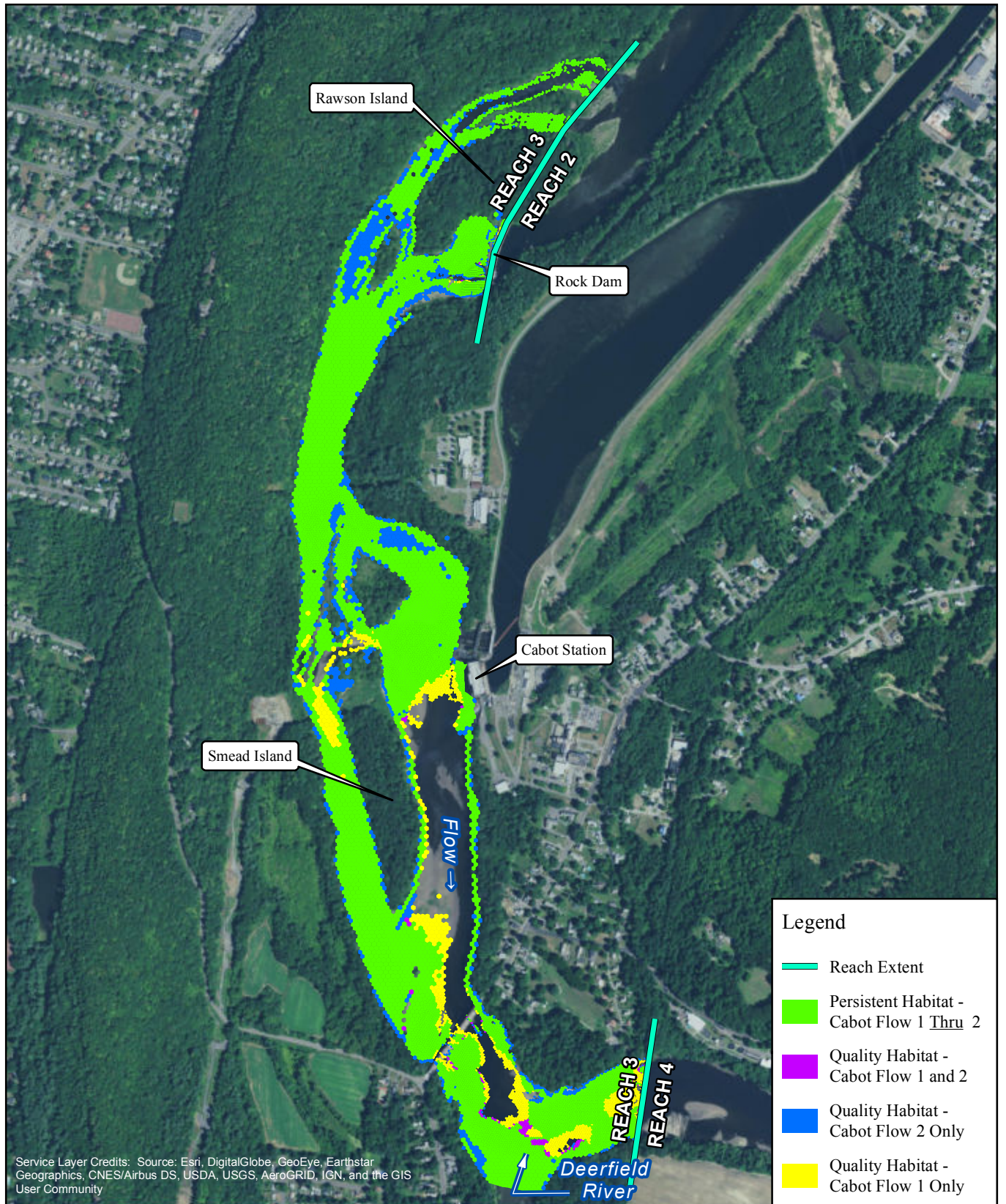
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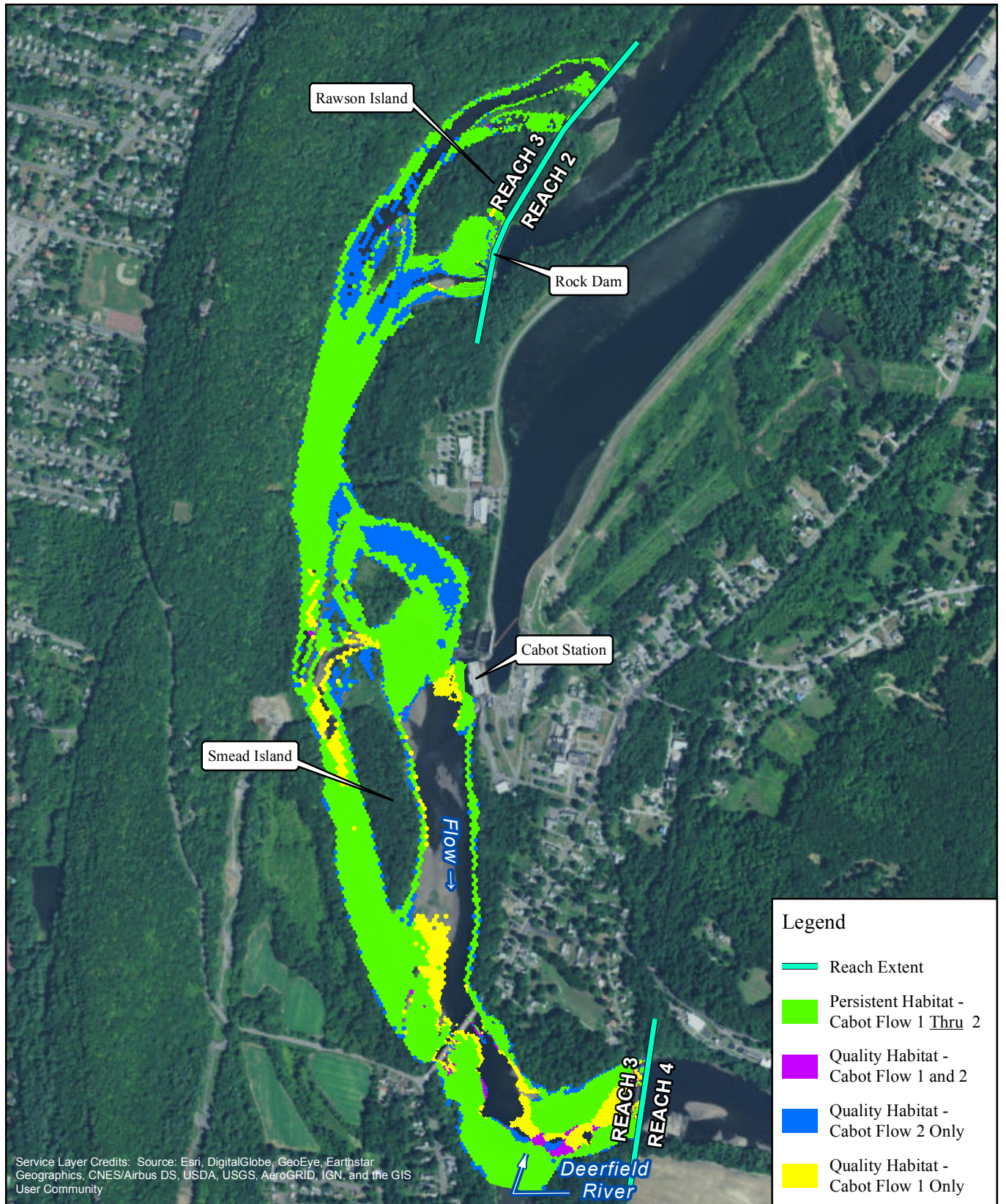
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 3000 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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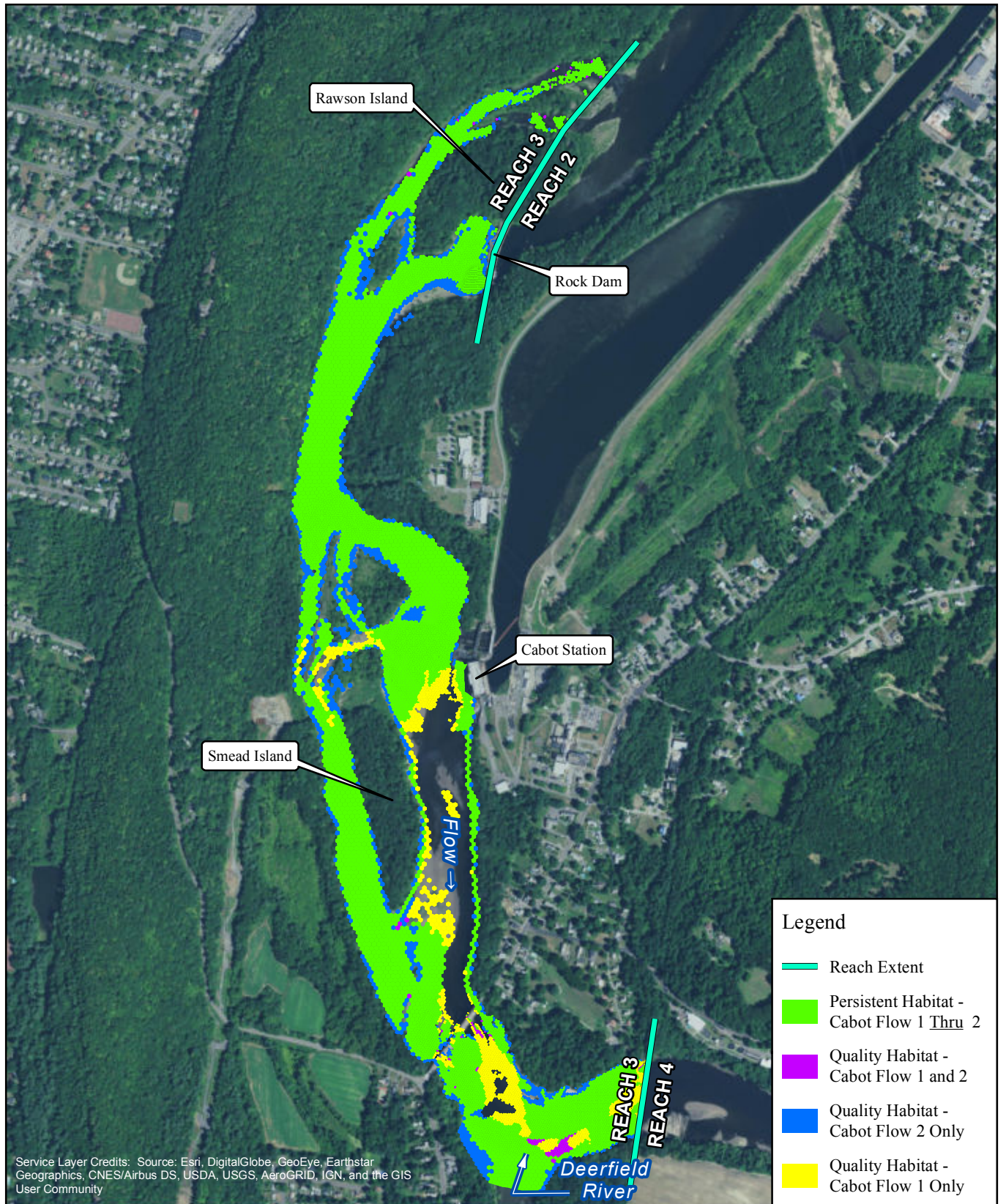
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 5000 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

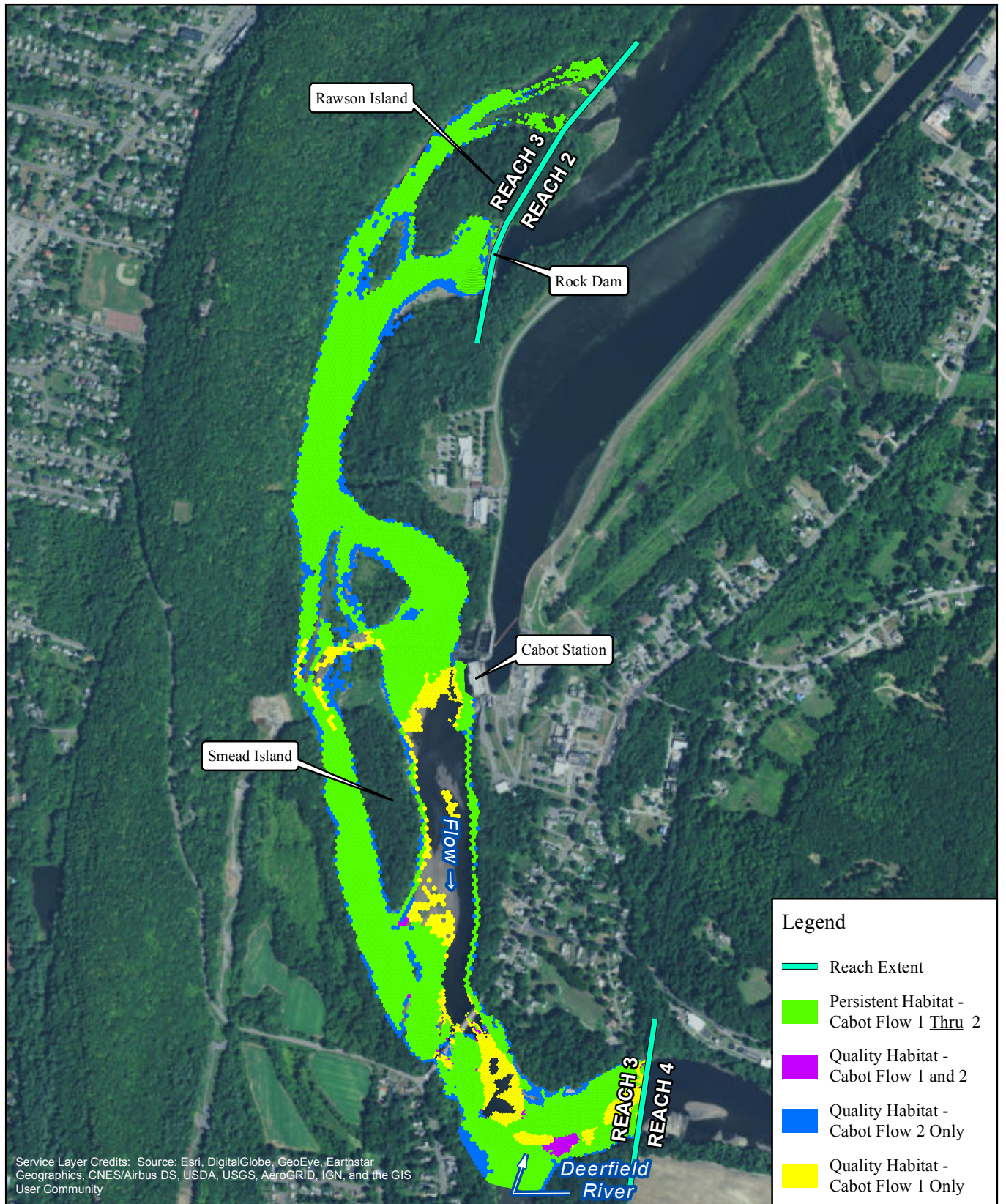
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

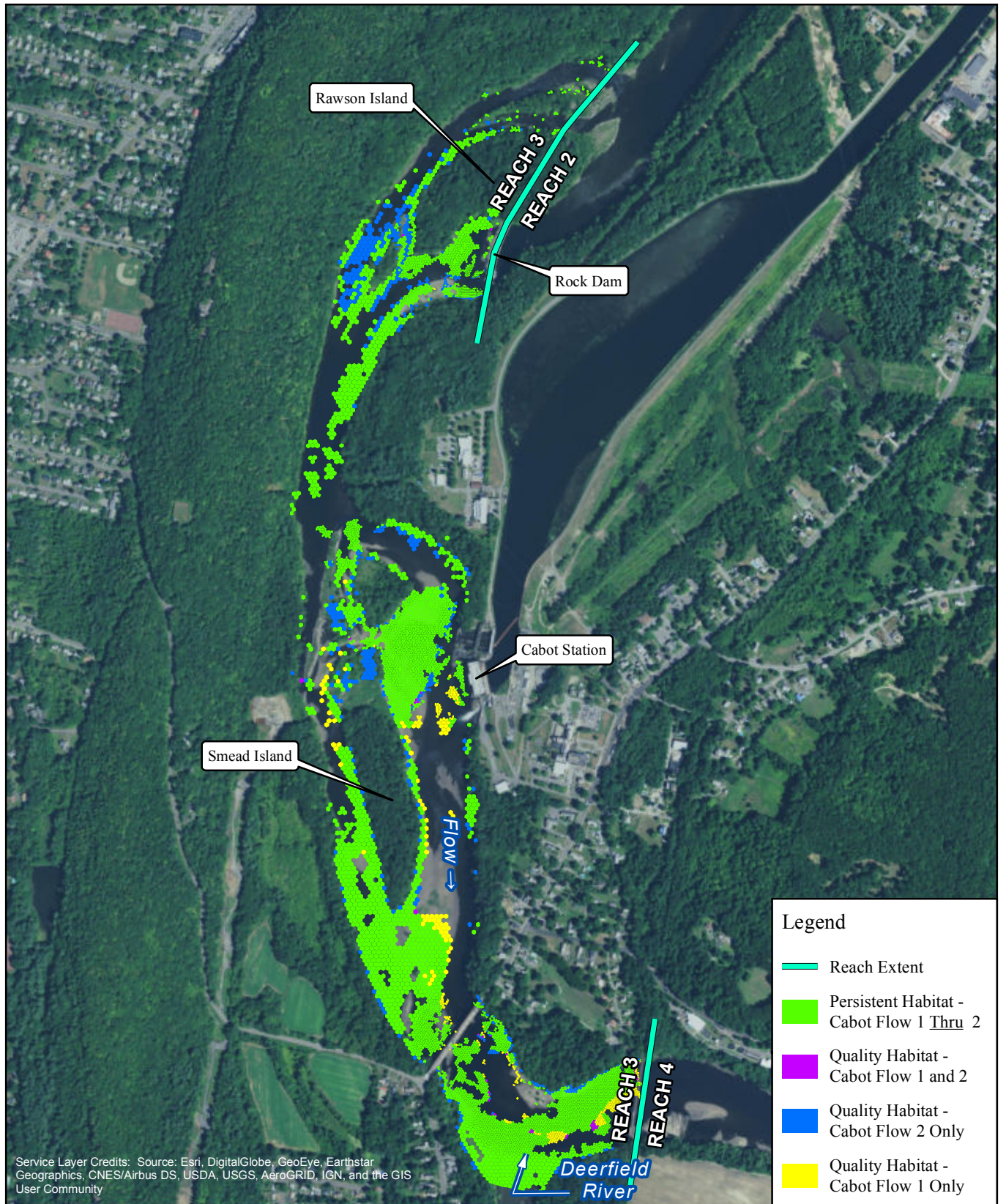
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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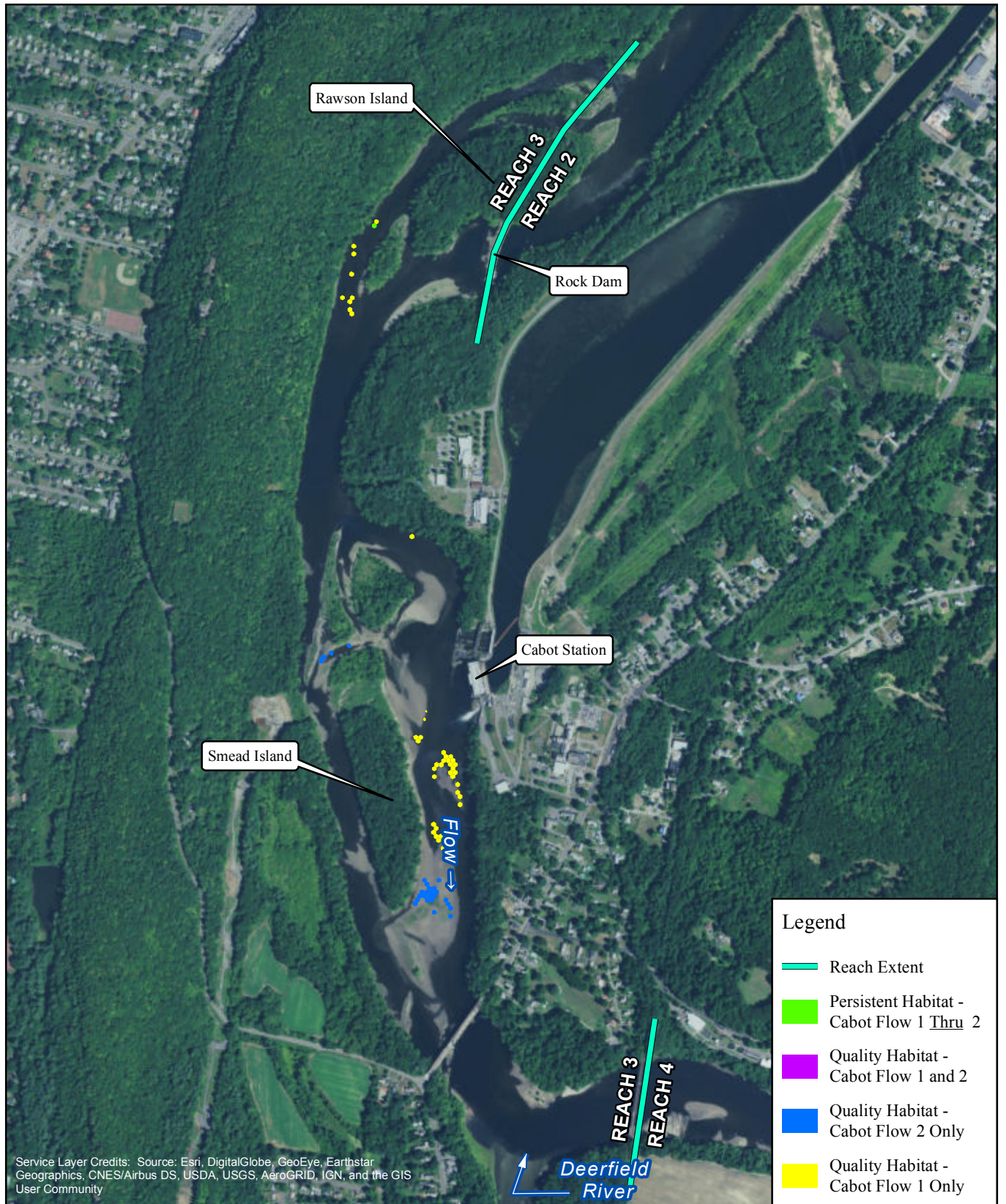
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**Persistent Habitat**  
Yellow Lampmussel-Adult  
Bypass Flow: 6500 cfs  
Cabot Flow 1: 7000 cfs  
Cabot Flow 2: 14000 cfs

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RELICENSING STUDY 3.3.1

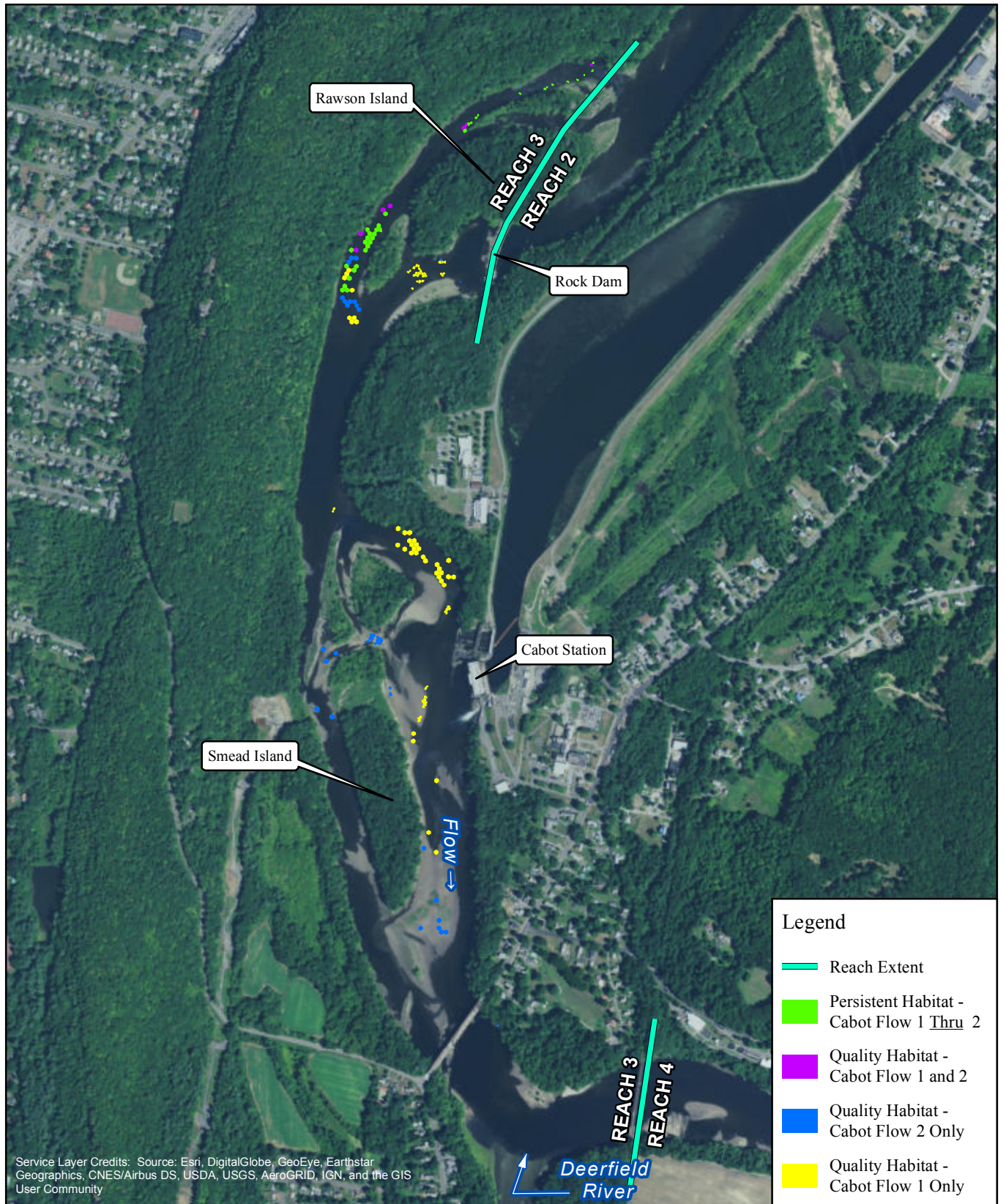
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**Persistent Habitat**  
Sea Lamprey-Spawning  
Bypass Flow: 200 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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**RELICENSING STUDY 3.3.1**

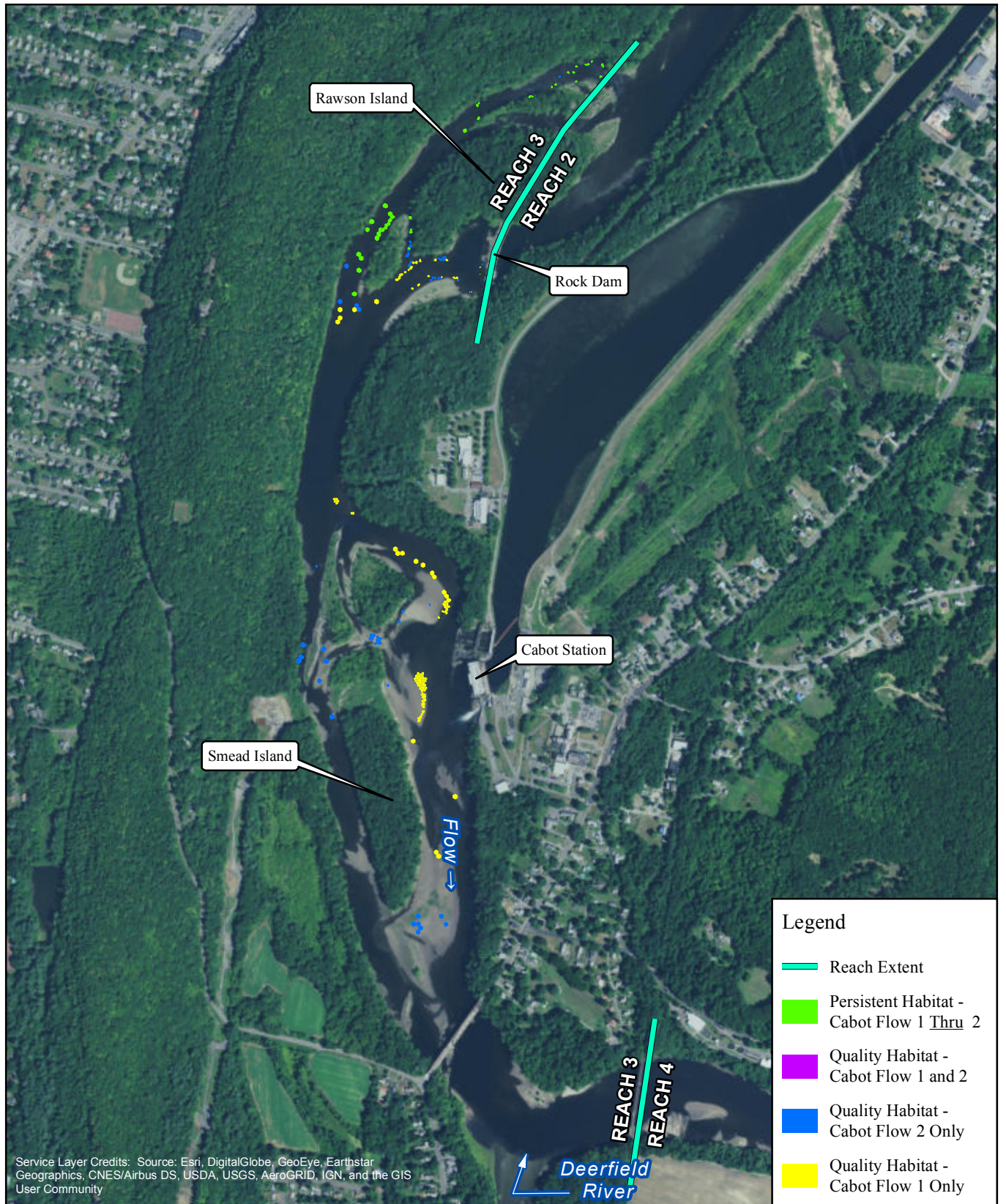
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**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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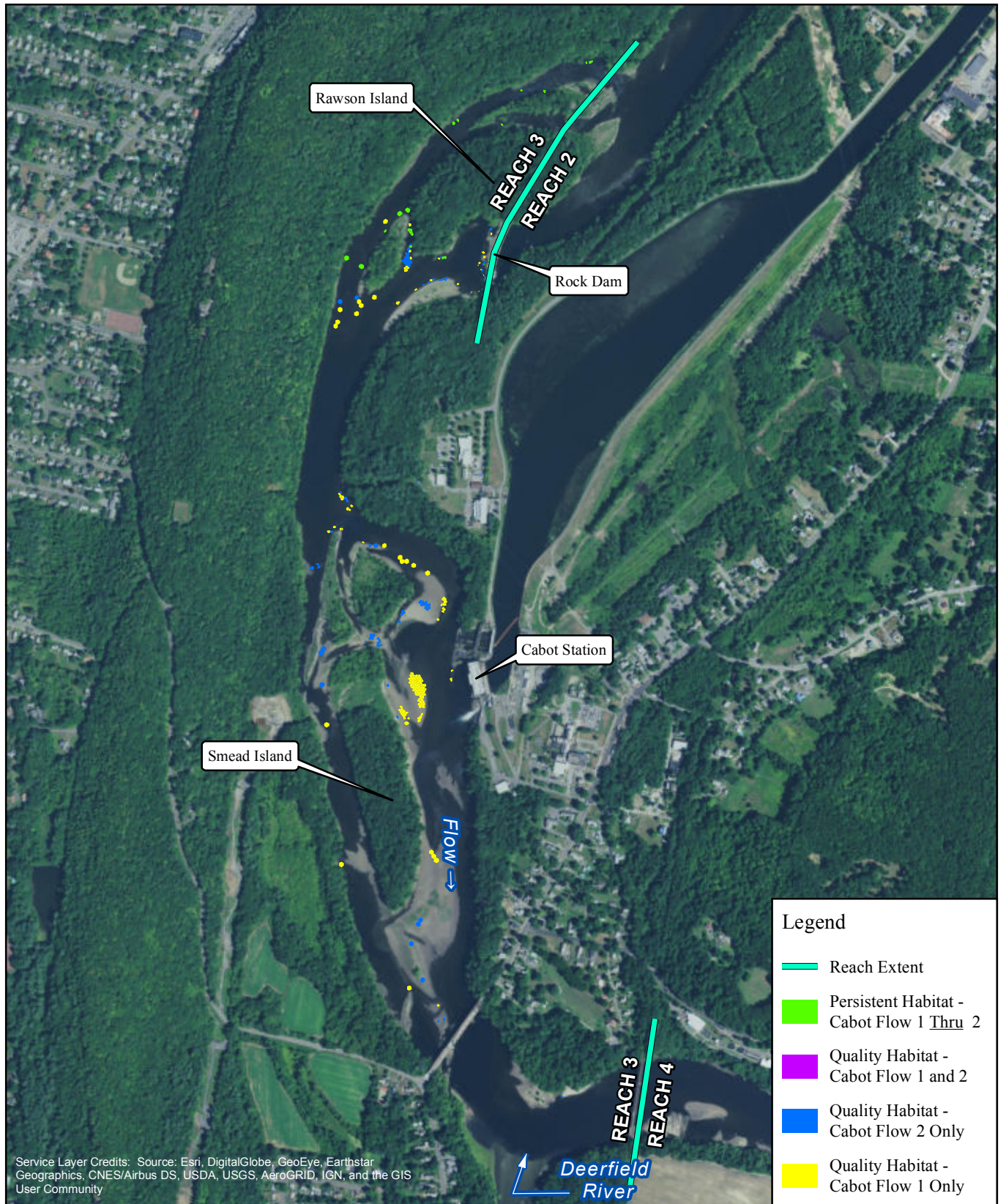
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Persistent Habitat  
 Tessellated Darter-Juv-Adult  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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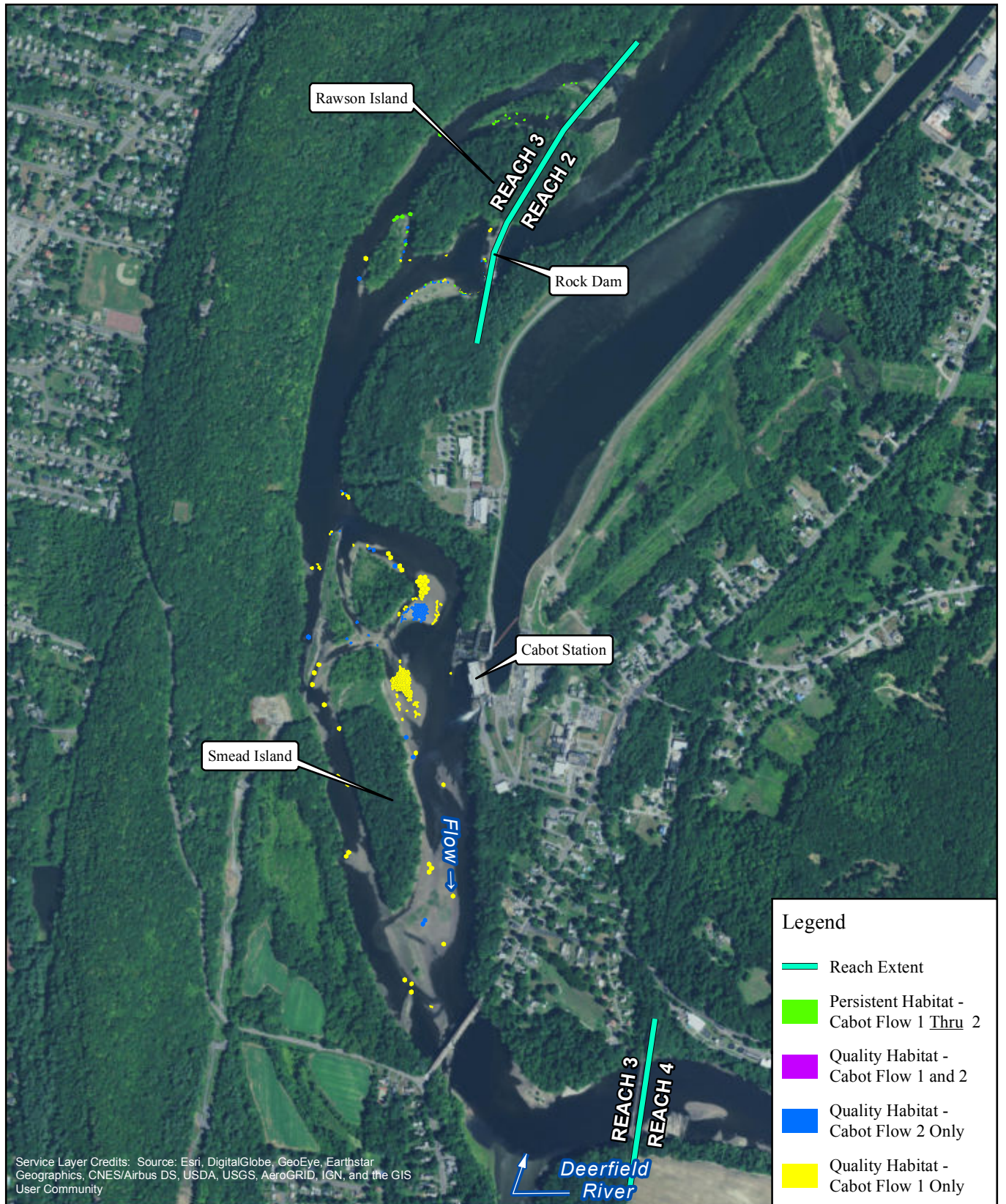


0 500 1,000 2,000 Feet

**Persistent Habitat**  
 Tessellated Darter-Juv-Adult  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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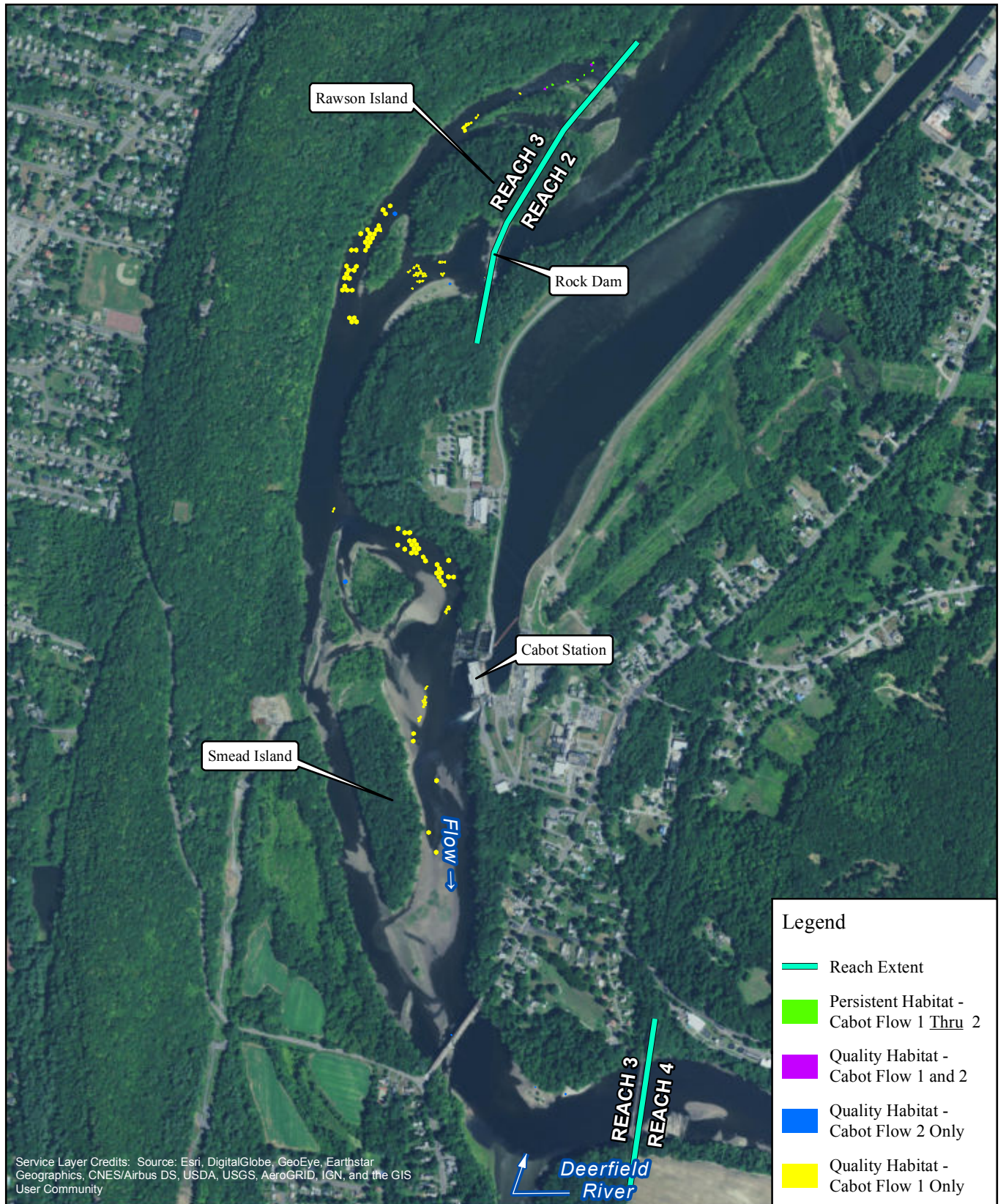
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

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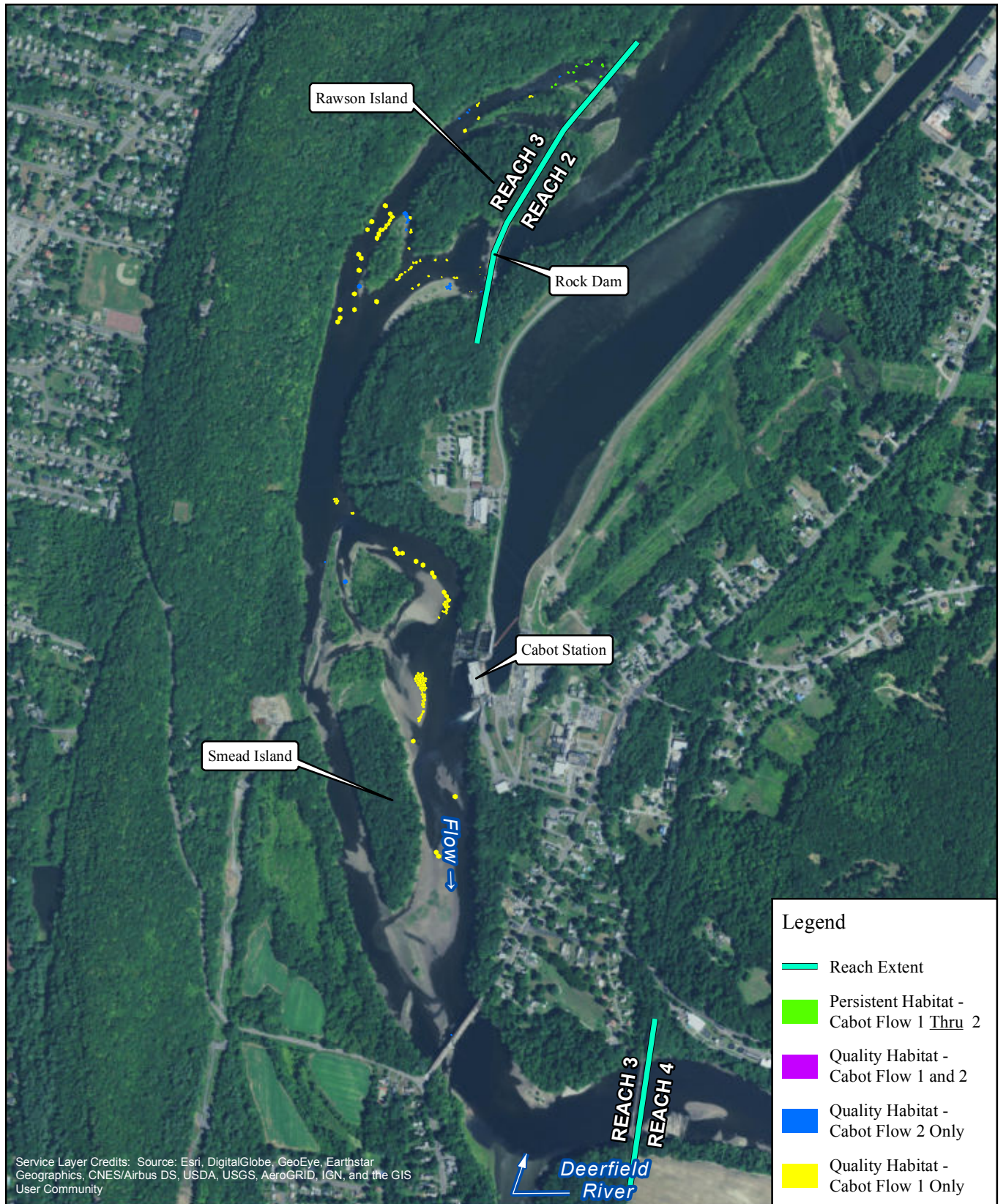
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Feet

Persistent Habitat  
Tessellated Darter-Juv-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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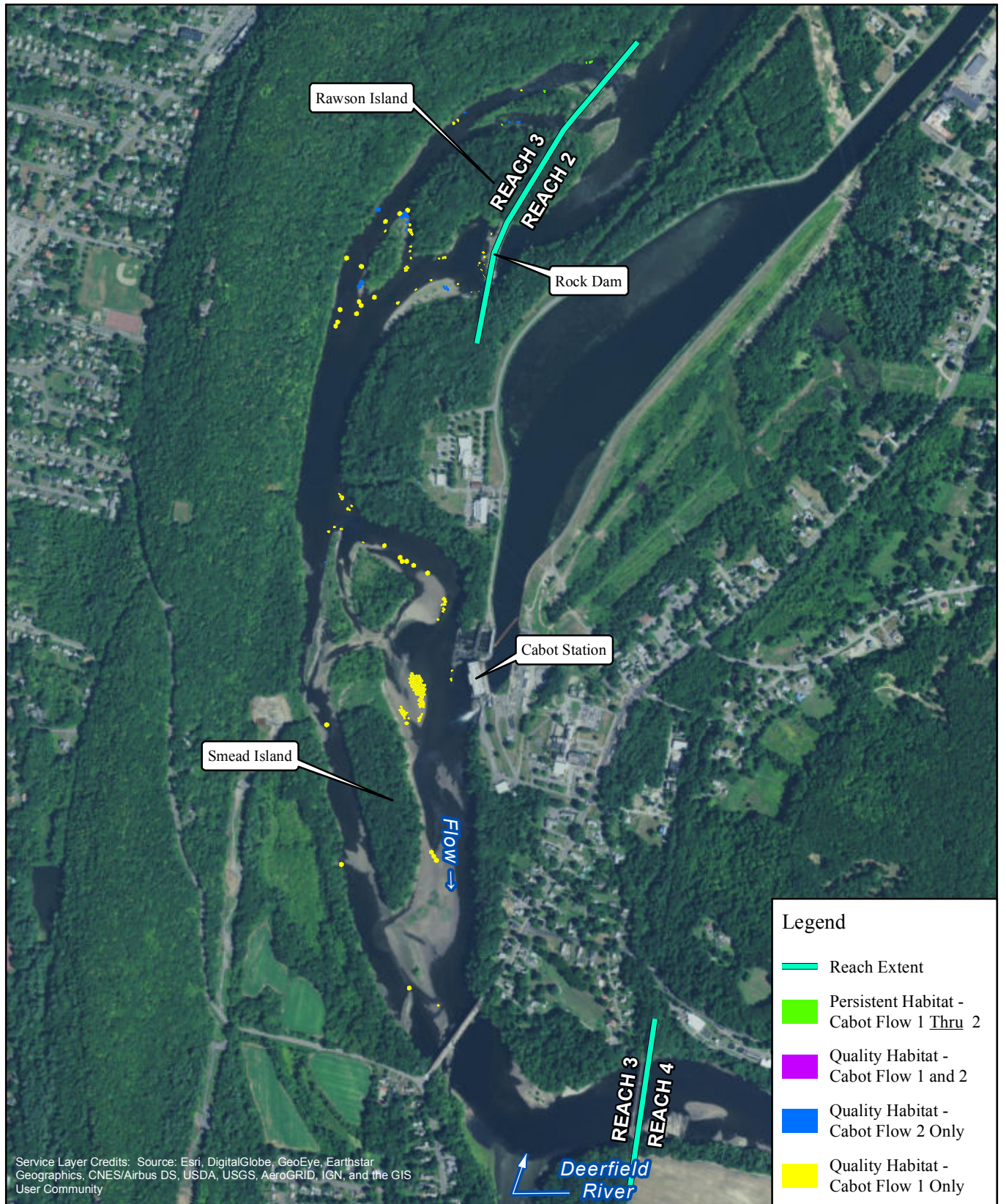
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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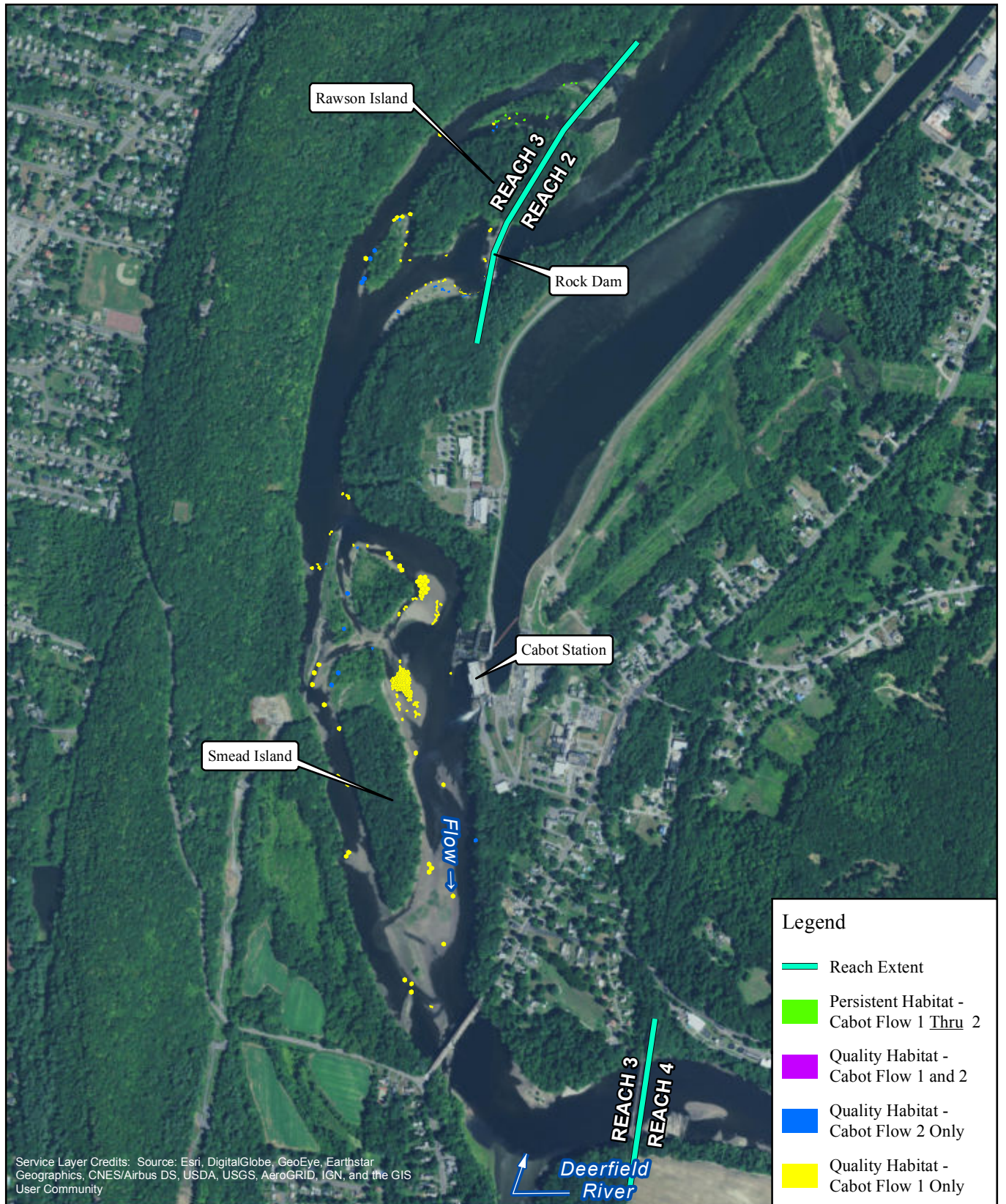
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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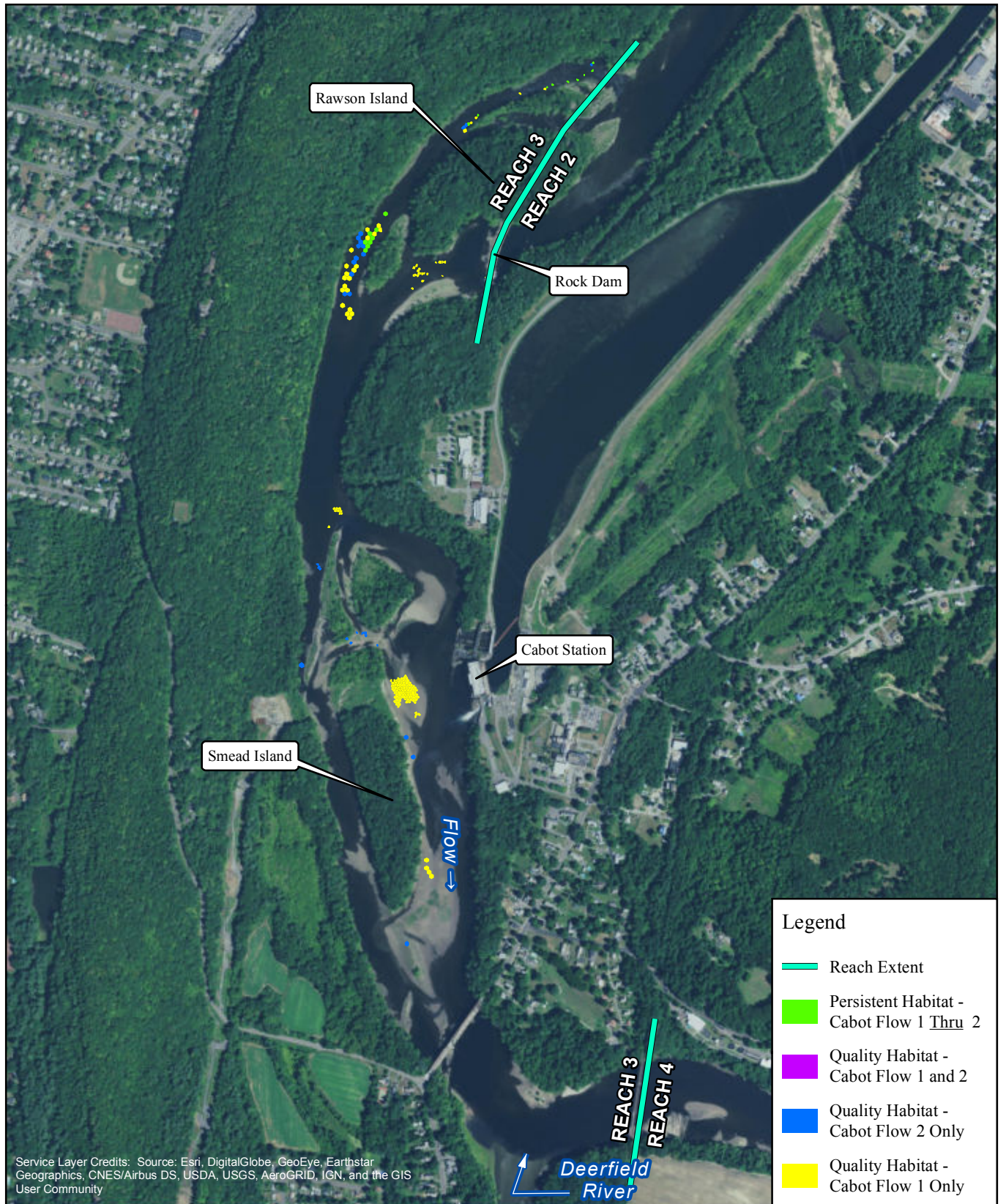
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 14000 cfs

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**RELICENSING STUDY 3.3.1**

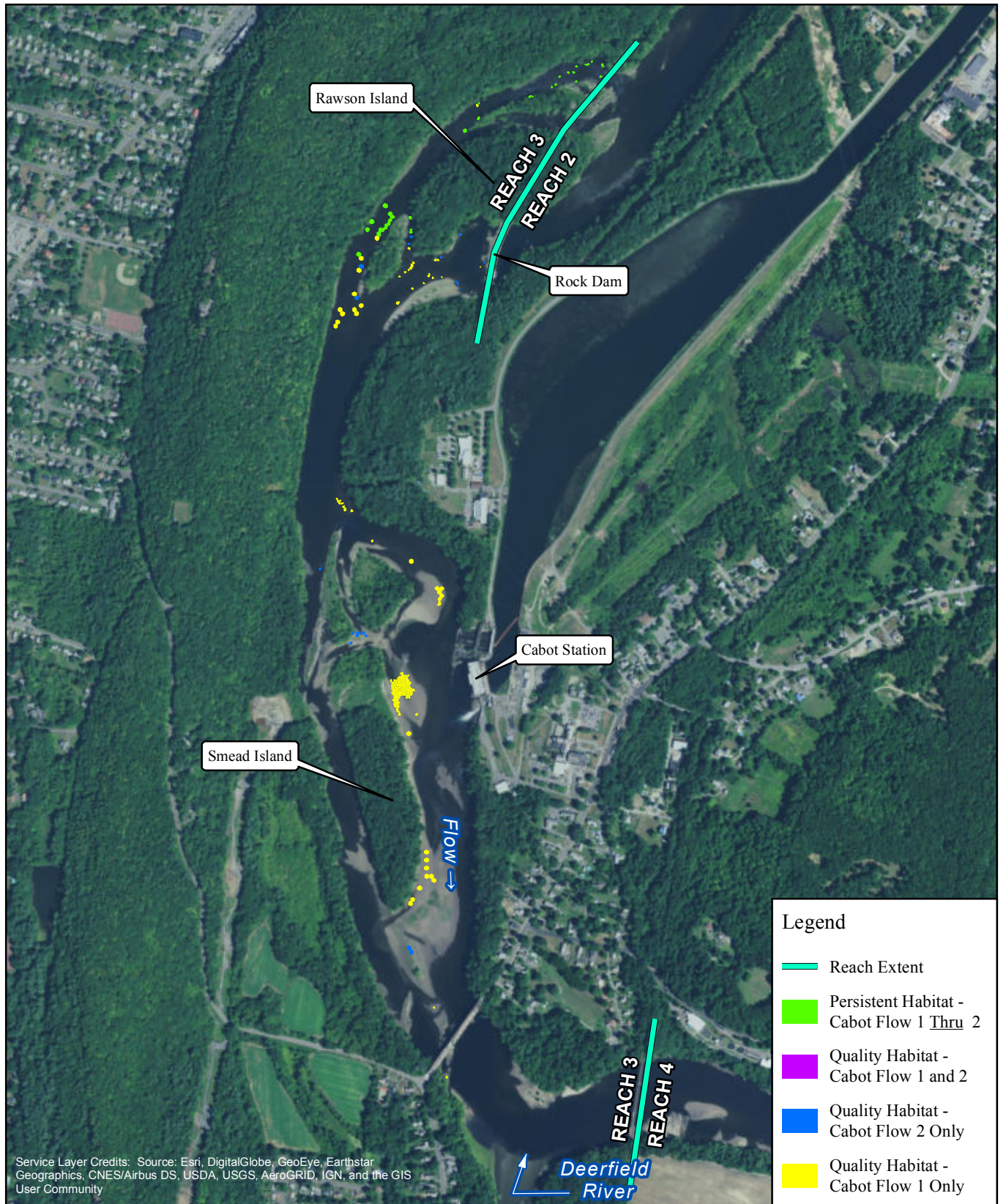
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 200 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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

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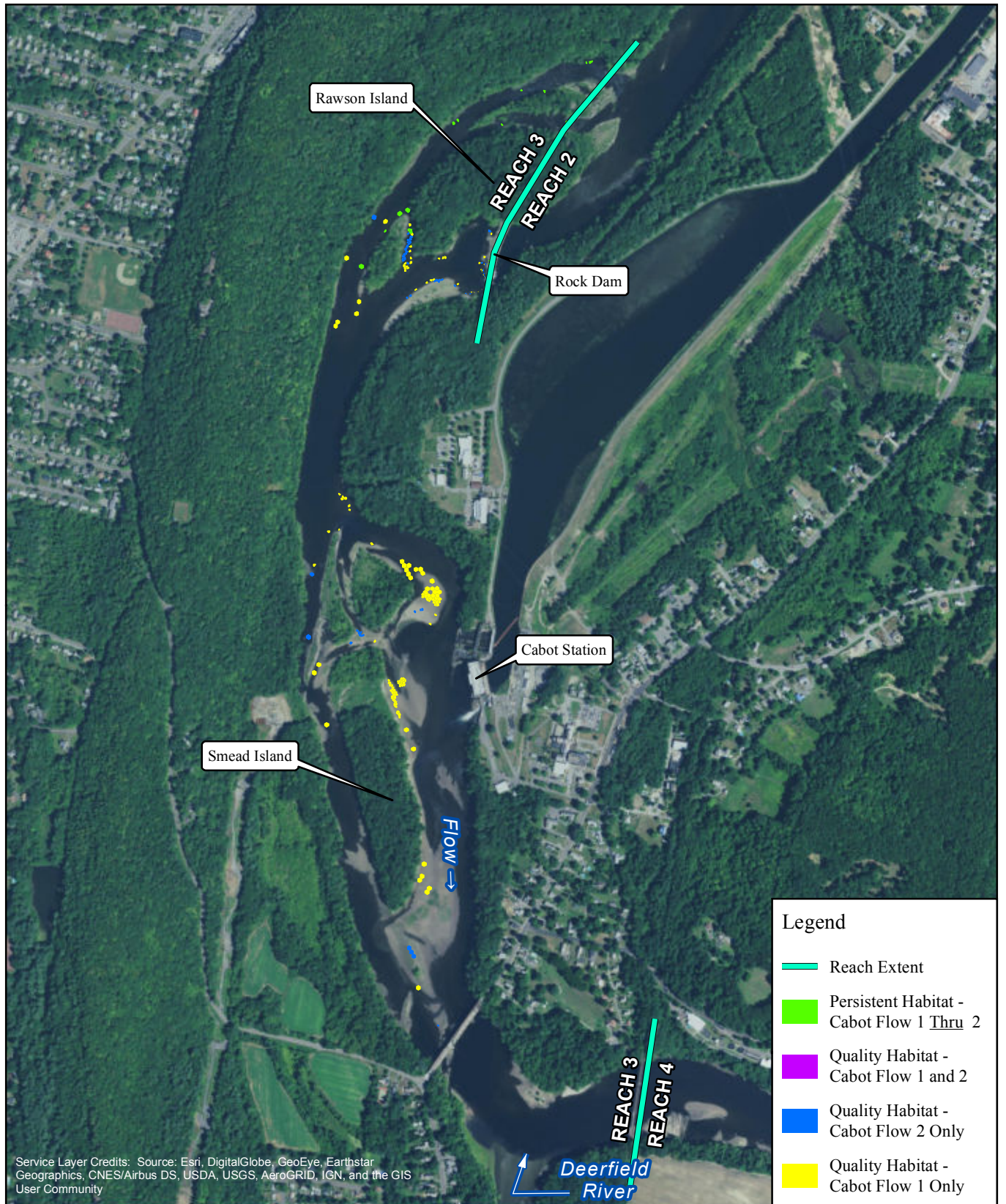
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Persistent Habitat  
 Tessellated Darter-Juv-Adult  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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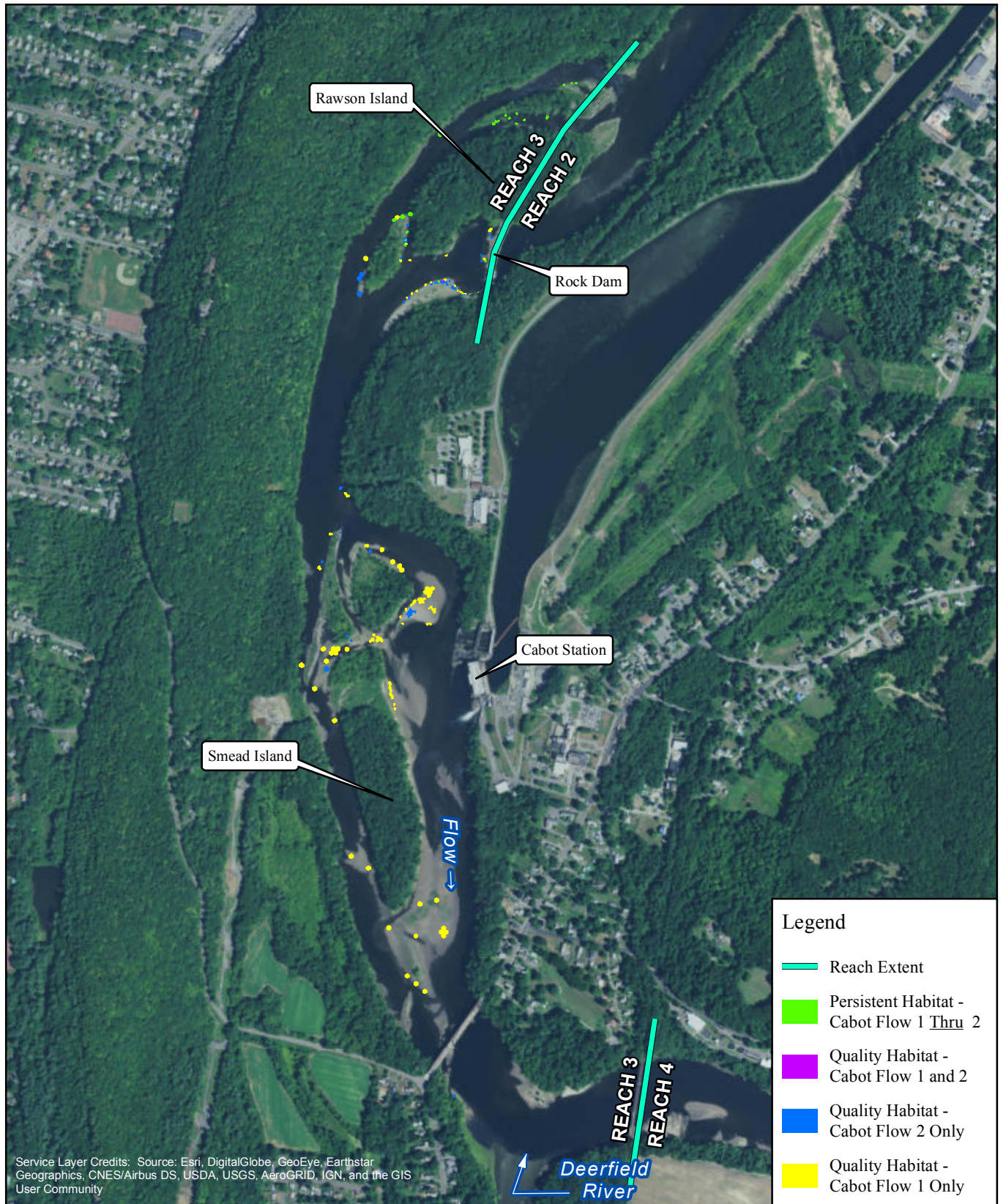
0 500 1,000 2,000 Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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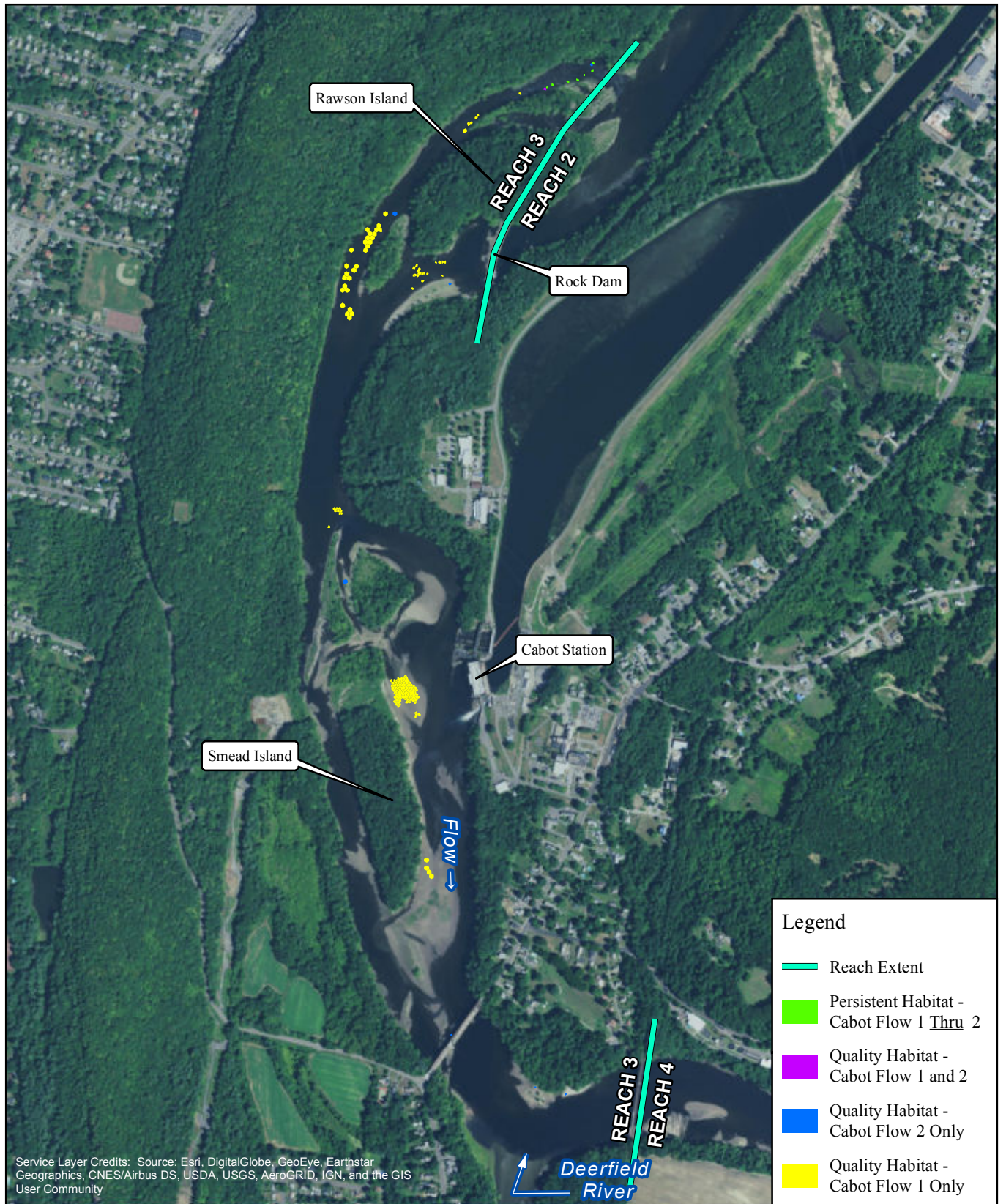
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**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 9000 cfs

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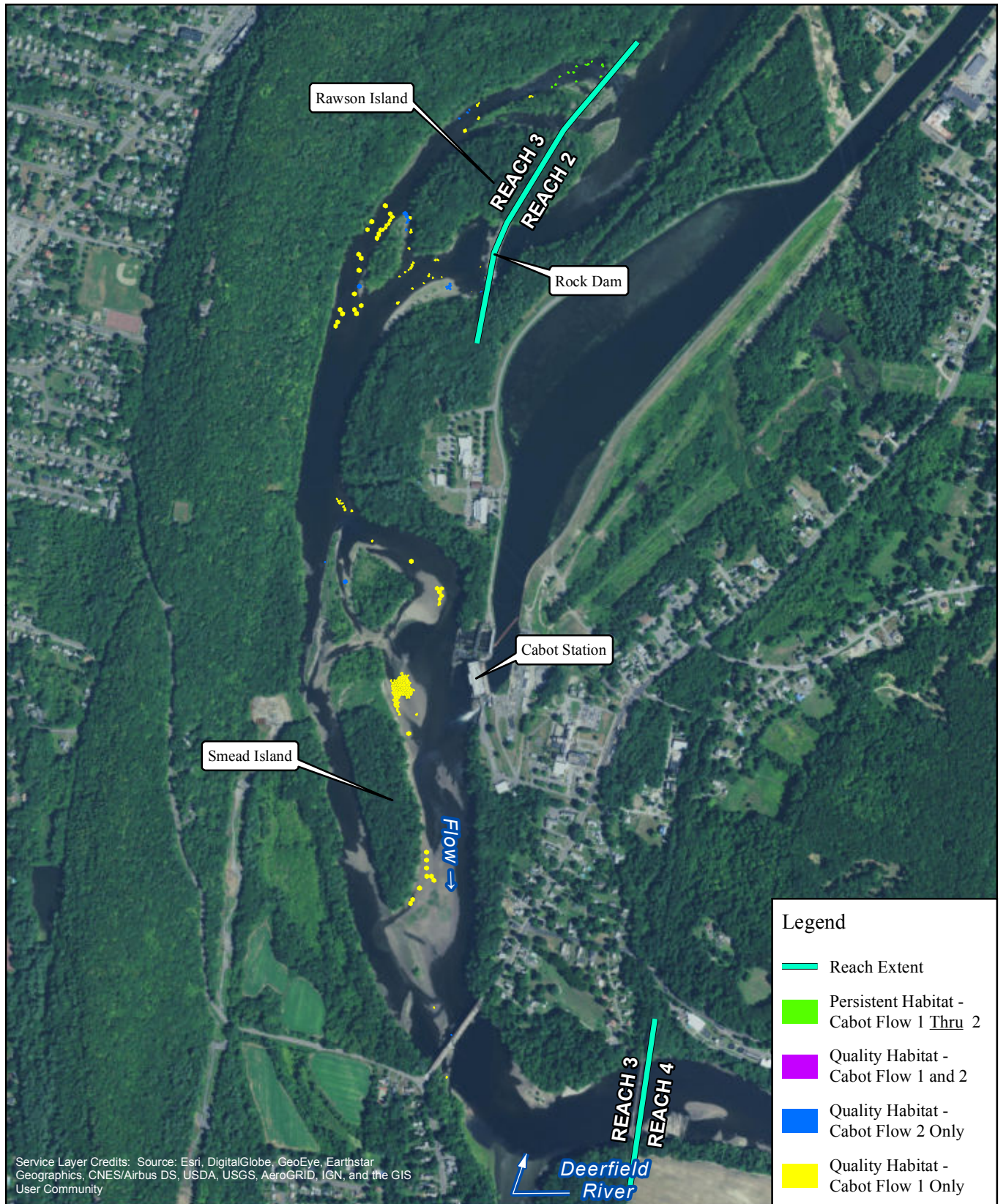
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Persistent Habitat  
Tessellated Darter-Juv-Adult  
Bypass Flow: 200 cfs  
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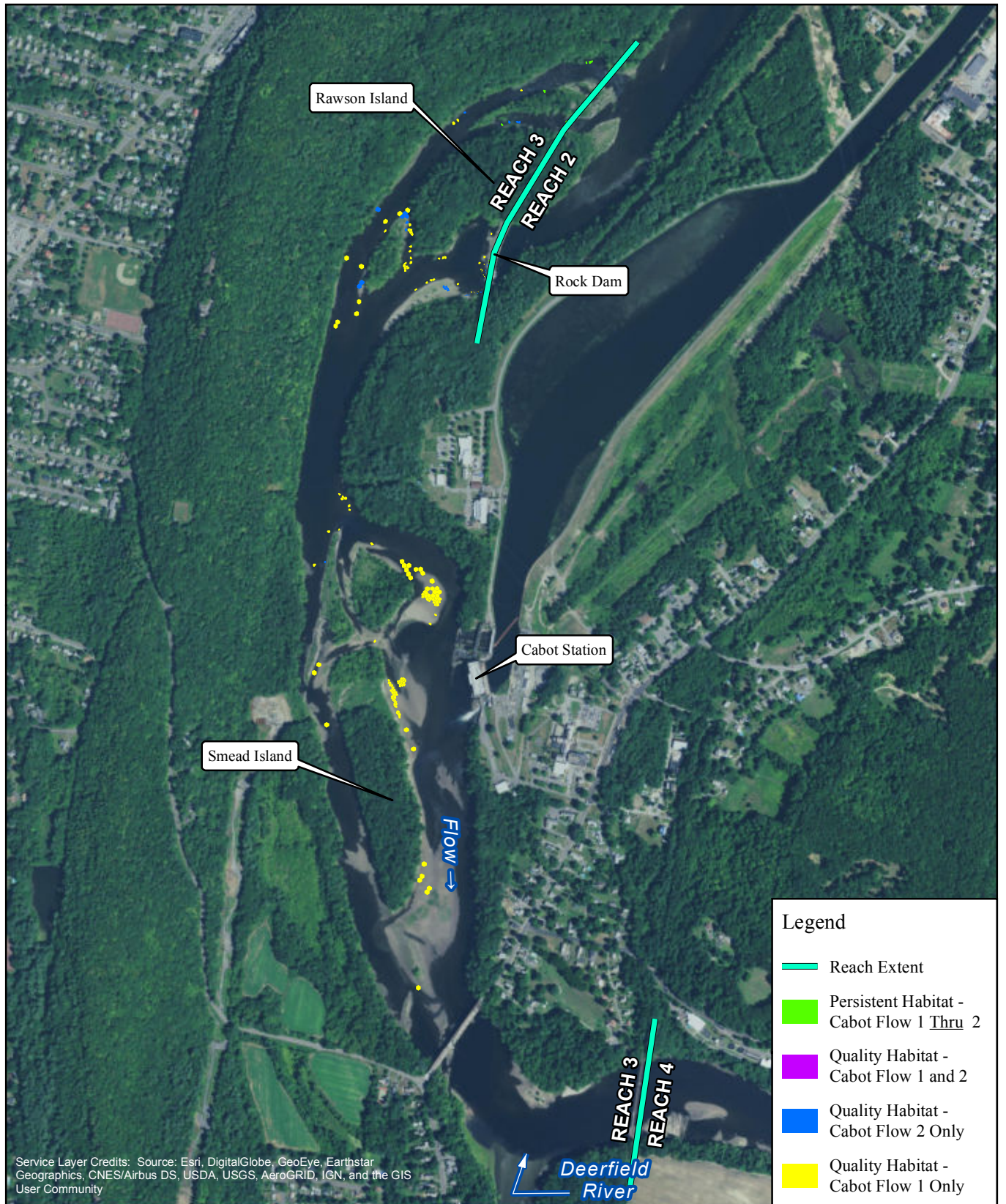
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 500 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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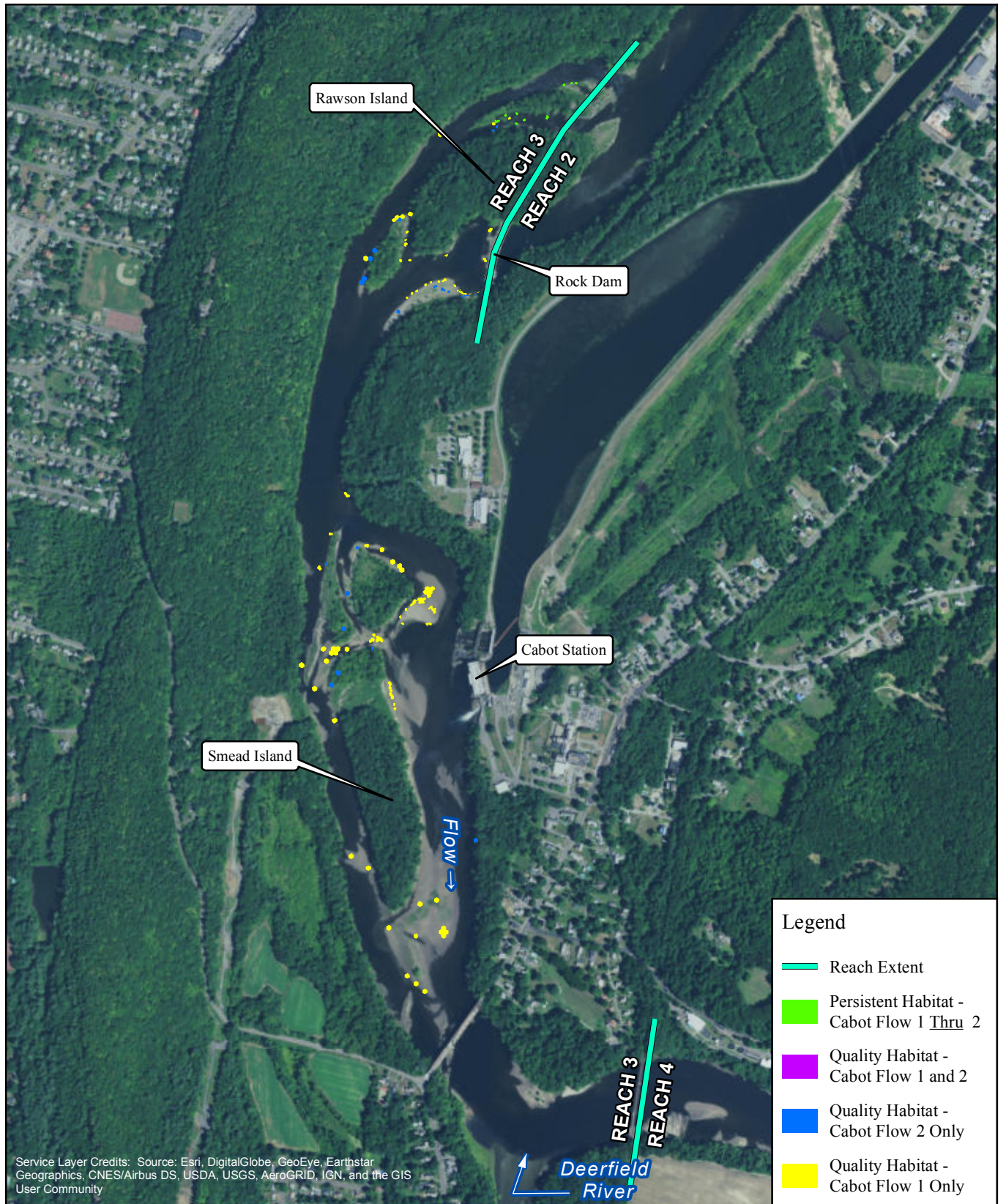
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Feet

**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 1000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

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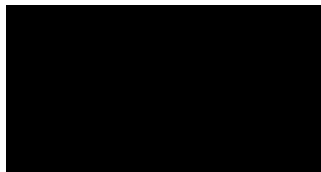
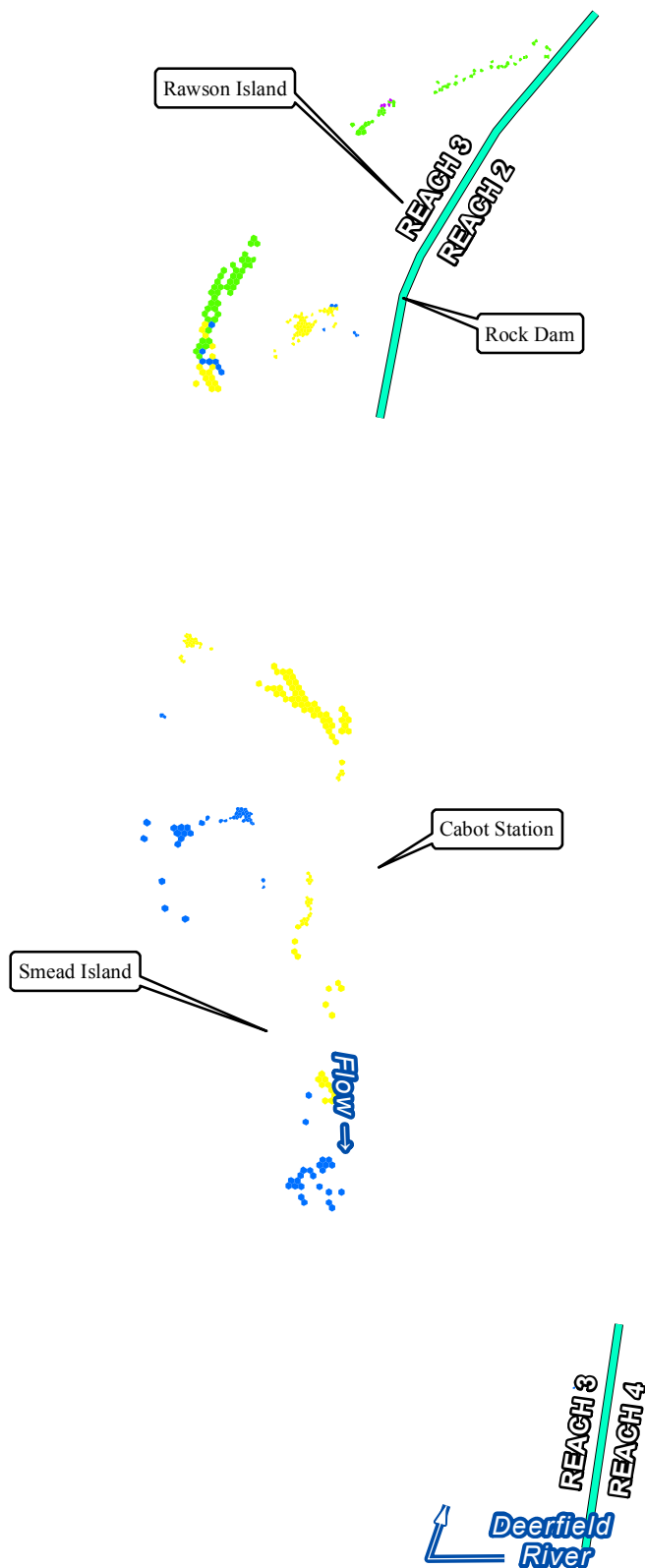
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**Persistent Habitat**  
Tessellated Darter-Juv-Adult  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 4500 cfs  
Cabot Flow 2: 14000 cfs

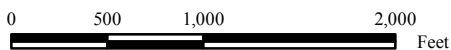
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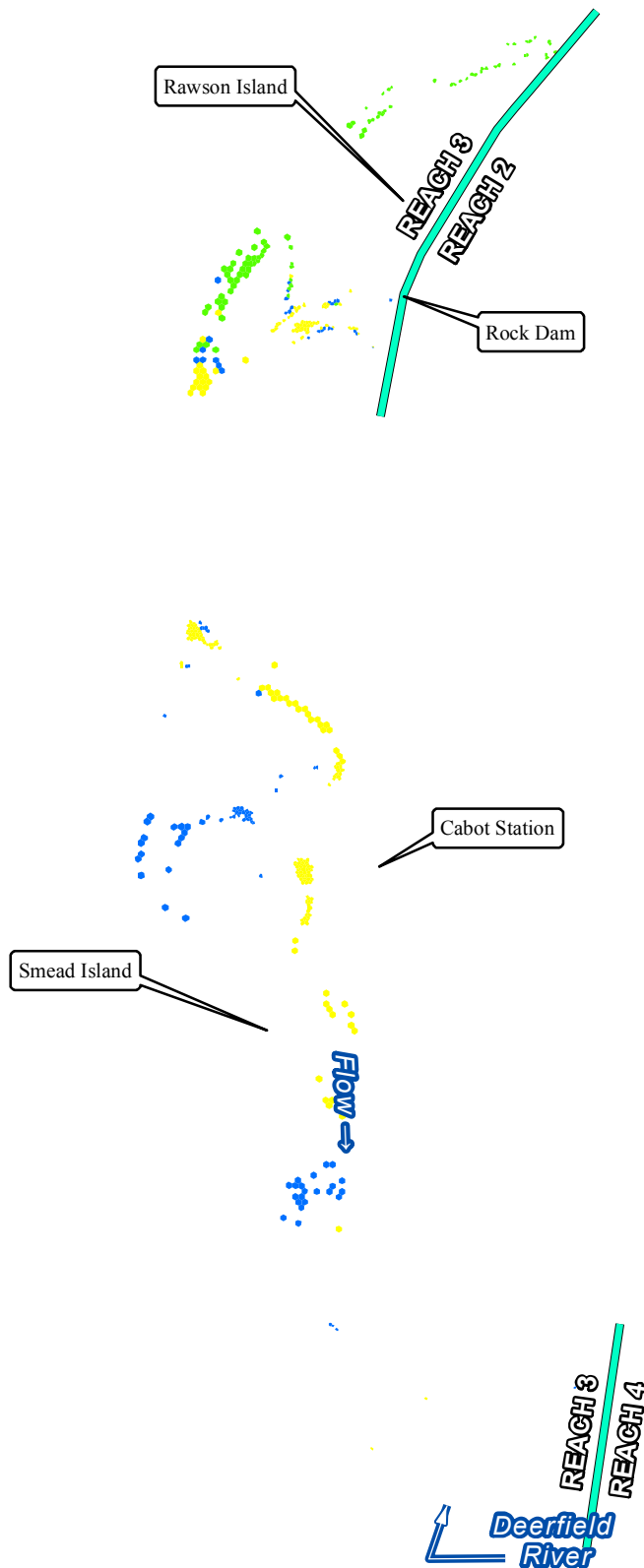
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

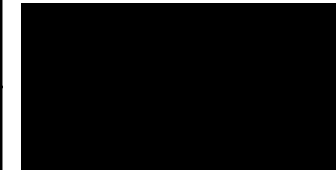
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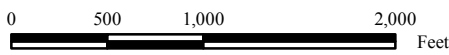
**Legend**

- 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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 Turners Falls Hydroelectric Project No. 1889

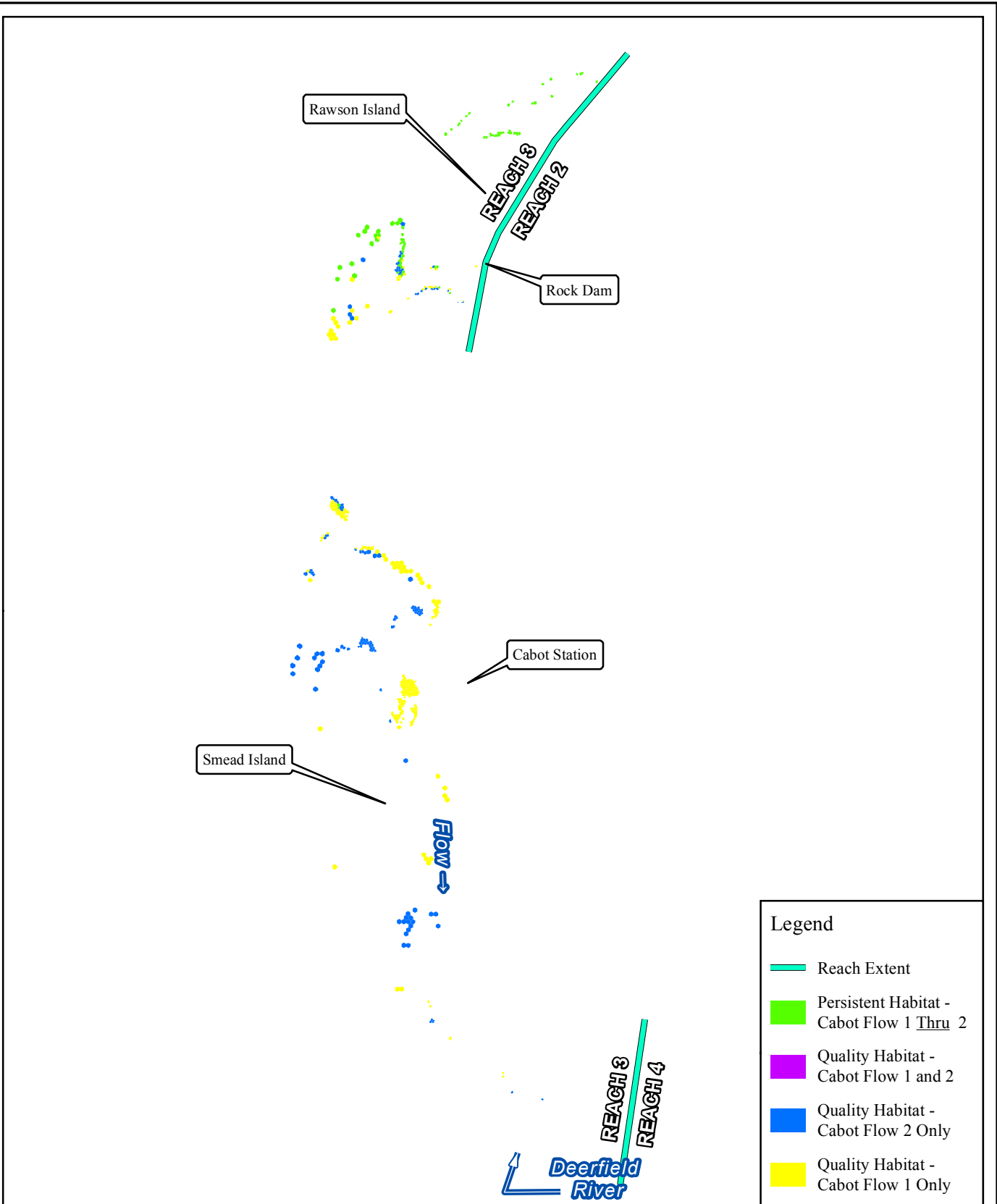
RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

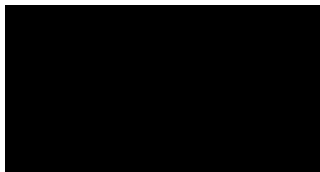
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 Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

**Persistent Habitat**  
 Longnose Dace-Juvenile  
 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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Rawson Island

REACH 3  
REACH 2

Rock Dam

Cabot Station

Smead Island

Flow →

REACH 3  
REACH 4

Deerfield  
River

### 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

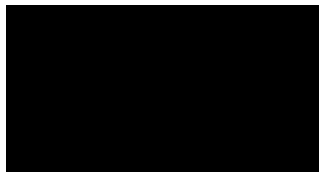
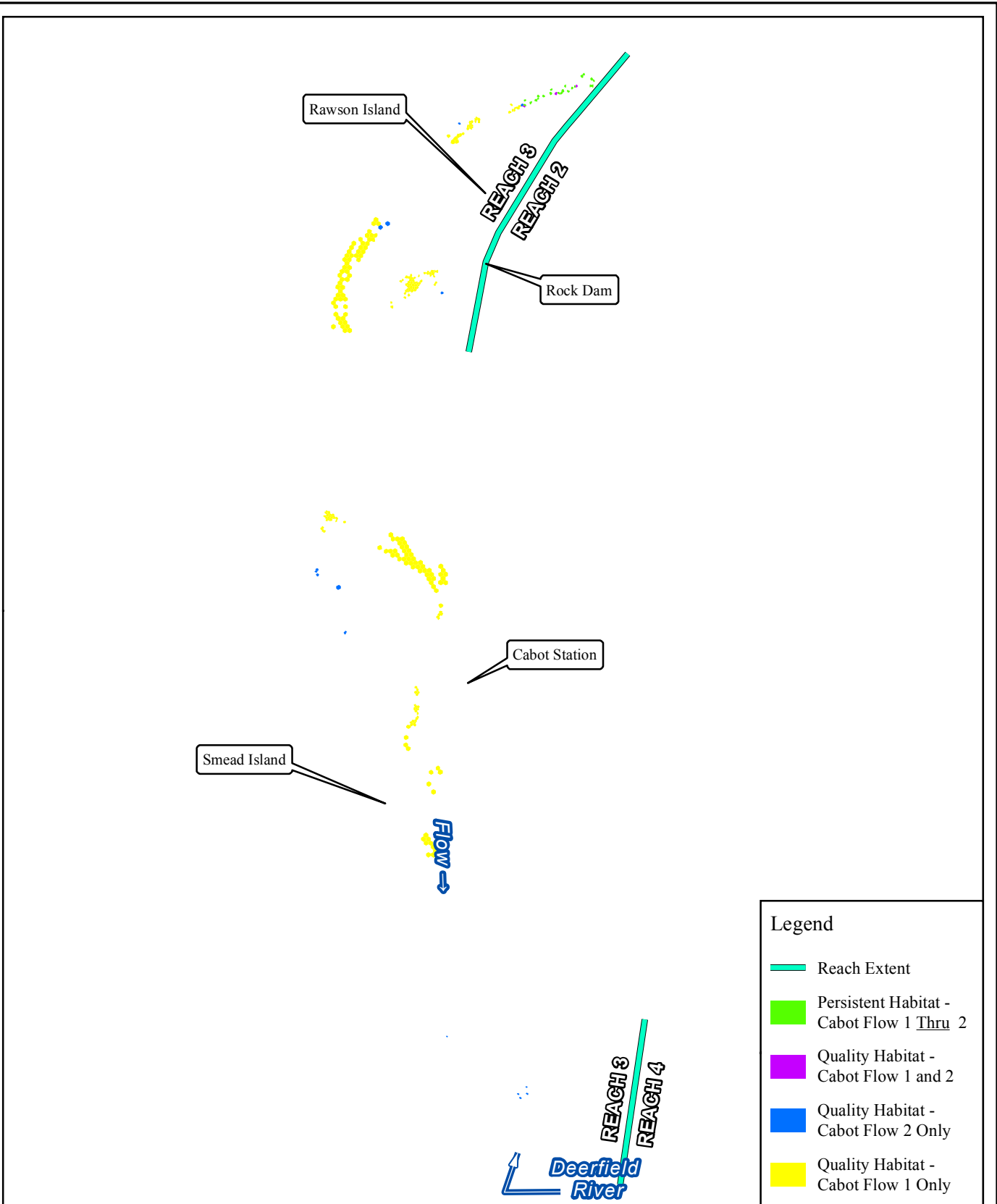
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Northfield Mountain Pumped Storage Project No. 2485  
Turners Falls Hydroelectric Project No. 1889  
RELICENSING STUDY 3.3.1

Persistent Habitat  
Longnose Dace-Juvenile  
Bypass Flow: 2000 cfs  
Cabot Flow 1: 2500 cfs  
Cabot Flow 2: 7000 cfs

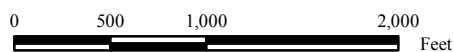
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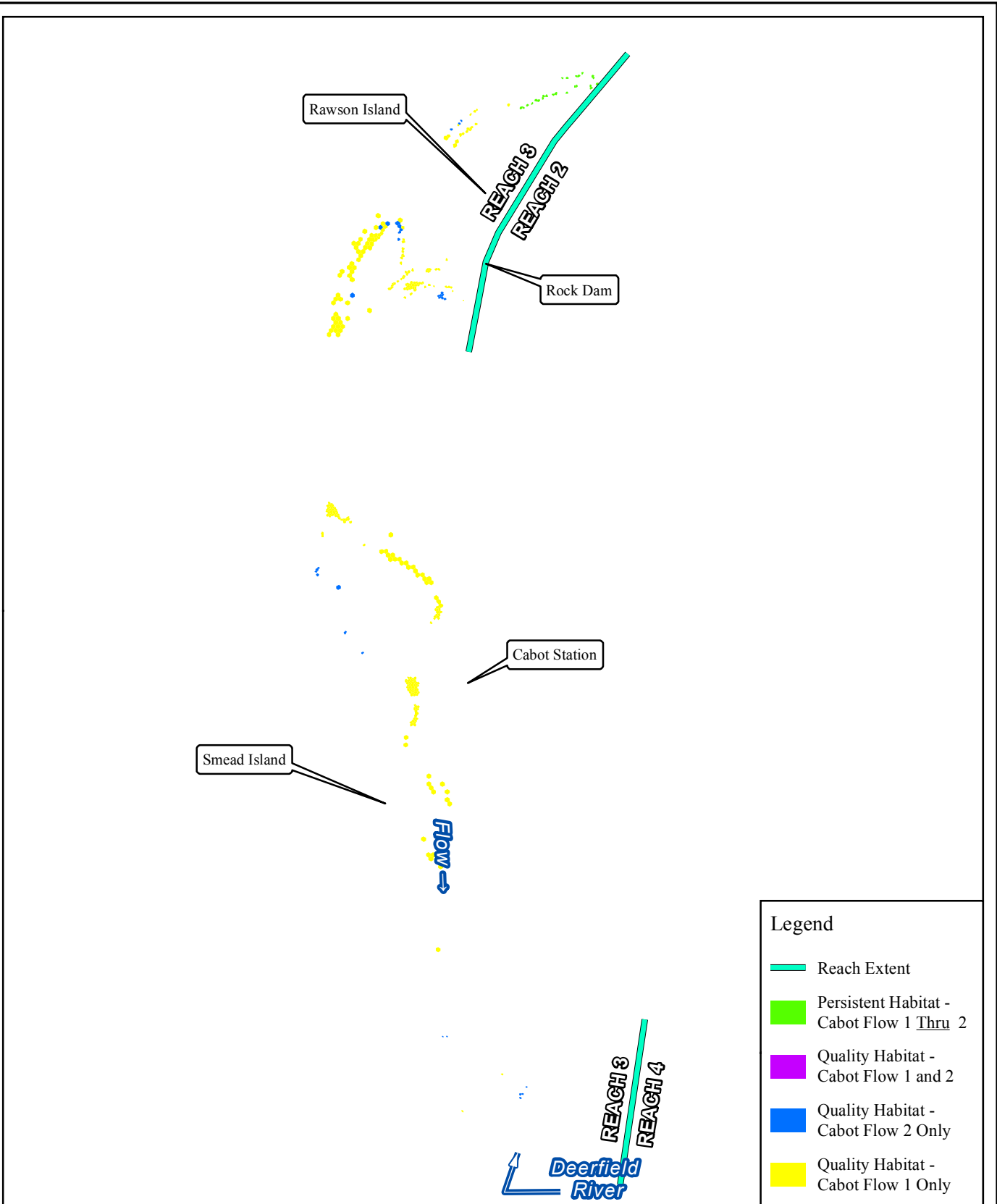
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 Northfield Mountain Pumped Storage Project No. 2485  
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**RELICENSING STUDY 3.3.1**



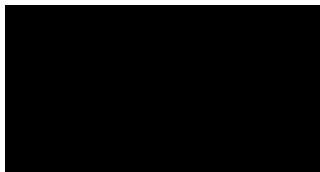
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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 Northfield Mountain Pumped Storage Project No. 2485  
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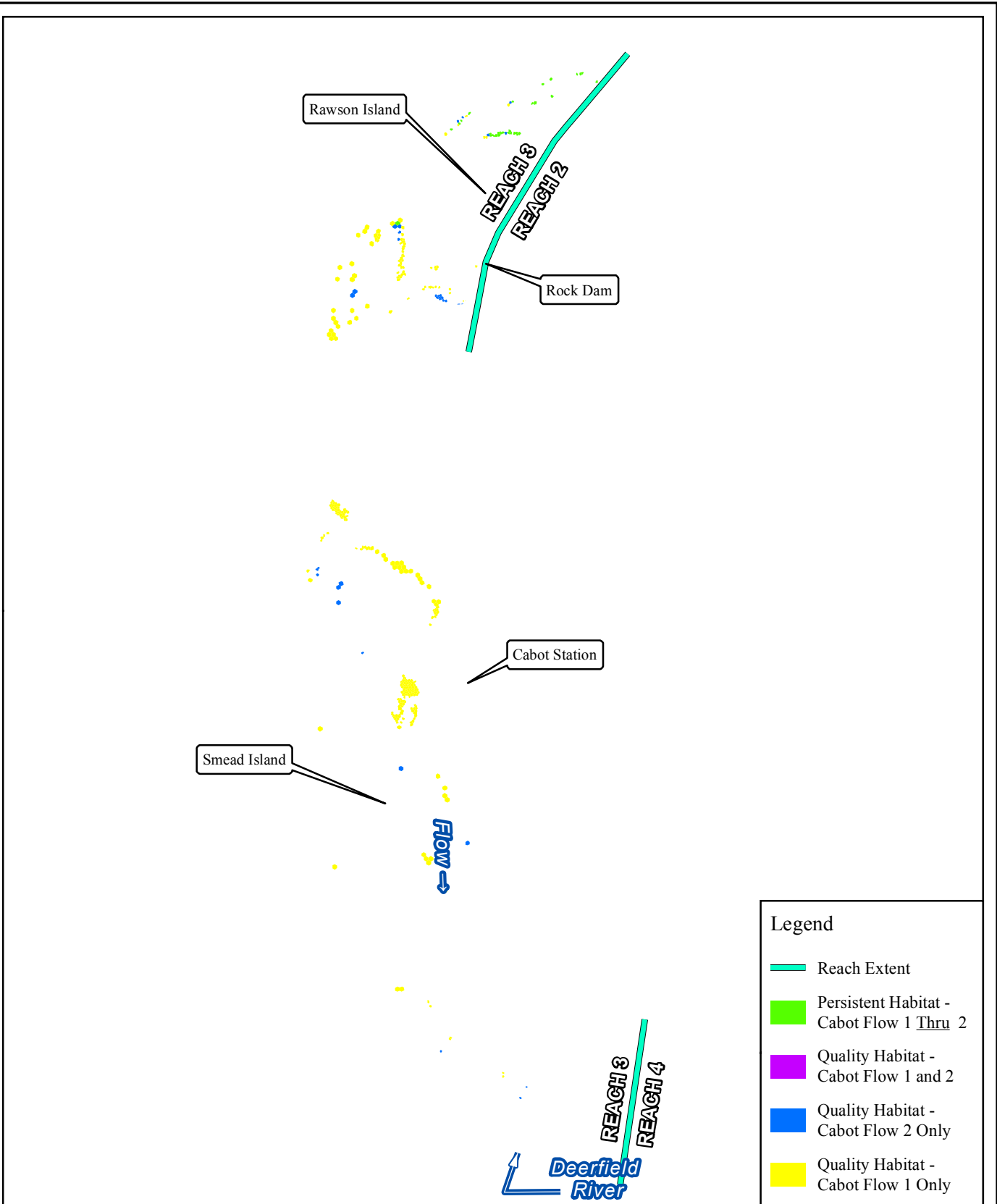


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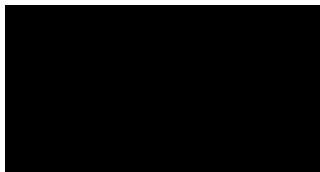
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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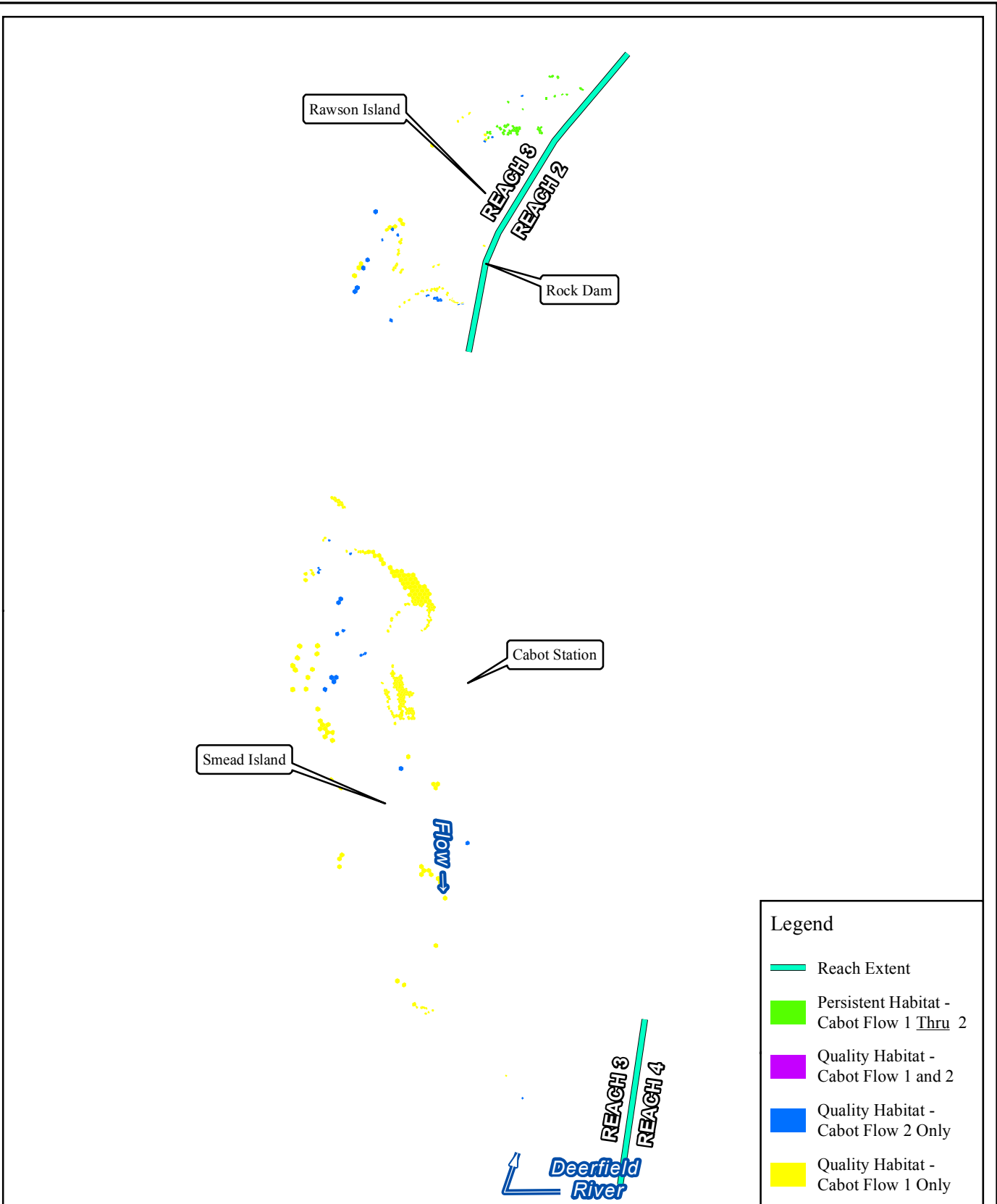


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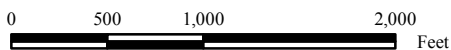
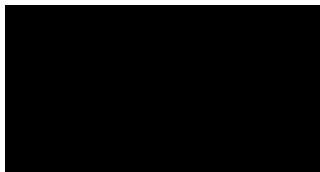
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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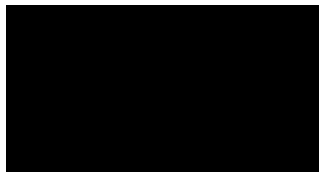
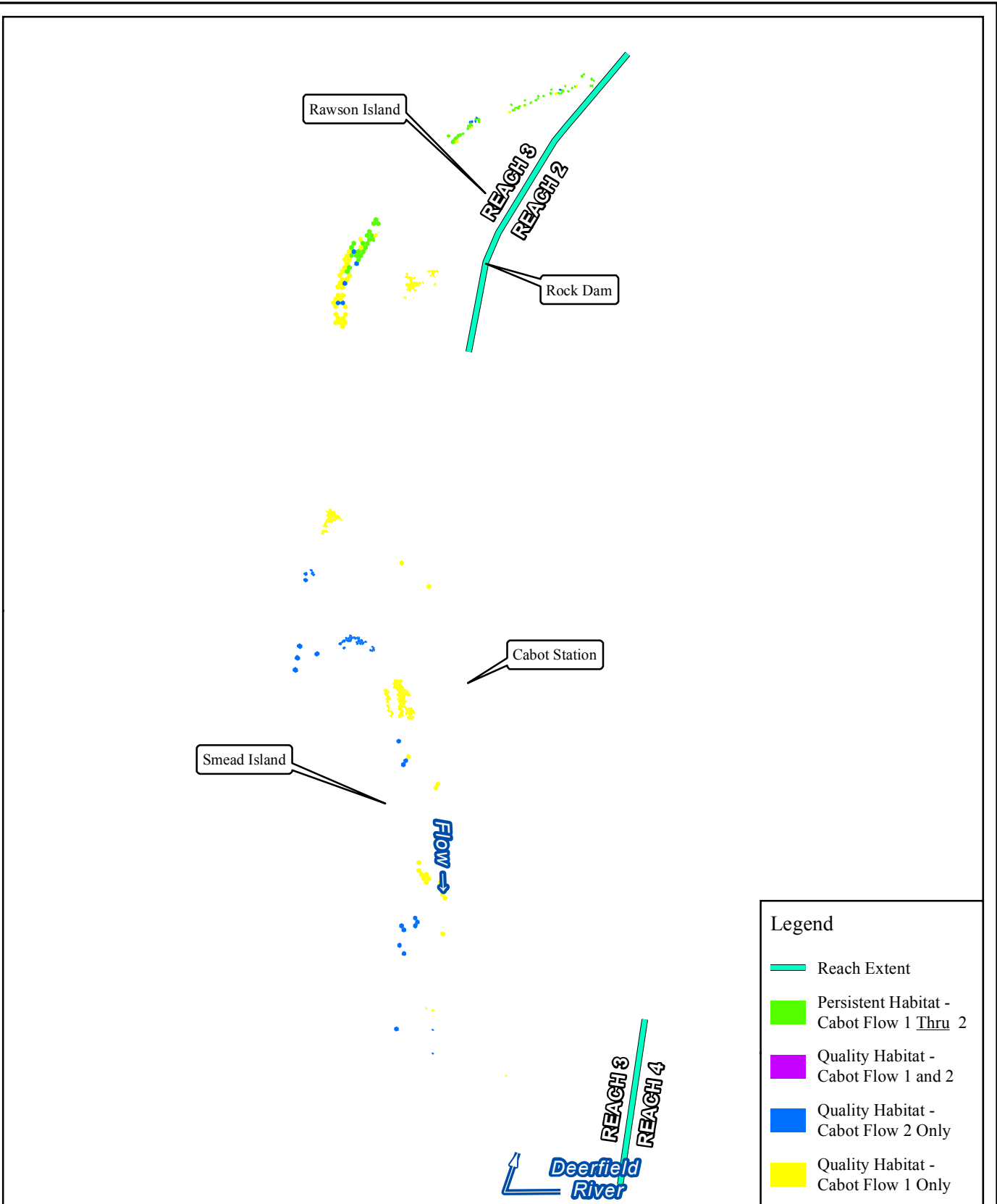
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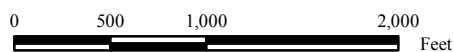
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 2000 cfs  
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 Cabot Flow 2: 14000 cfs

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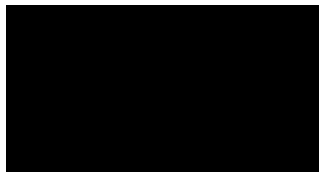
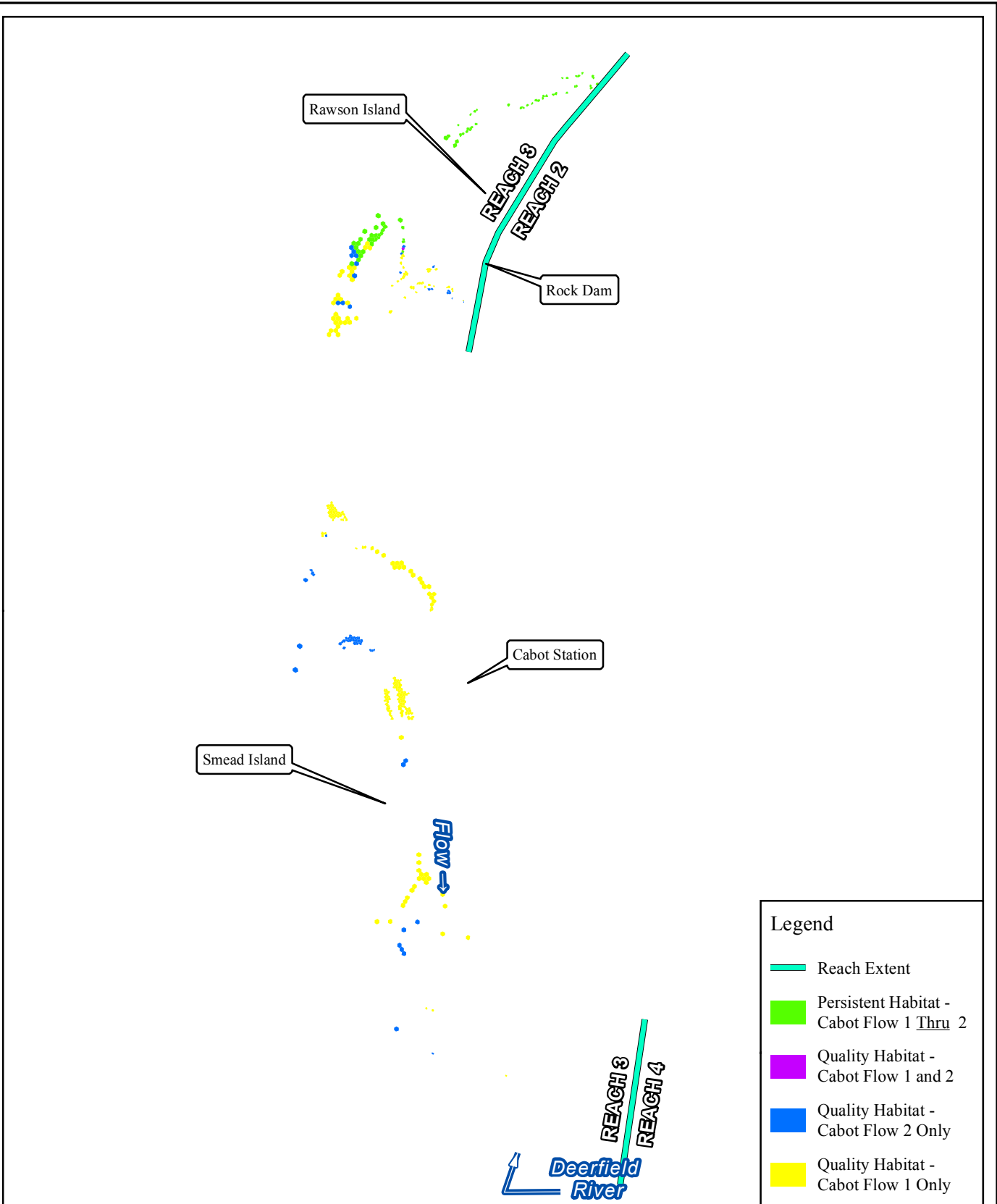
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

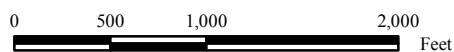
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FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
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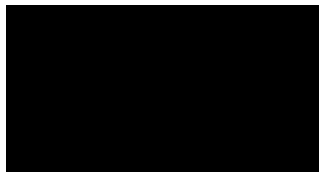
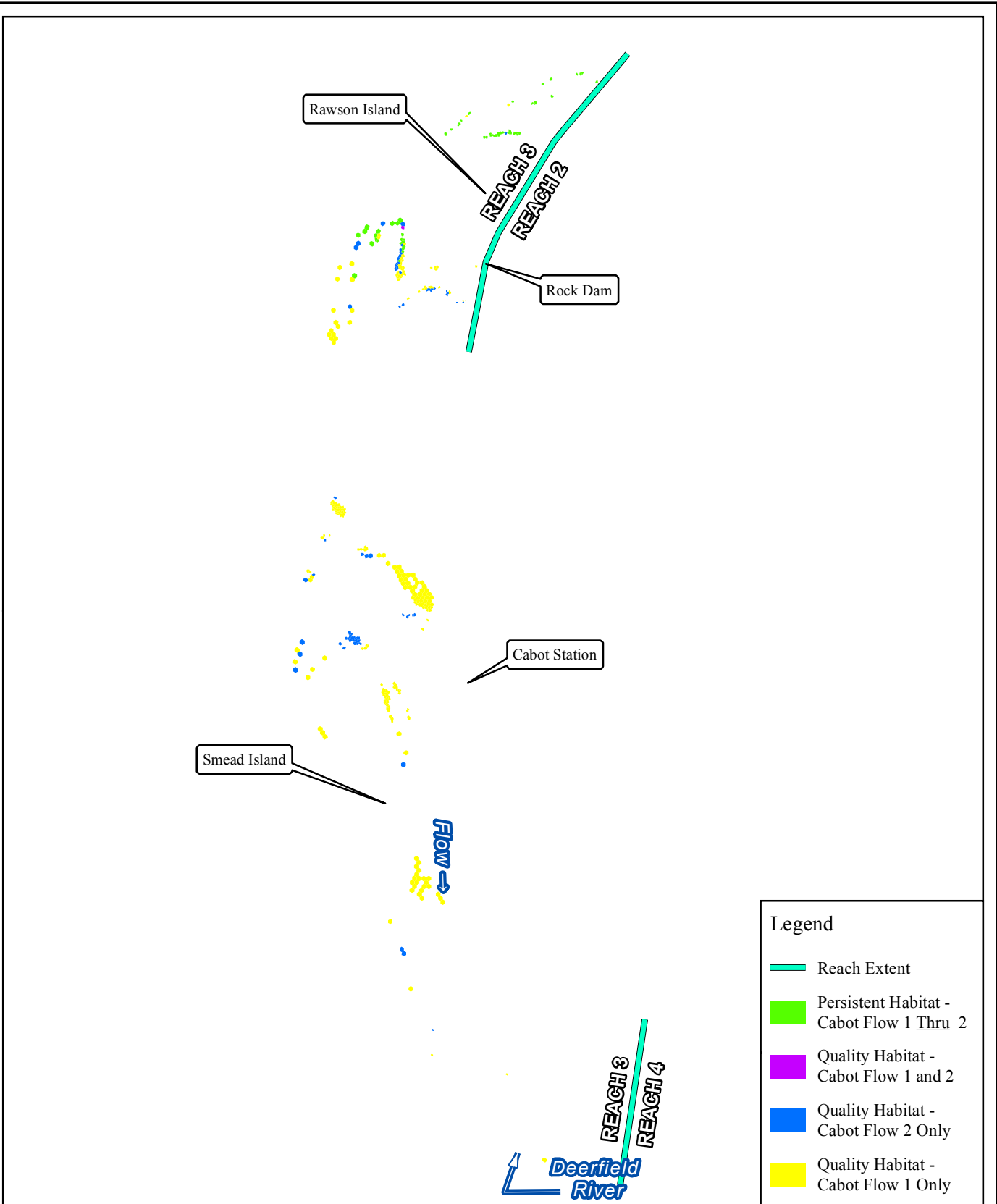
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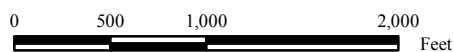
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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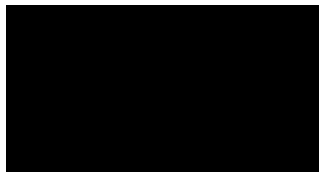
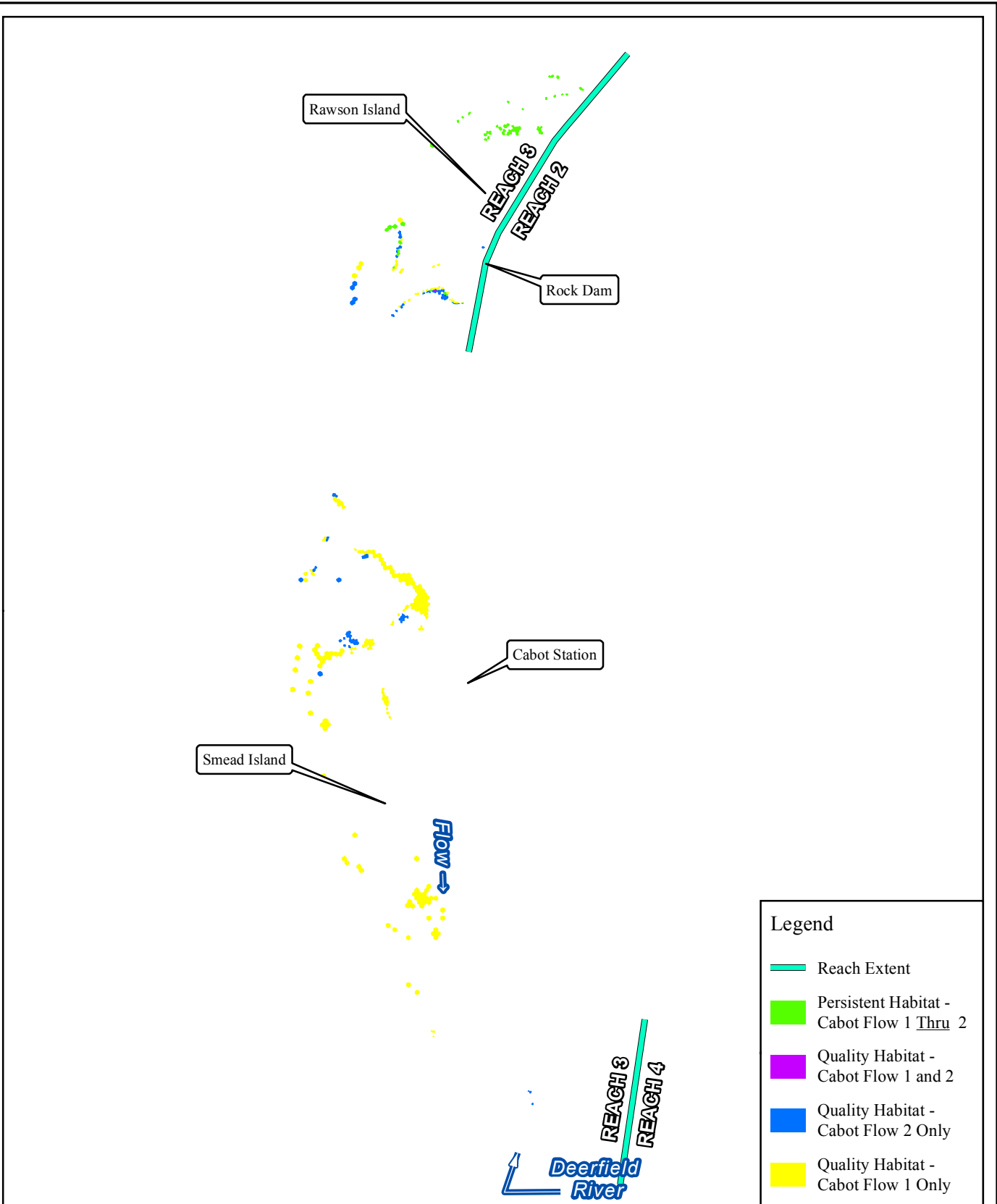
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 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**



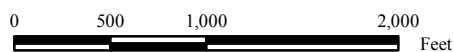
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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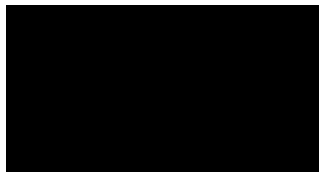
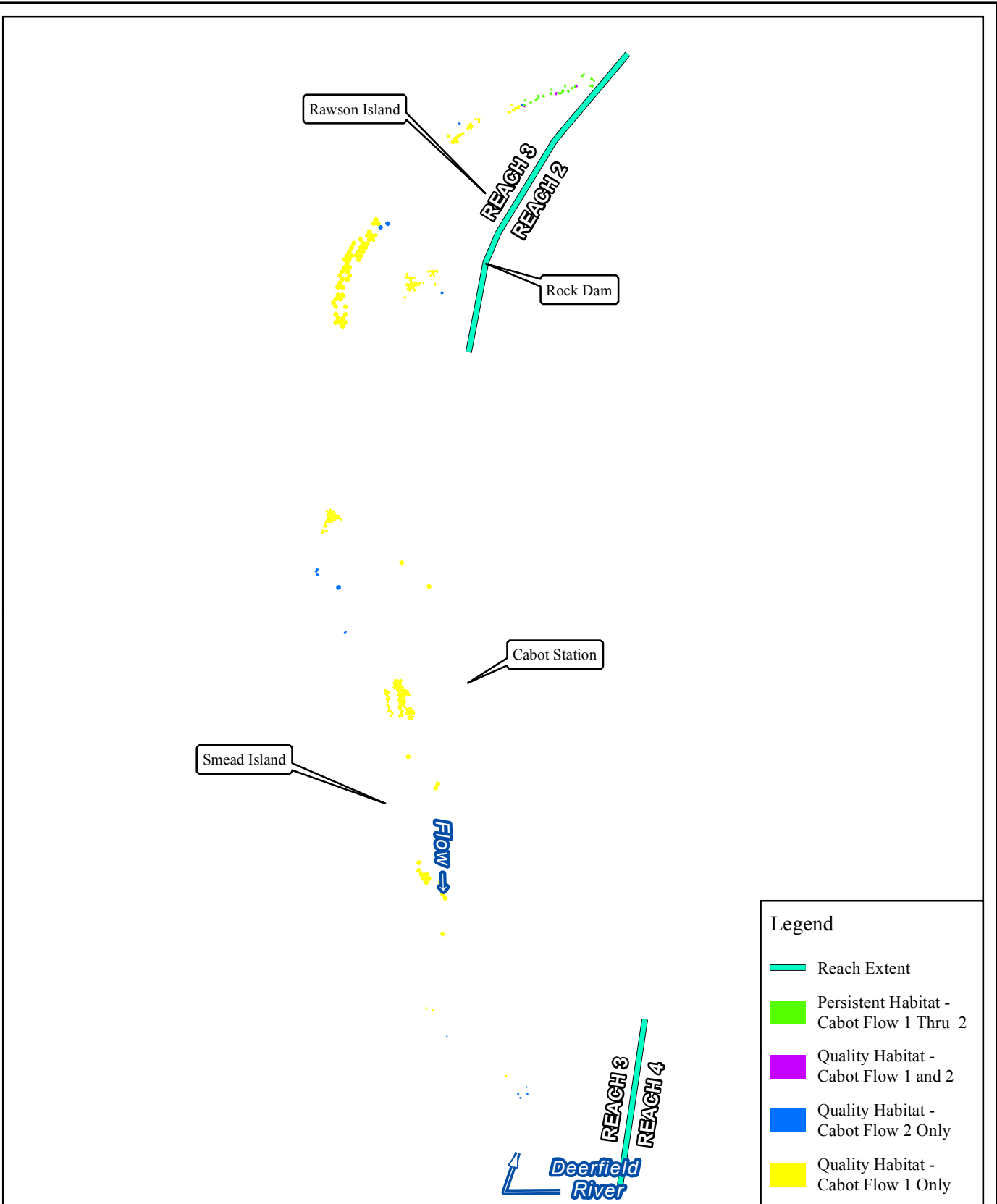
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 Northfield Mountain Pumped Storage Project No. 2485  
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 RELICENSING STUDY 3.3.1



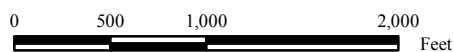
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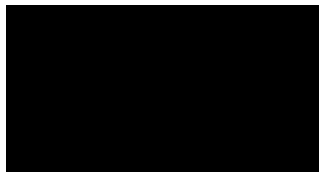
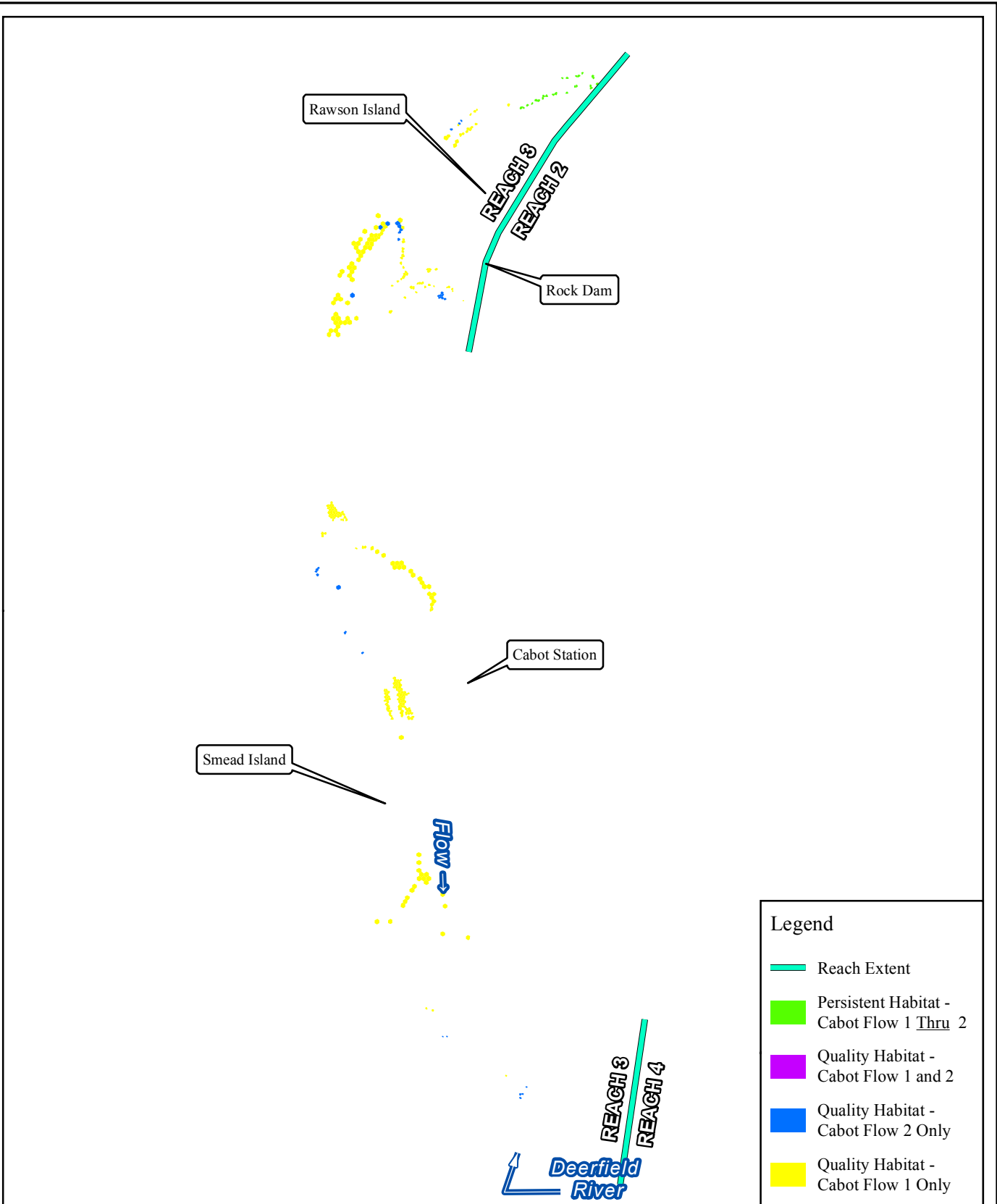
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 14000 cfs

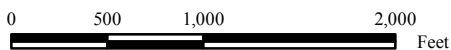
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FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889

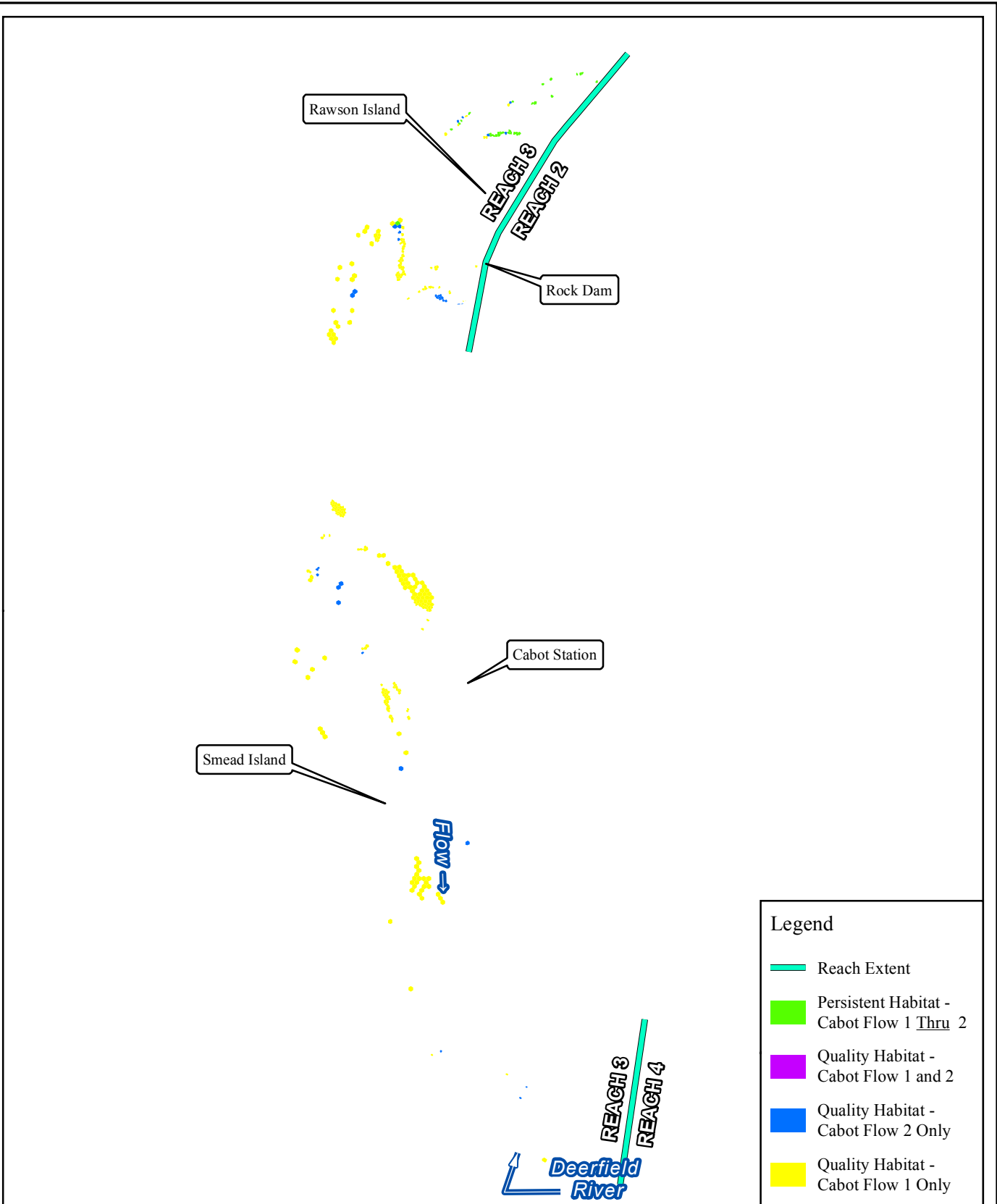
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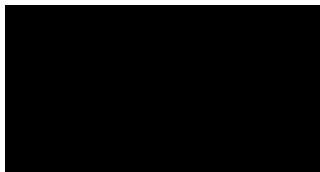
**Persistent Habitat**  
 Longnose Dace-Juvenile  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 14000 cfs

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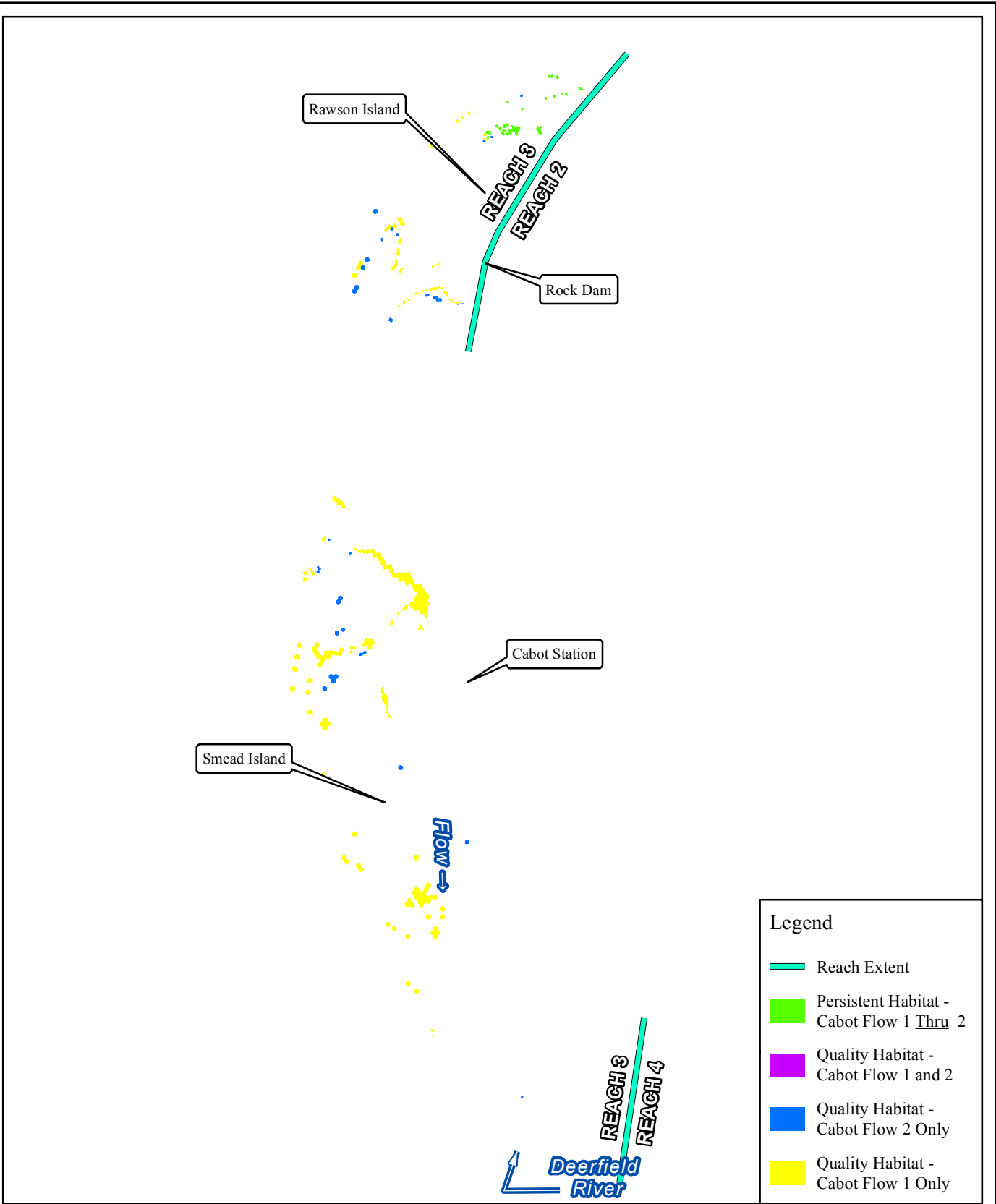


0 500 1,000 2,000 Feet

**Persistent Habitat**  
 Longnose Dace-Juvenile  
 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
- Quality Habitat - Cabot Flow 1 and 2
- Quality Habitat - Cabot Flow 2 Only
- Quality Habitat - Cabot Flow 1 Only



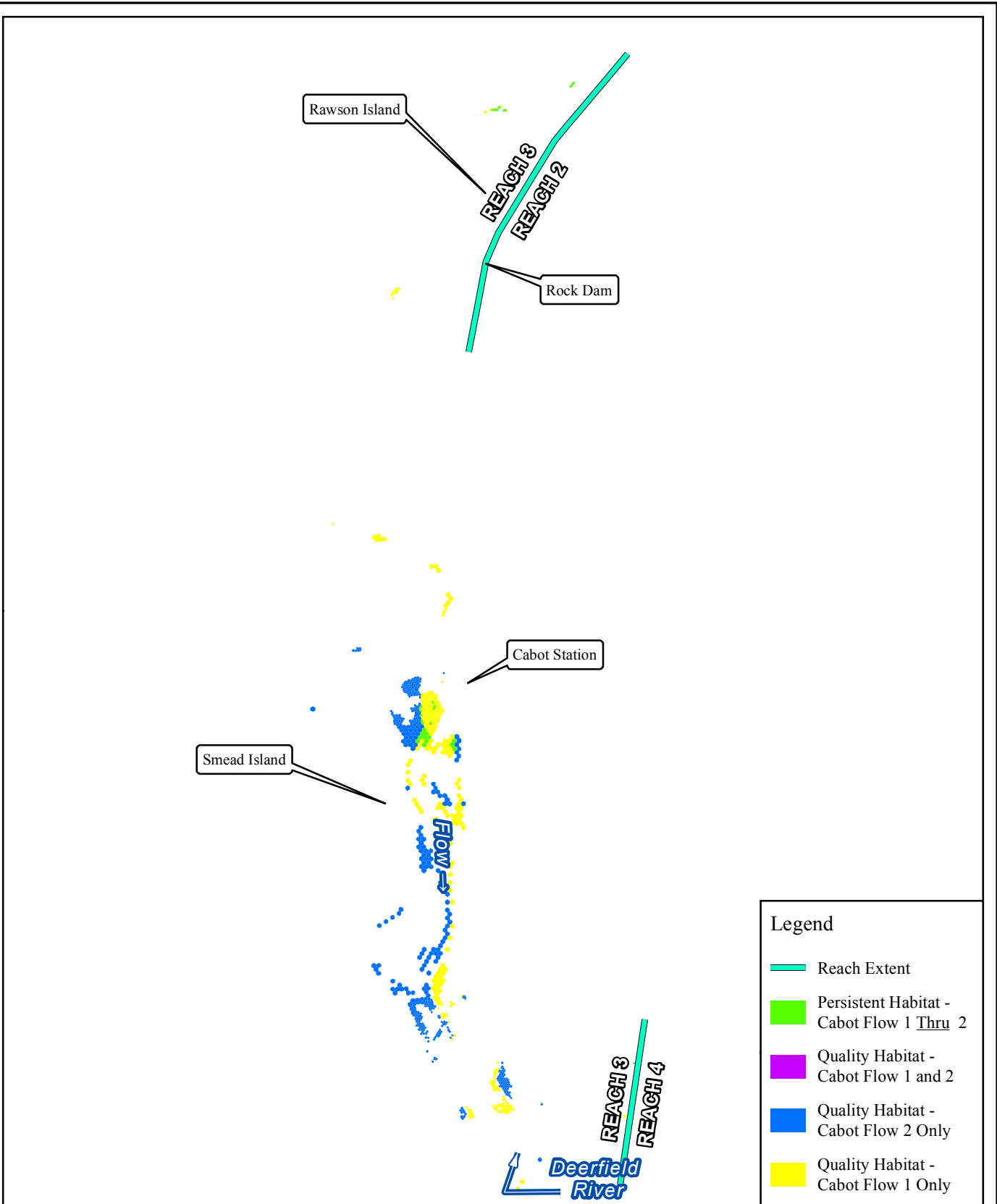
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FIRSTLIGHT HYDRO GENERATING COMPANY  
Northfield Mountain Pumped Storage Project No. 2485  
Turners Falls Hydroelectric Project No. 1889  
**RELICENSING STUDY 3.3.1**

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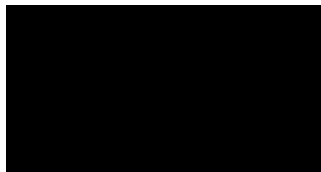
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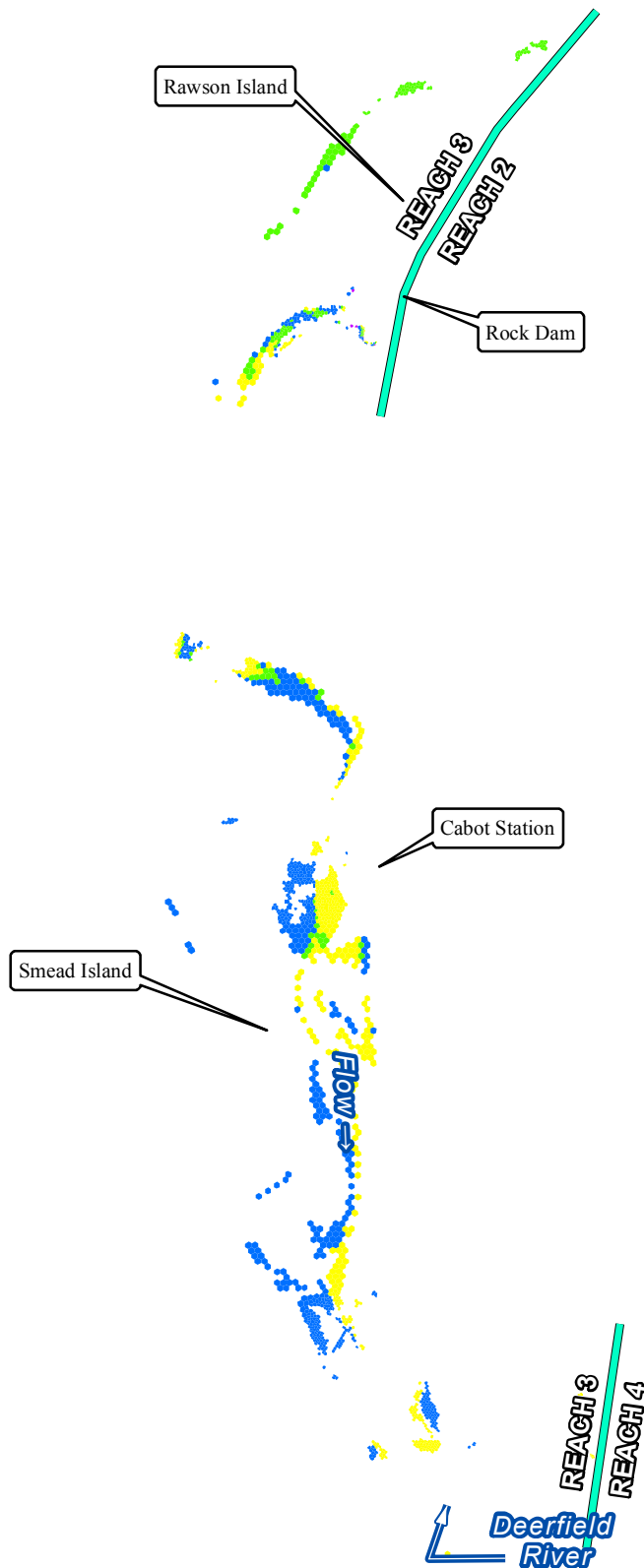
Persistent Habitat  
 Deep-Fast Guild-  
 Bypass Flow: 200 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs



0 500 1,000 2,000 Feet

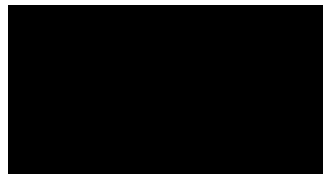
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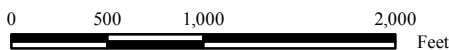


**Legend**

- 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



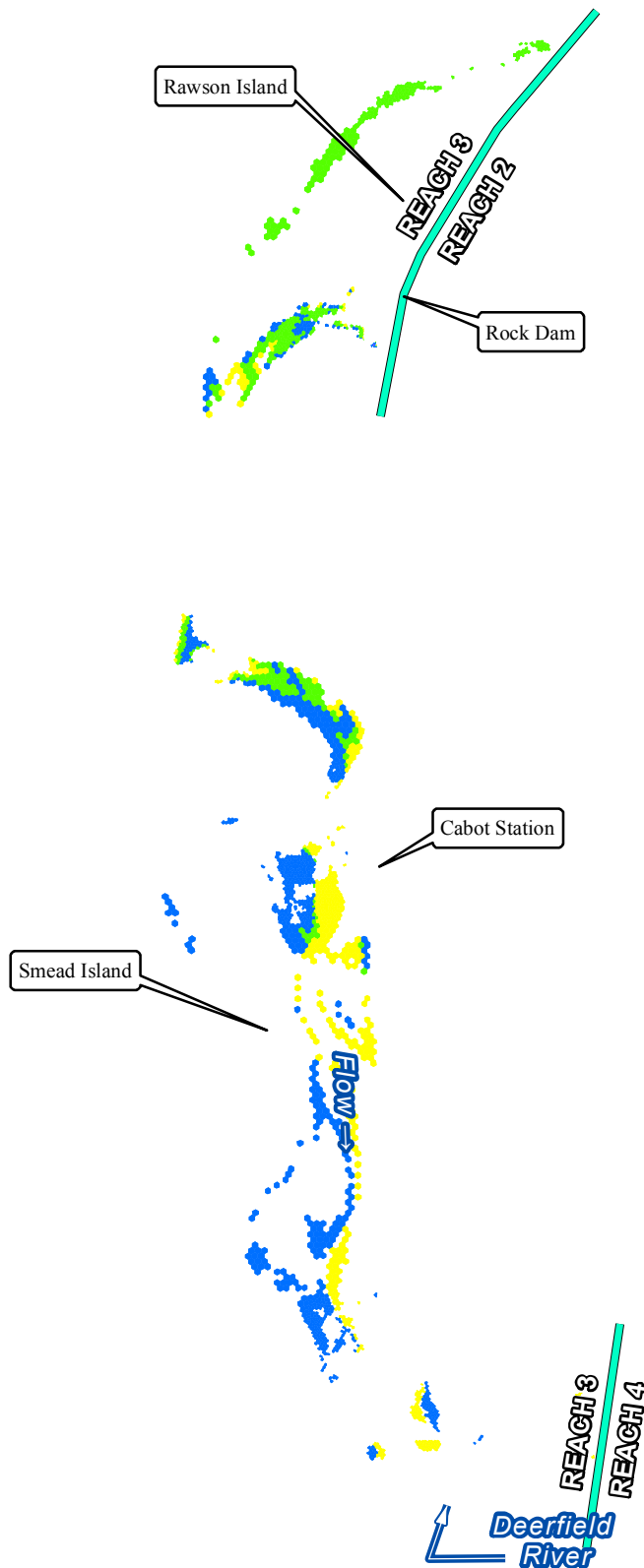
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
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**RELICENSING STUDY 3.3.1**



**Persistent Habitat**  
**Deep-Fast Guild-**  
 Bypass Flow: 500 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

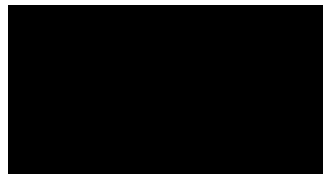
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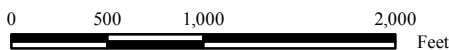


**Legend**

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



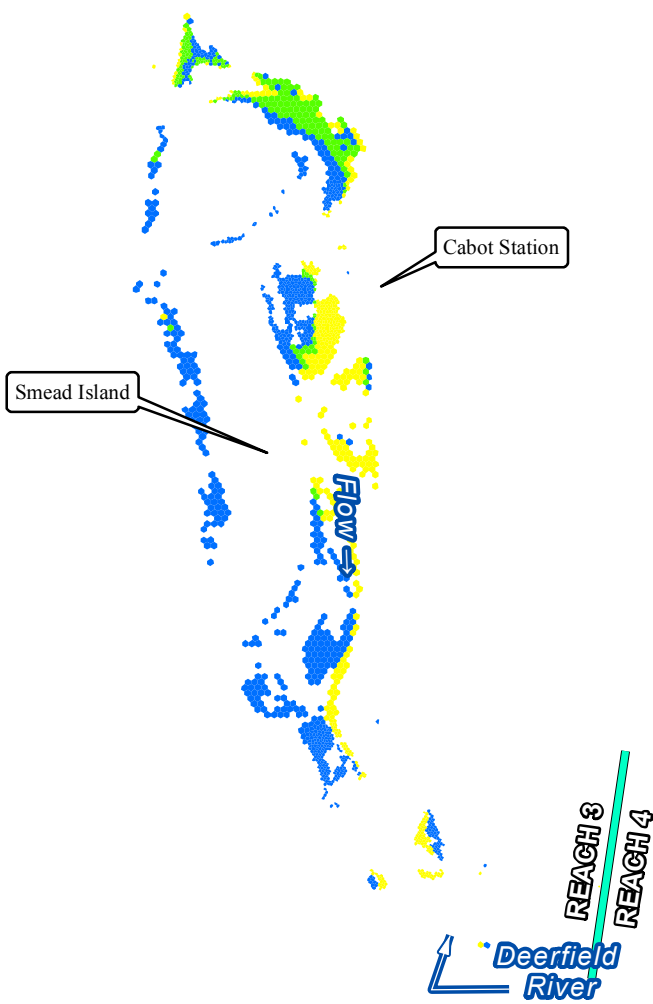
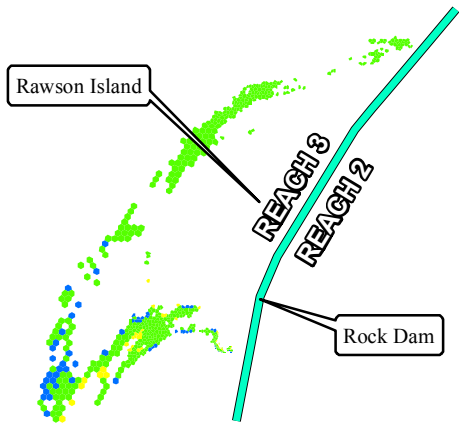
FIRSTLIGHT HYDRO GENERATING COMPANY  
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**RELICENSING STUDY 3.3.1**



**Persistent Habitat**  
**Deep-Fast Guild-**  
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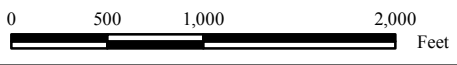


**Legend**

- 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  
 Deep-Fast Guild-**  
 Bypass Flow: 2000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 7000 cfs

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Rawson Island

REACH 3  
REACH 2

Rock Dam

Cabot Station

Smead Island

Flow →

Deerfield  
River

REACH 3  
REACH 4

### 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

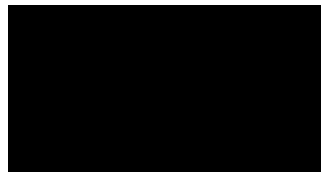
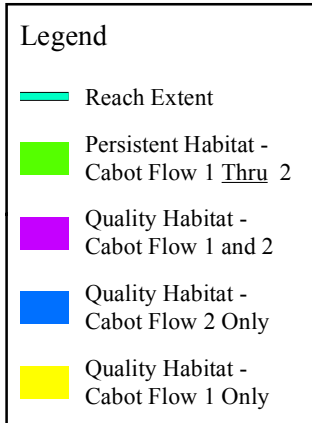
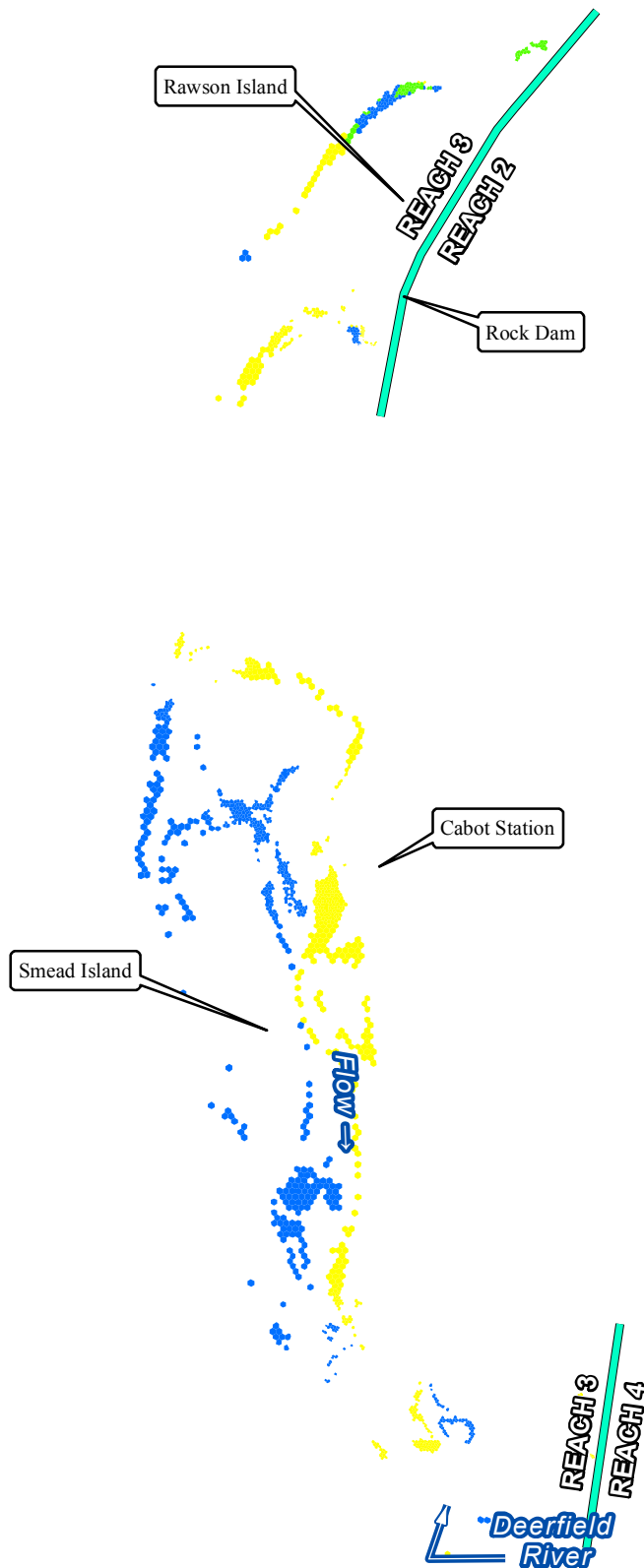
FIRSTLIGHT HYDRO GENERATING COMPANY  
Northfield Mountain Pumped Storage Project No. 2485  
Turners Falls Hydroelectric Project No. 1889  
RELICENSING STUDY 3.3.1

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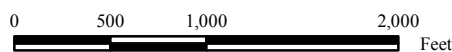
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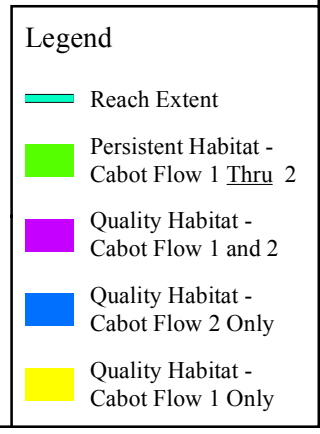
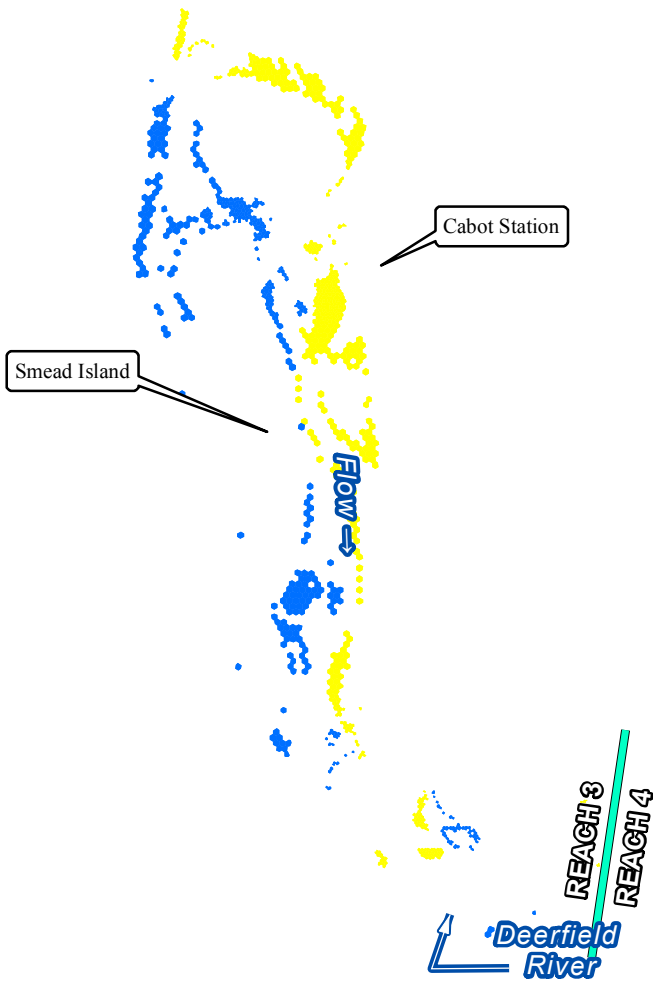
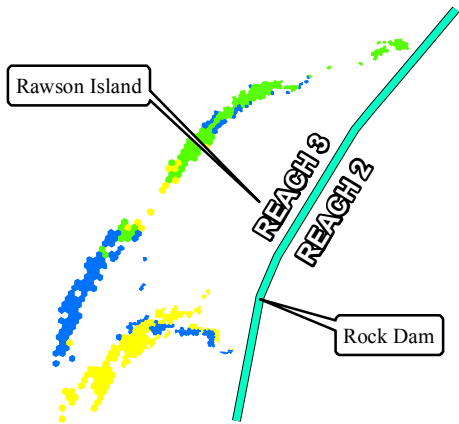
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 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889  
 RELICENSING STUDY 3.3.1



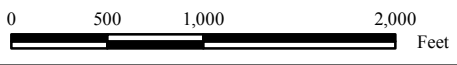
Persistent Habitat  
 Deep-Fast Guild-  
 Bypass Flow: 500 cfs  
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 Cabot Flow 2: 14000 cfs

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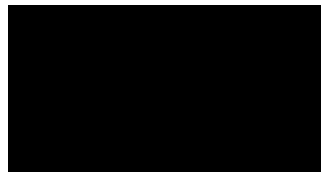
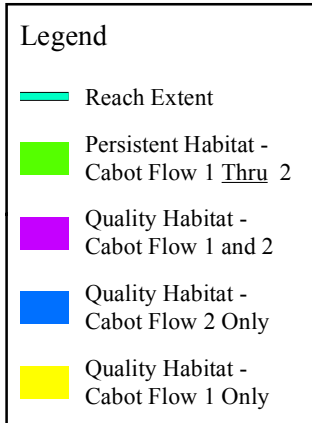
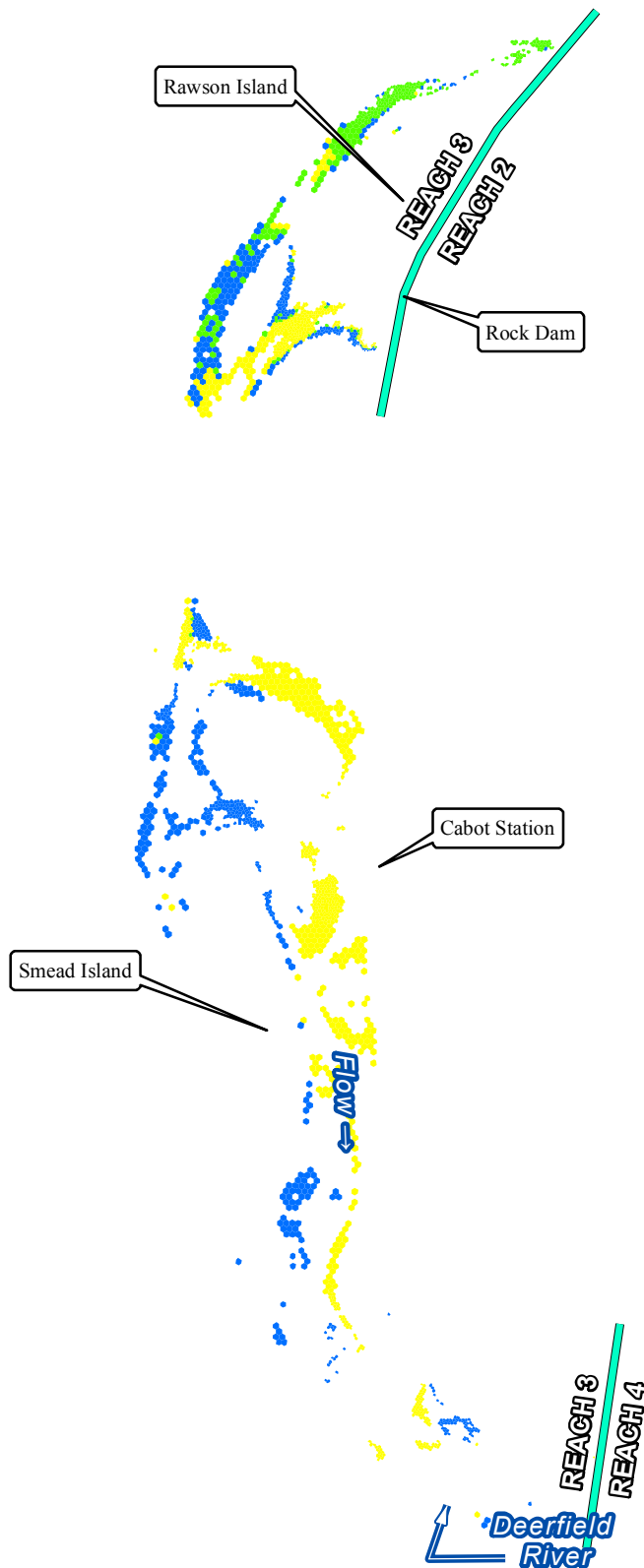
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
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 RELICENSING STUDY 3.3.1



Persistent Habitat  
 Deep-Fast Guild-  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 2500 cfs  
 Cabot Flow 2: 14000 cfs

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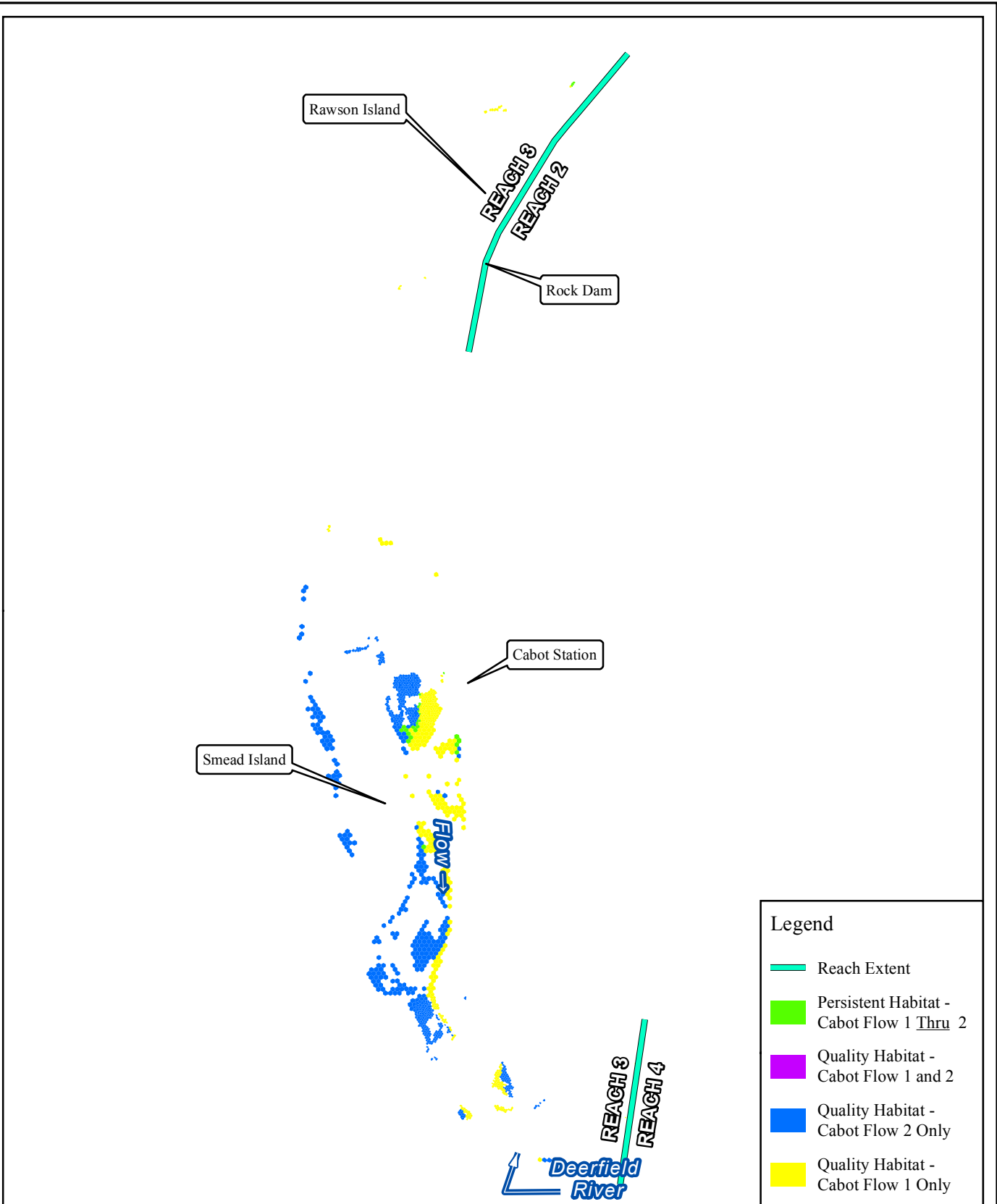


FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
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**RELICENSING STUDY 3.3.1**

**Persistent Habitat**  
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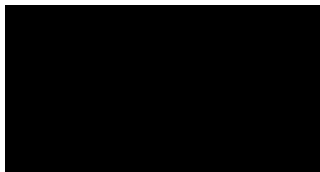
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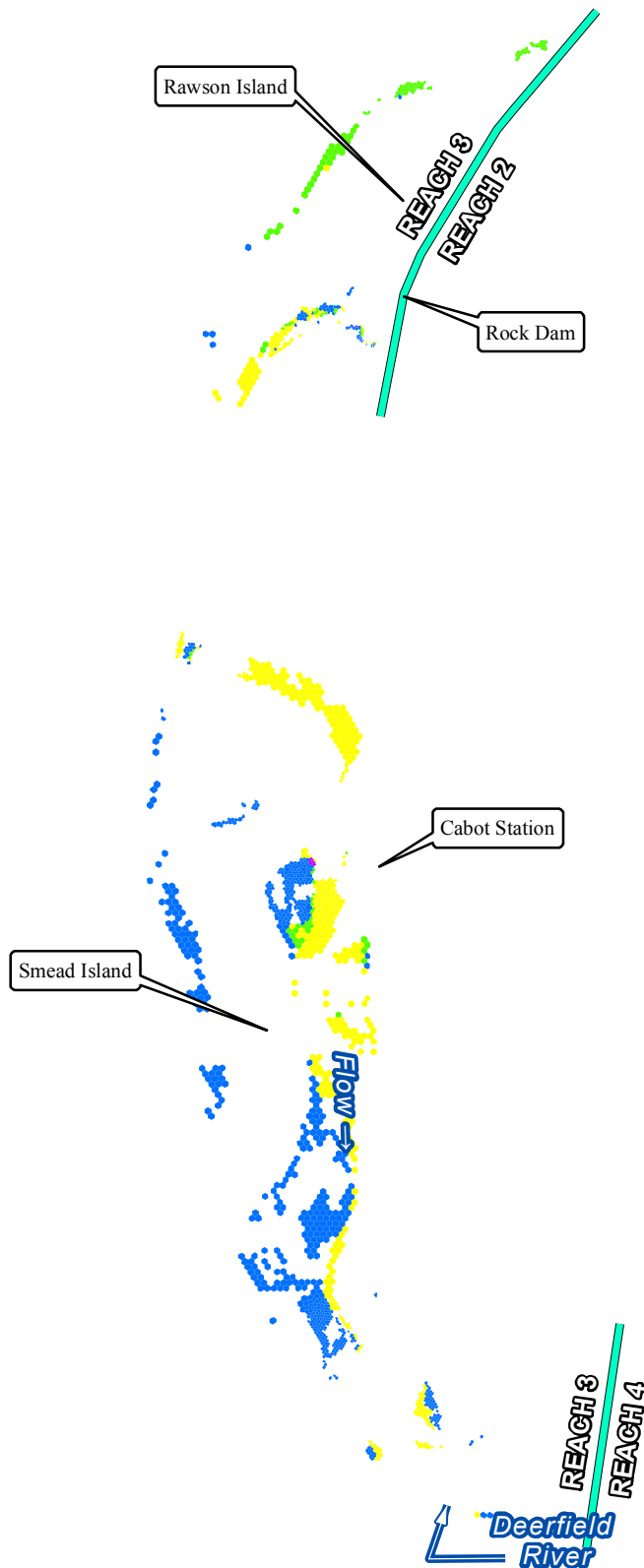
**Persistent Habitat**  
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 Bypass Flow: 200 cfs  
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0 500 1,000 2,000 Feet

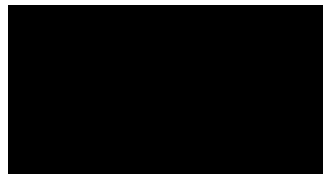
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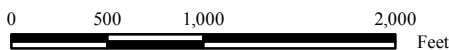


**Legend**

- 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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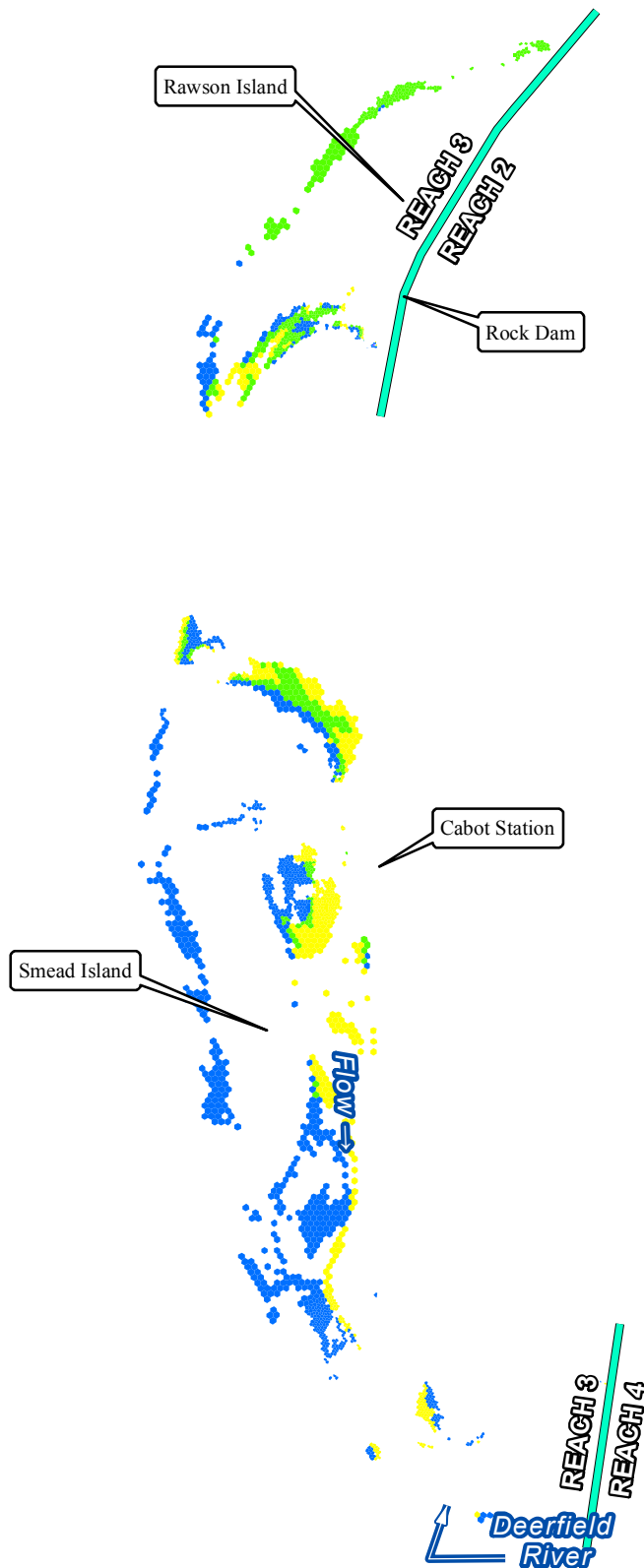
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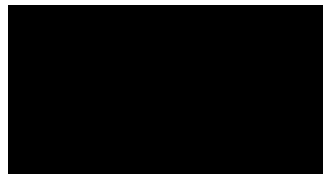
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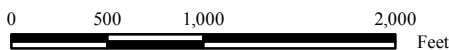


**Legend**

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- Persistent Habitat - Cabot Flow 1 Thru 2
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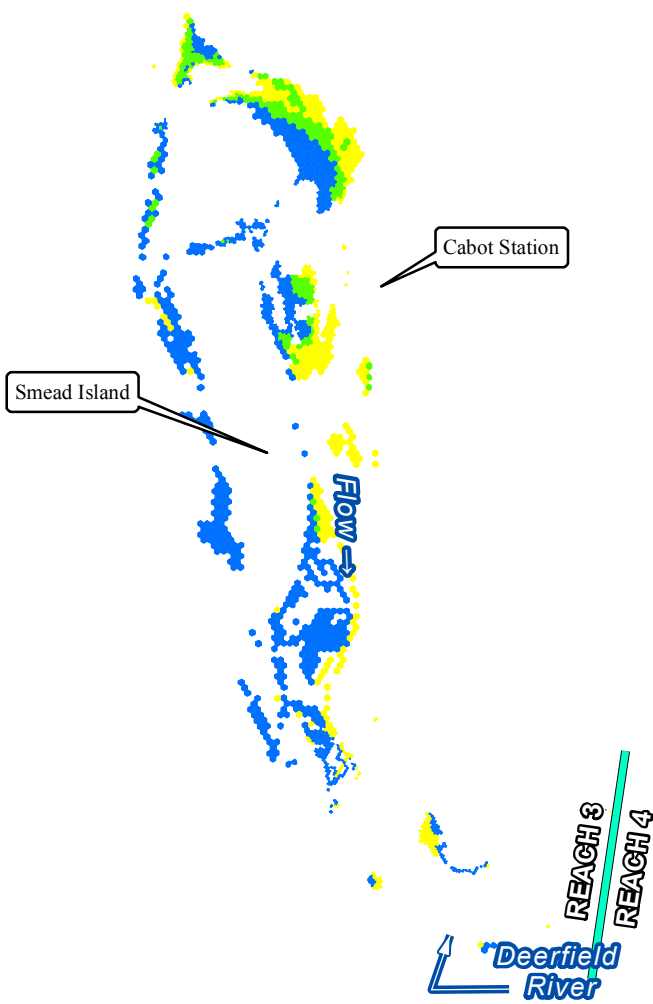
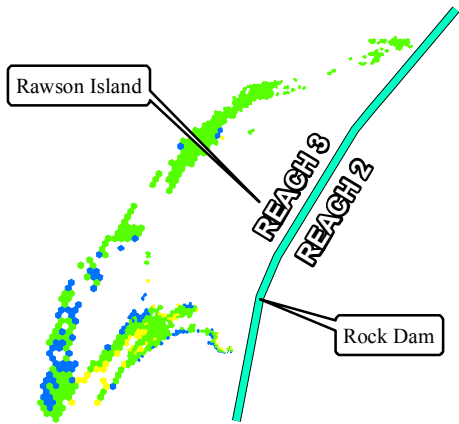
FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
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**RELICENSING STUDY 3.3.1**



**Persistent Habitat  
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 Cabot Flow 2: 9000 cfs

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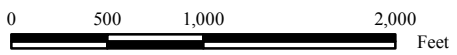
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FIRSTLIGHT HYDRO GENERATING COMPANY  
 Northfield Mountain Pumped Storage Project No. 2485  
 Turners Falls Hydroelectric Project No. 1889

RELICENSING STUDY 3.3.1



Persistent Habitat  
 Deep-Fast Guild-  
 Bypass Flow: 2000 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 9000 cfs

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Rawson Island

REACH 3  
REACH 2

Rock Dam

Cabot Station

Smead Island

Flow →

Deerfield River

REACH 3  
REACH 4

### Legend

- Reach Extent
- Persistent Habitat - Cabot Flow 1 Thru 2
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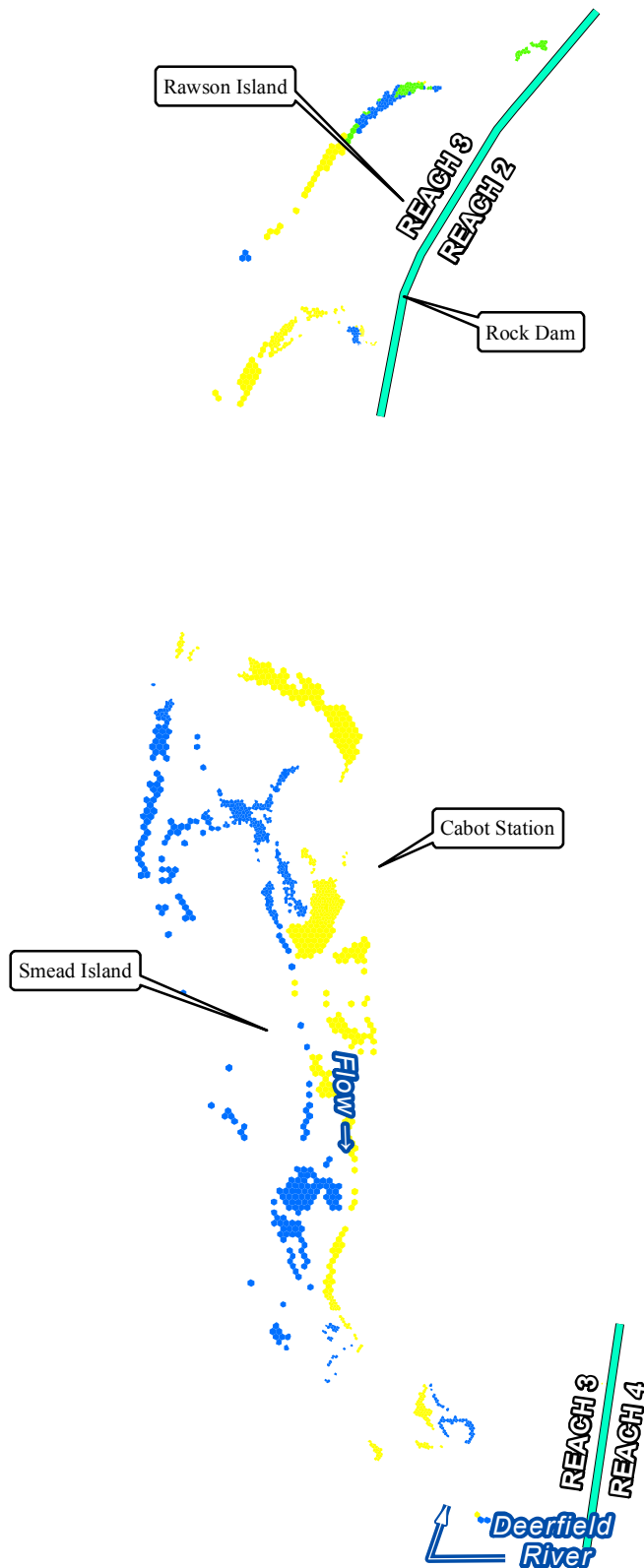
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0 500 1,000 2,000 Feet

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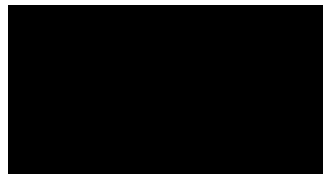
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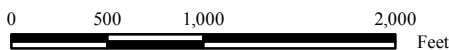


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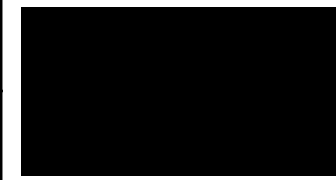
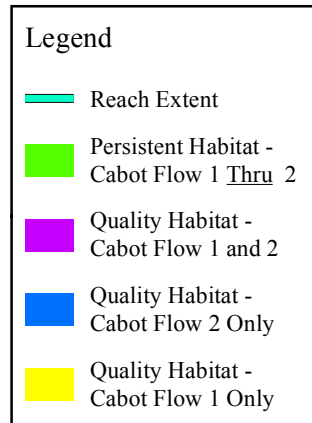
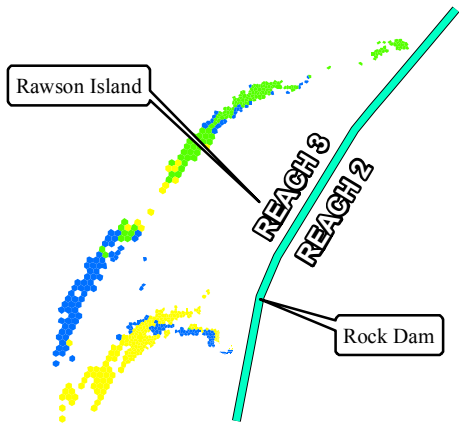
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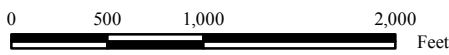
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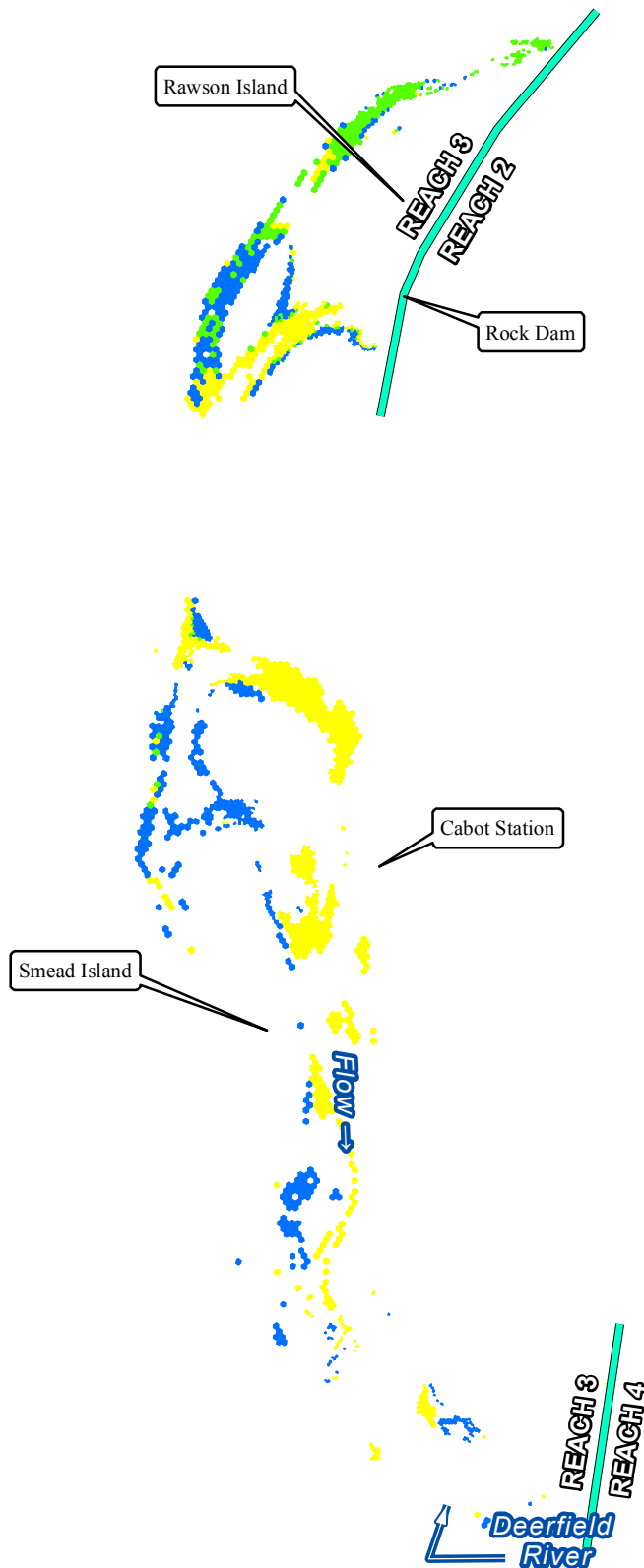
**RELICENSING STUDY 3.3.1**



**Persistent Habitat  
 Deep-Fast Guild-**  
 Bypass Flow: 1000 cfs  
 Cabot Flow 1: 4500 cfs  
 Cabot Flow 2: 14000 cfs

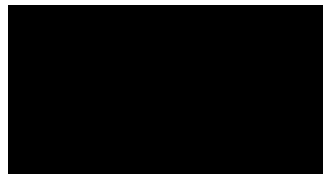
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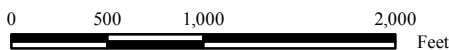


**Legend**

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



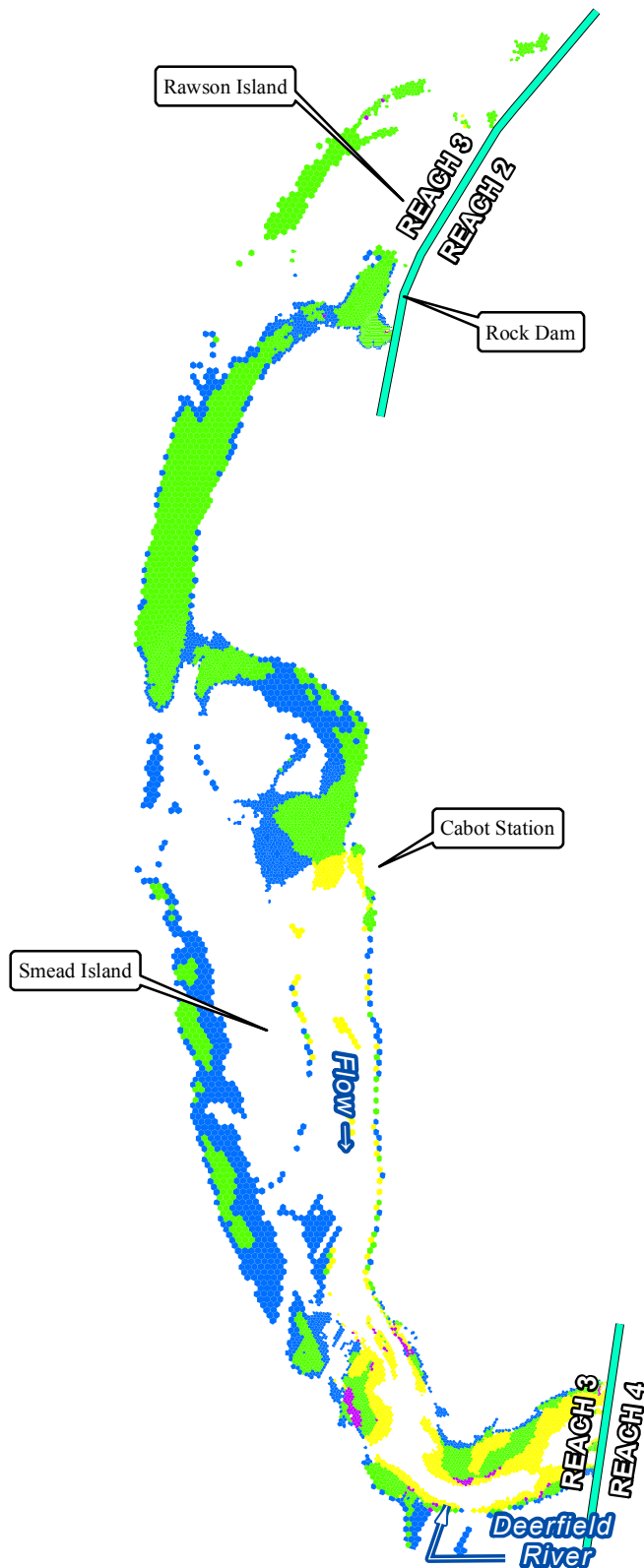
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**Persistent Habitat**  
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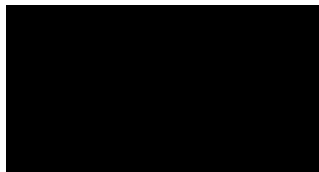
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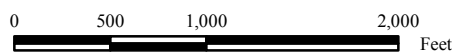


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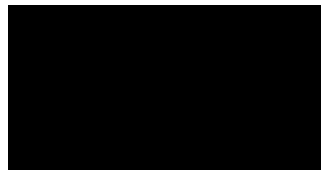
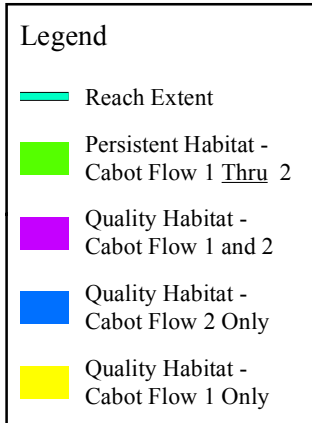
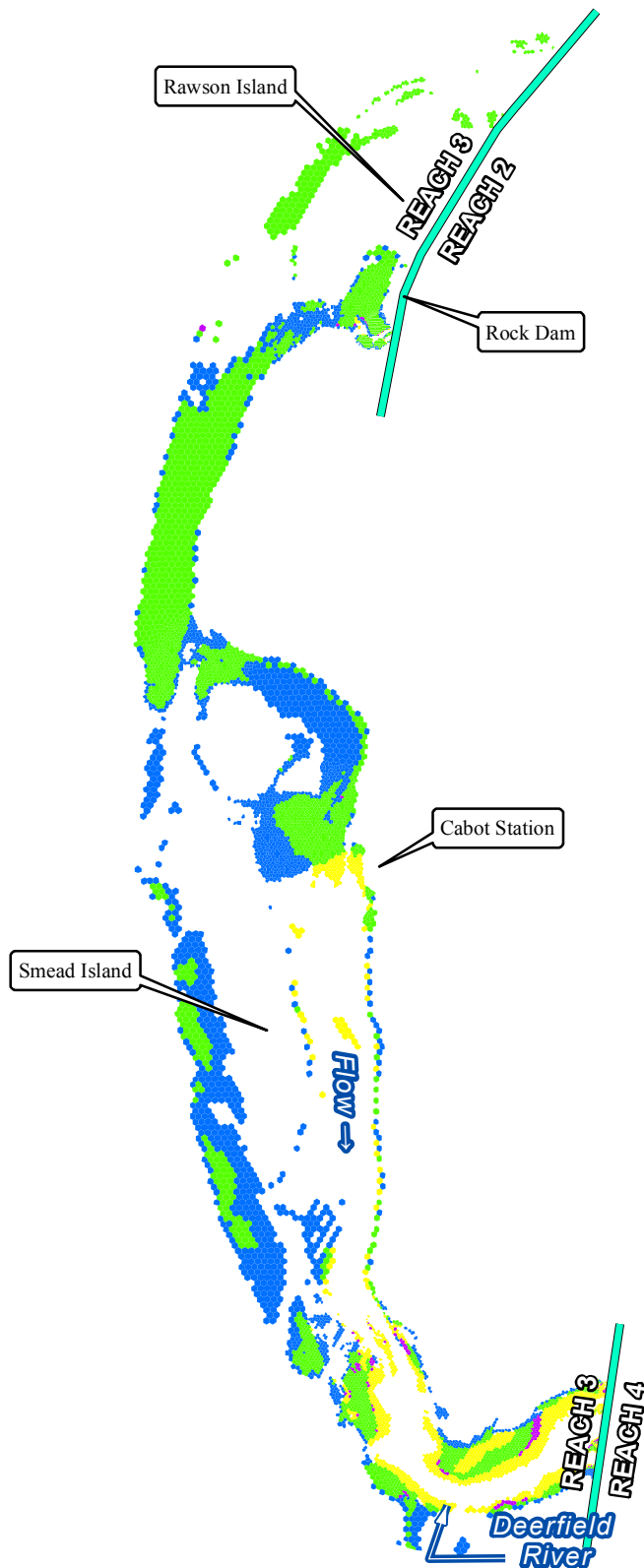
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**Persistent Habitat**  
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 Bypass Flow: 200 cfs  
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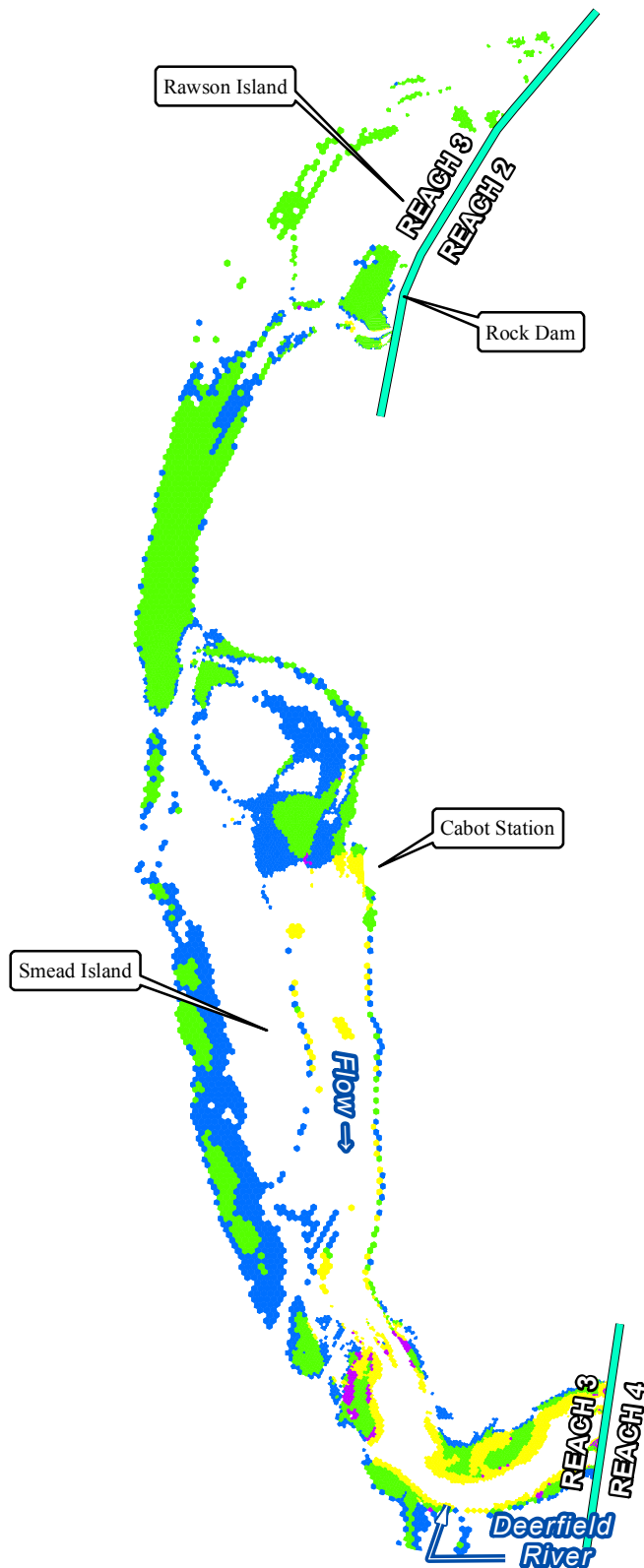


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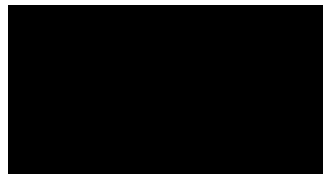
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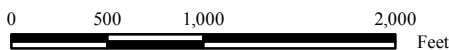


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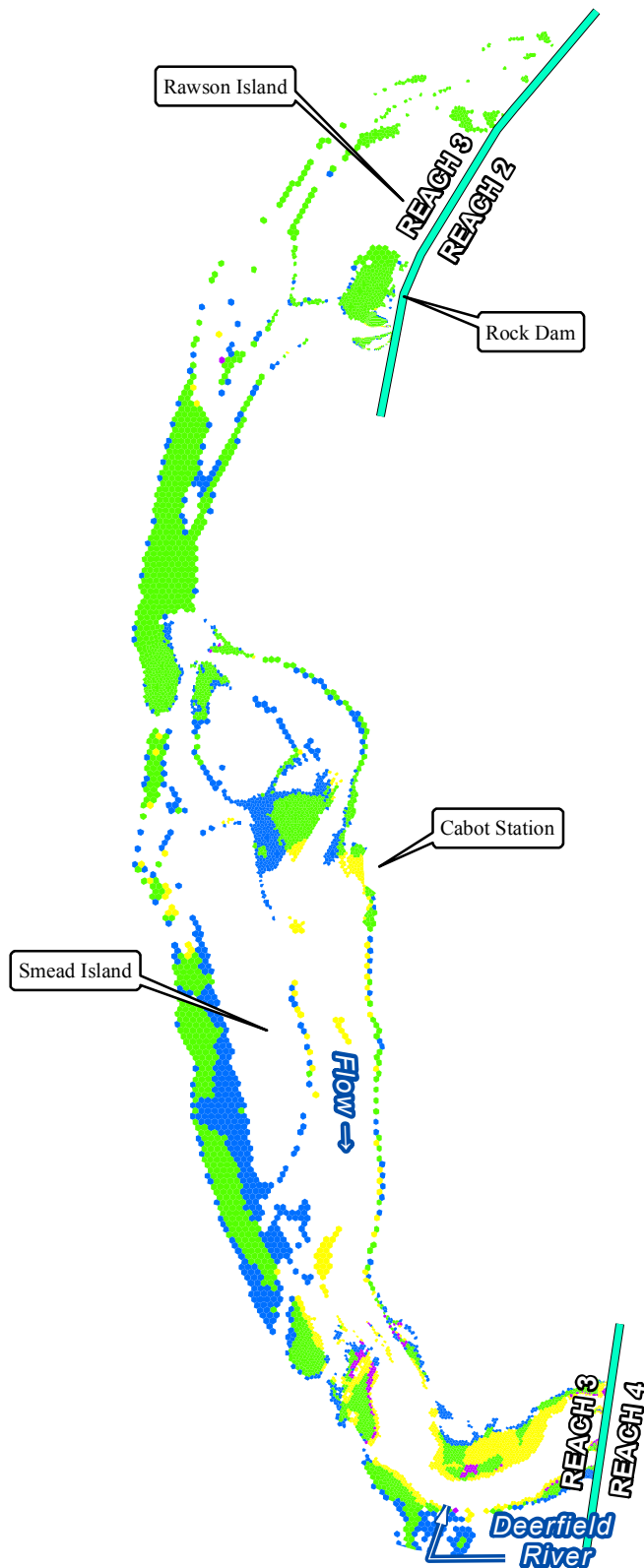
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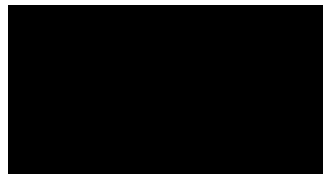
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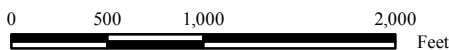


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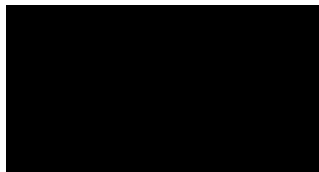
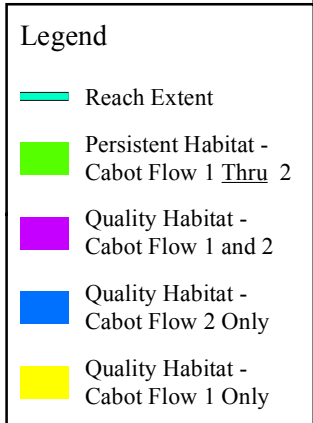
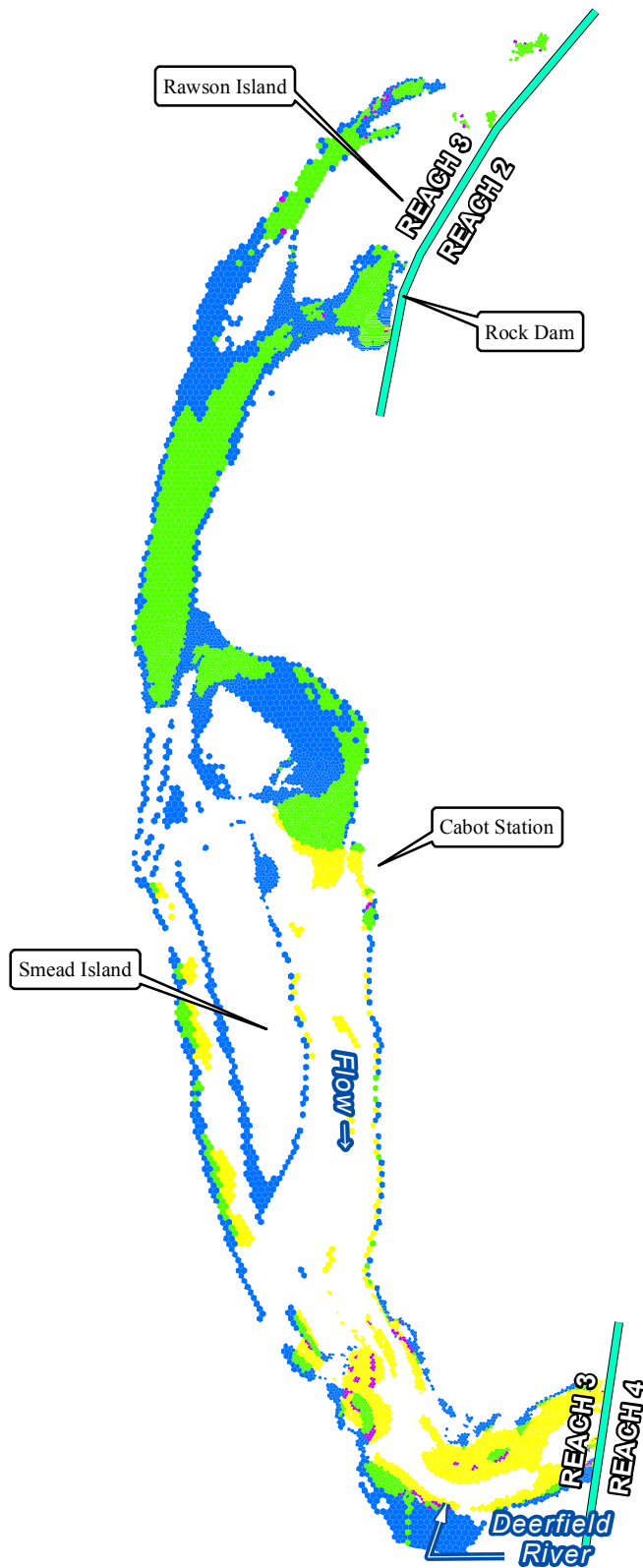
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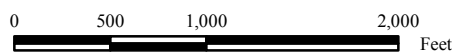
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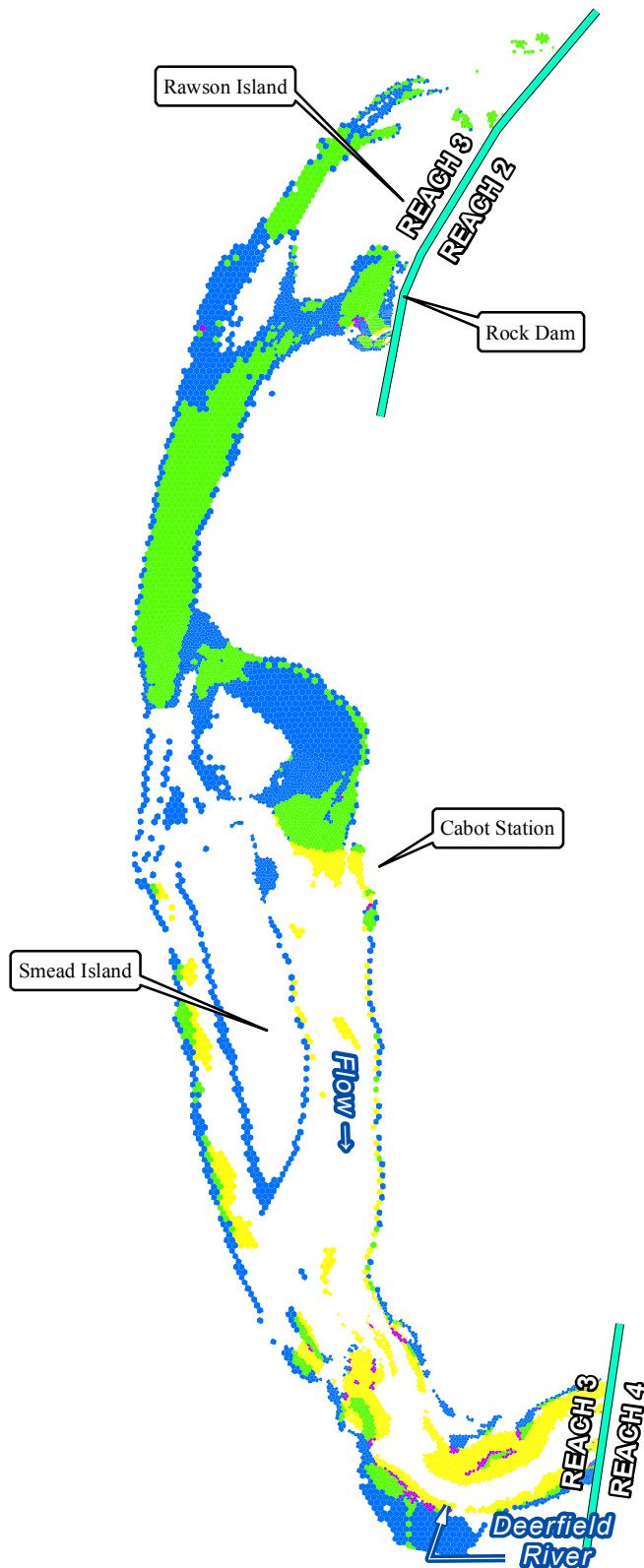
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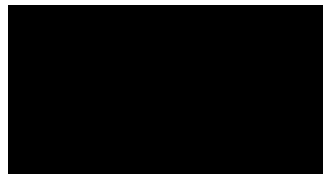
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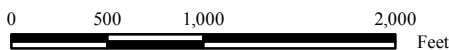


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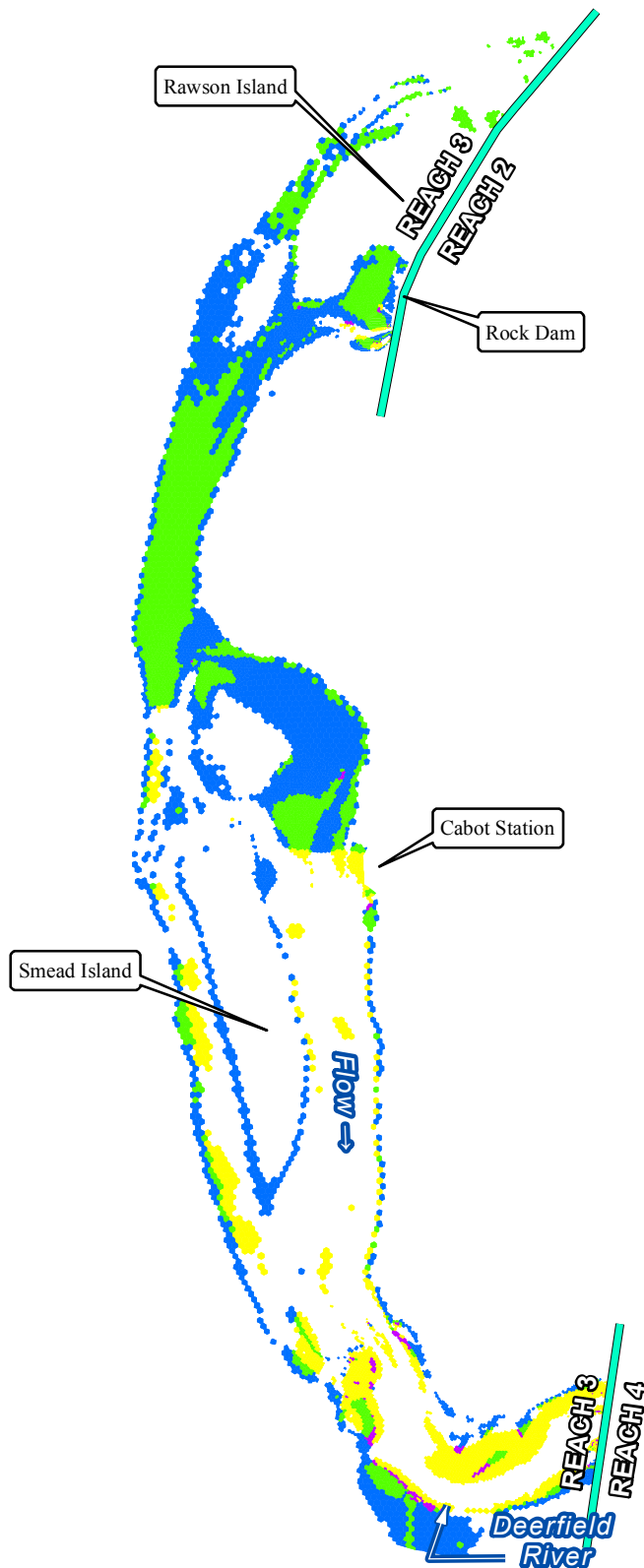
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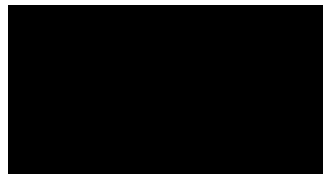
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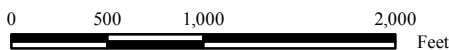


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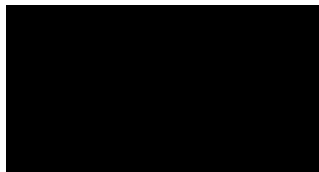
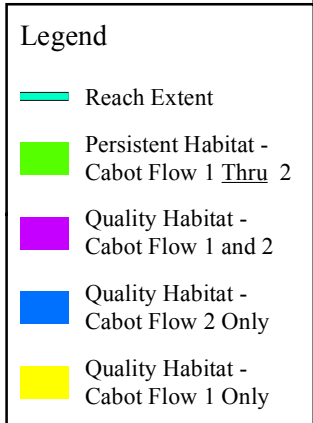
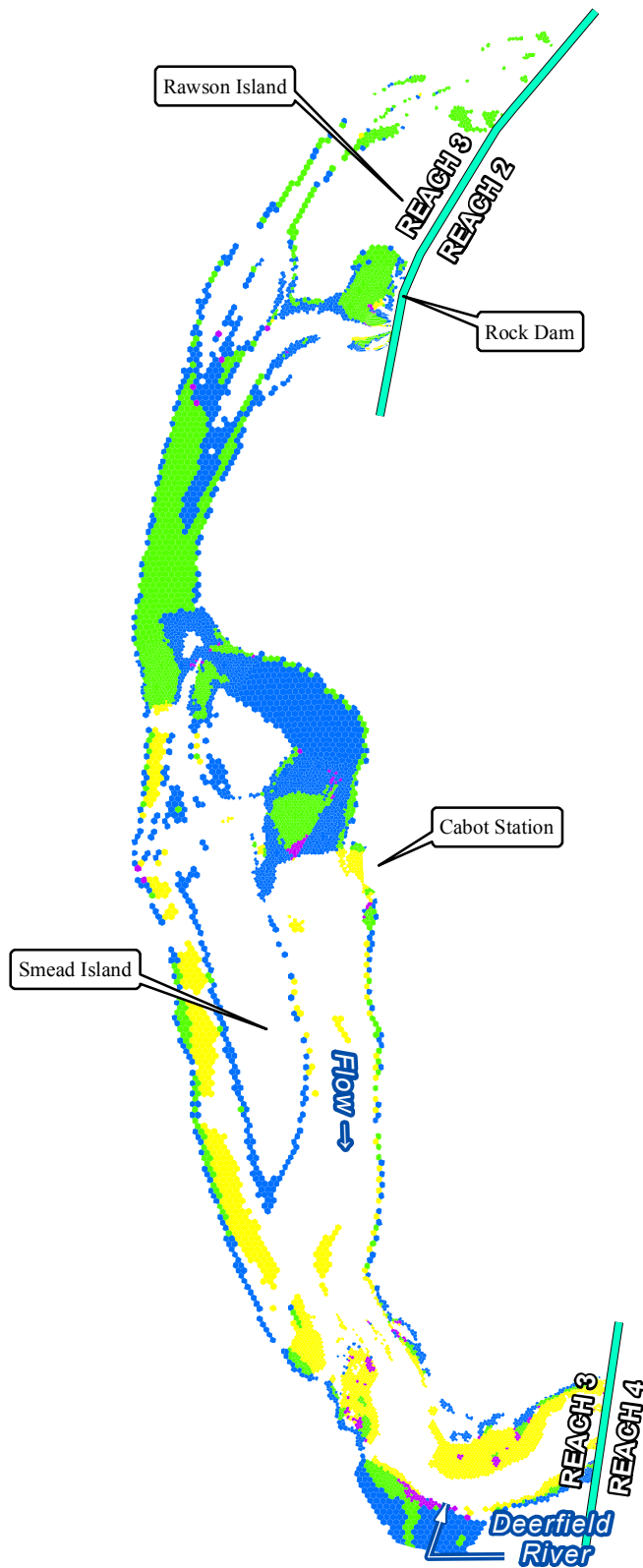
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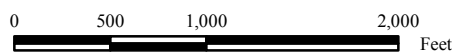
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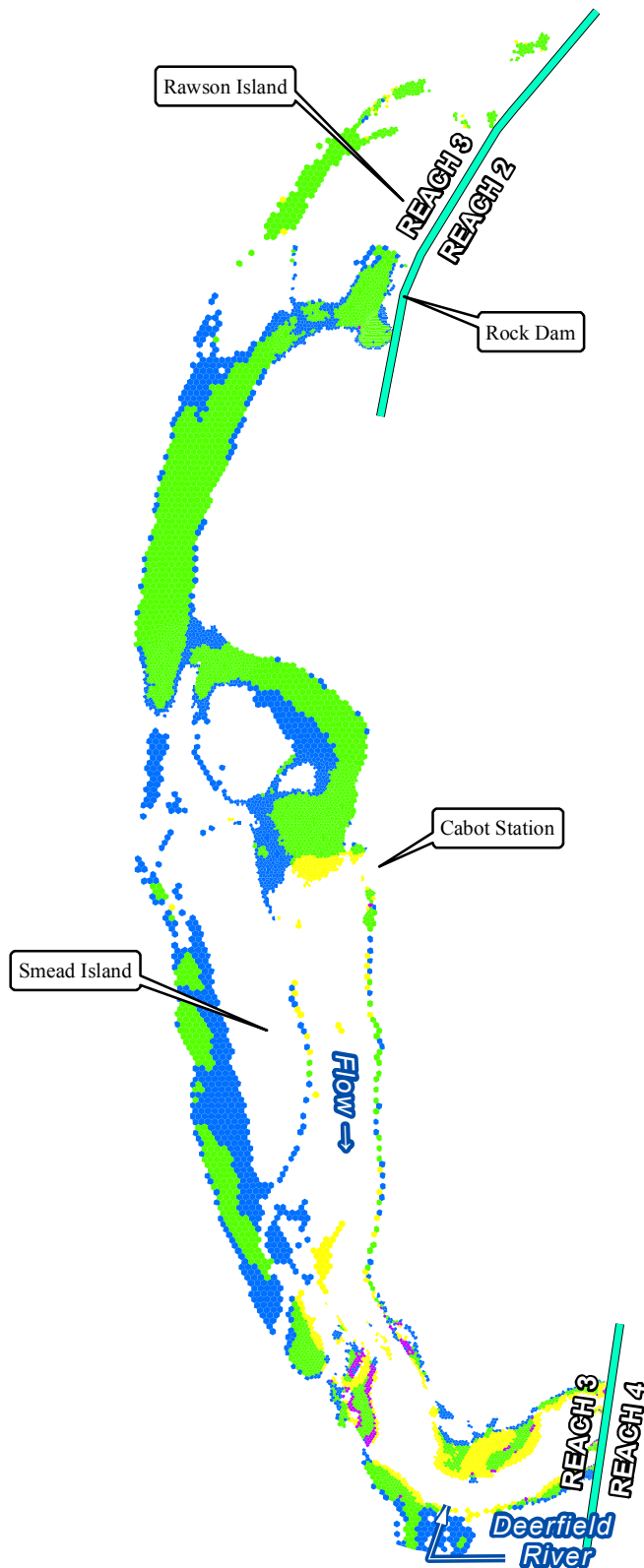
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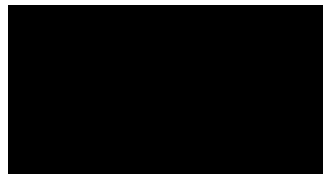
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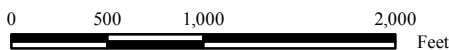


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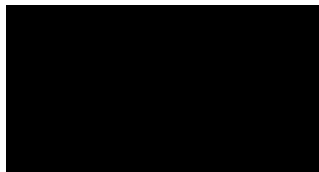
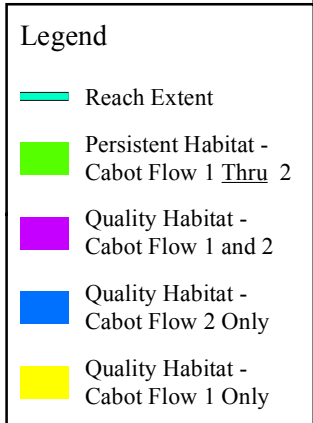
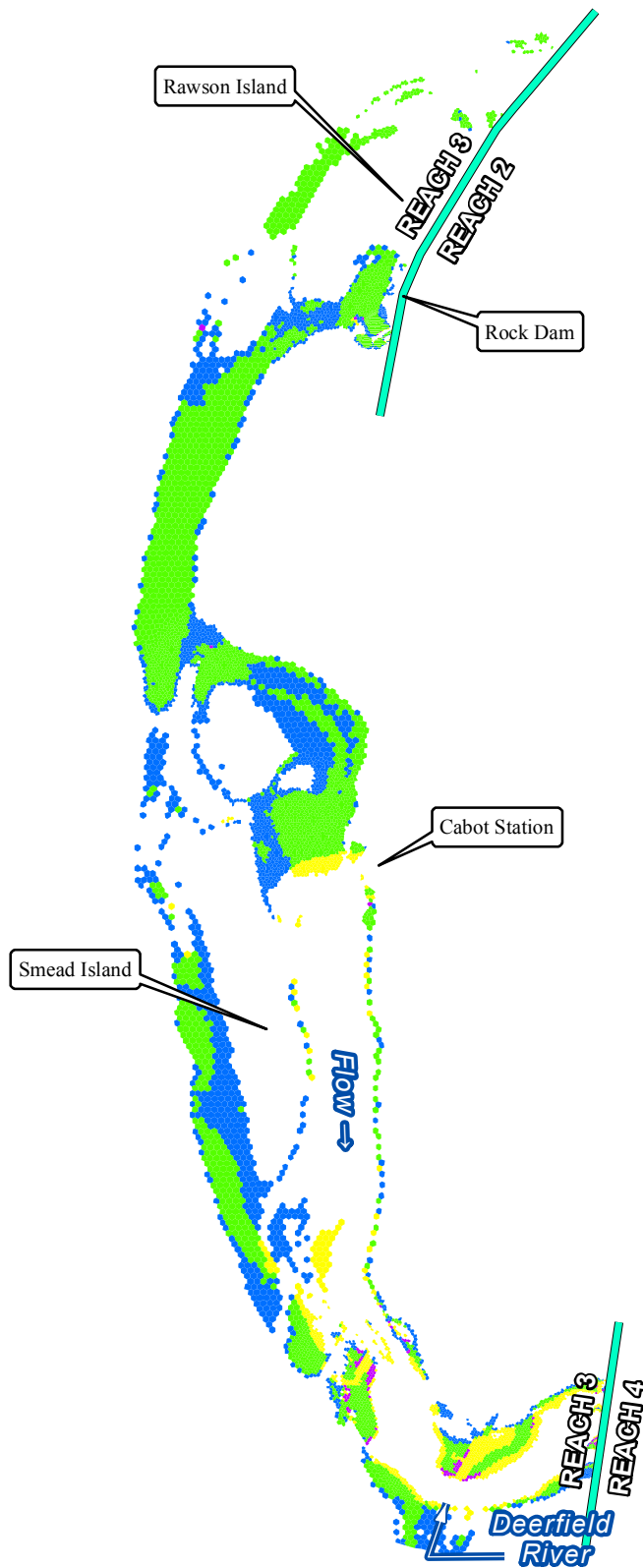
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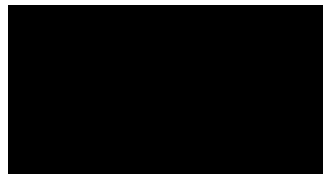
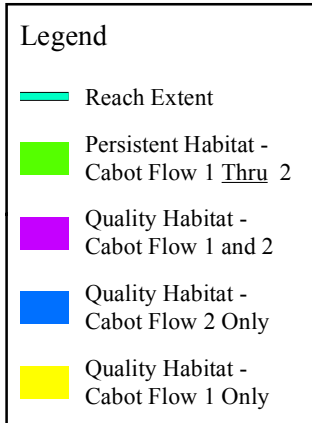
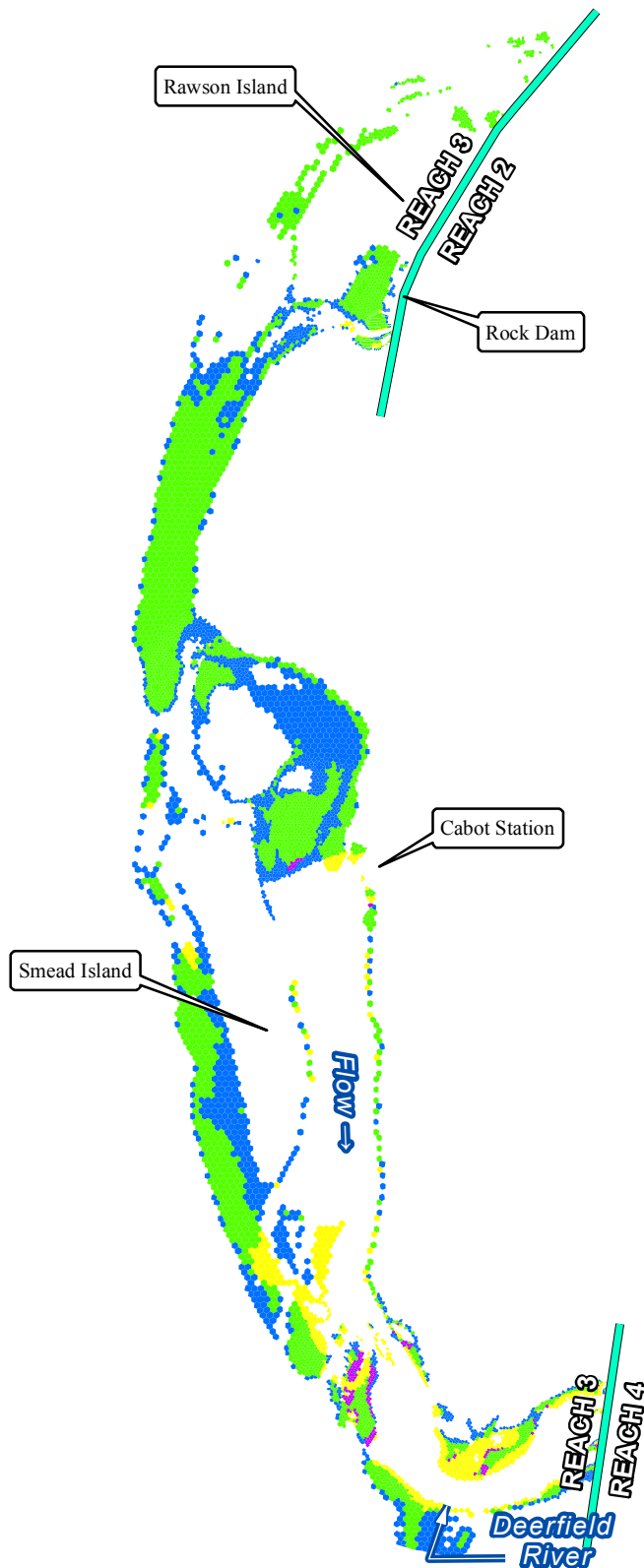


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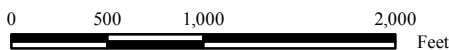
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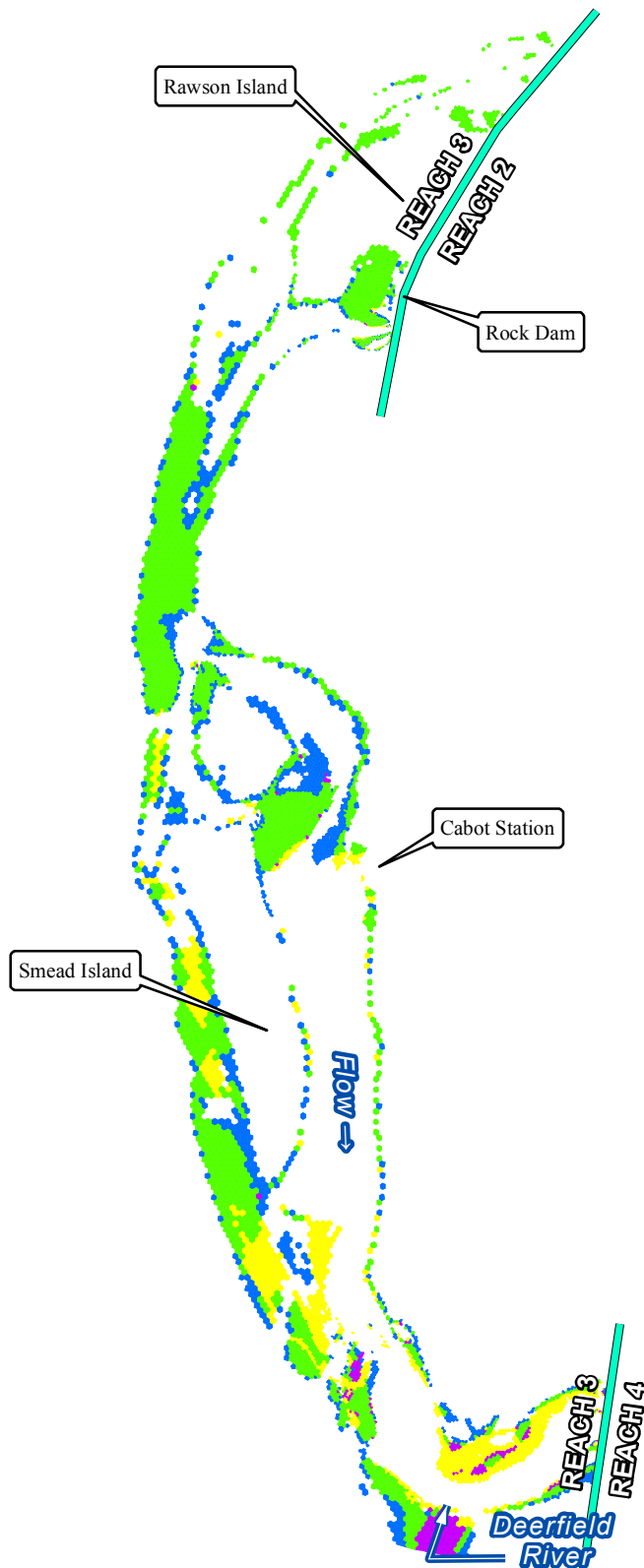
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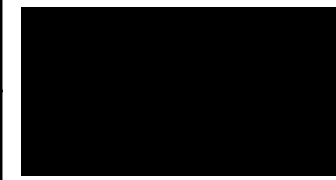
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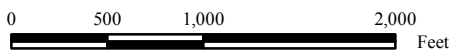


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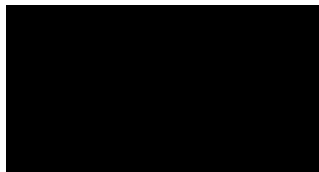
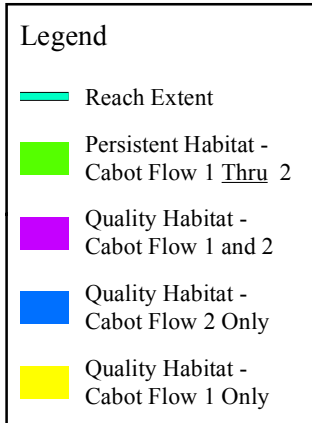
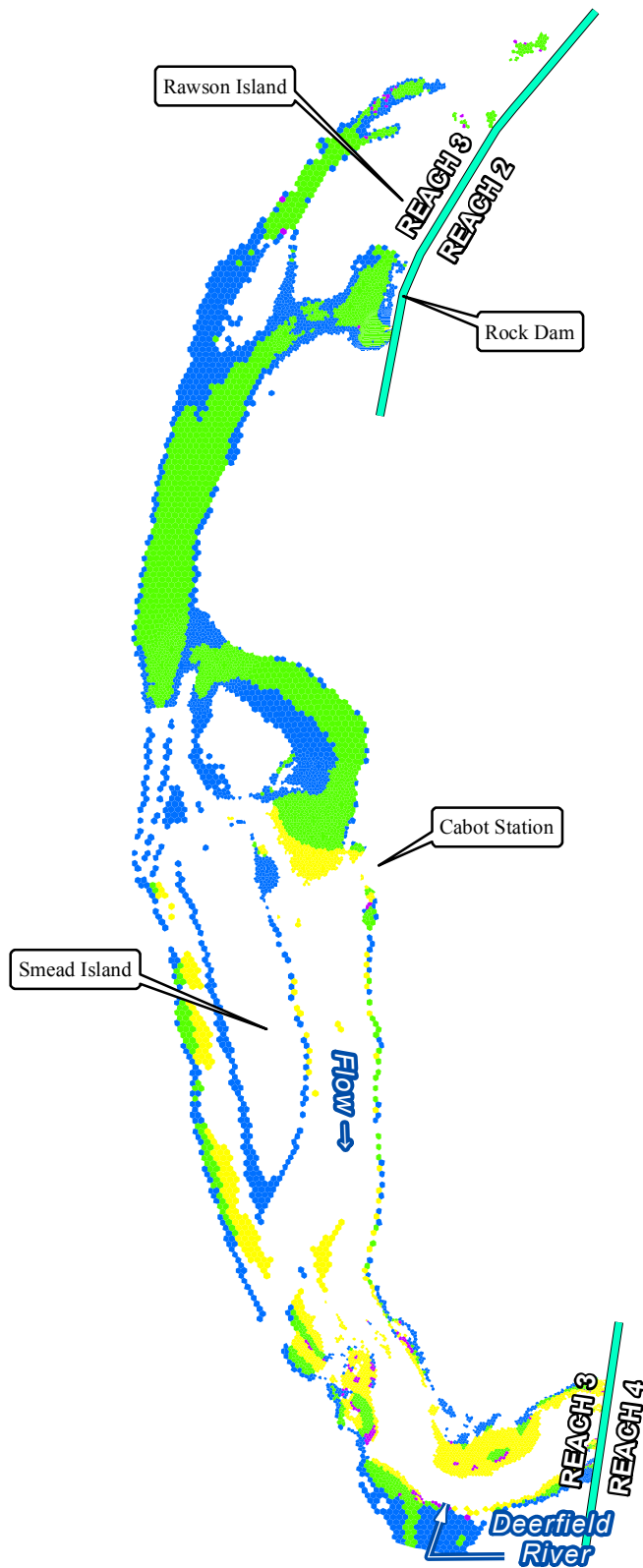
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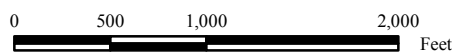
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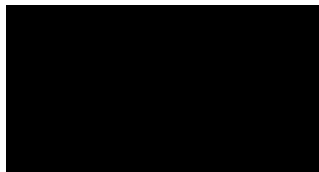
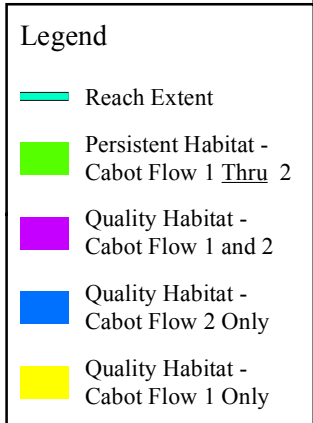
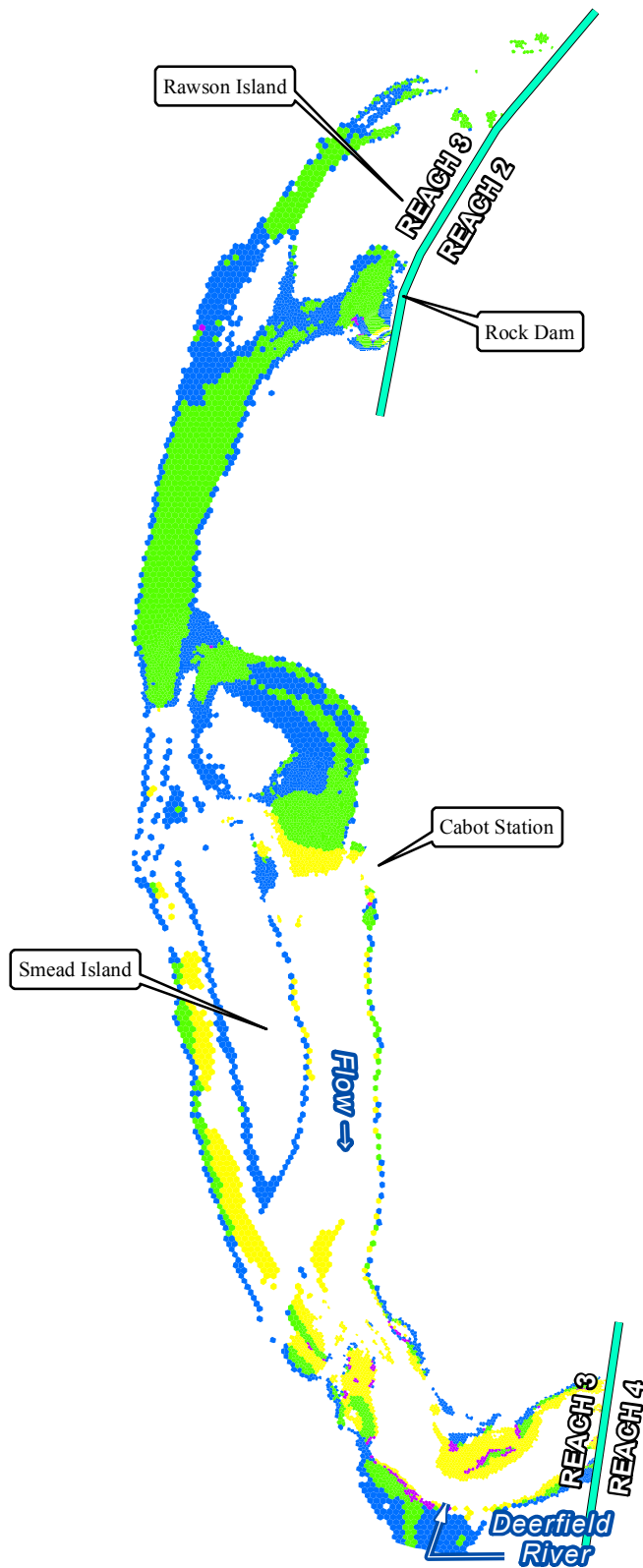
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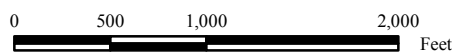
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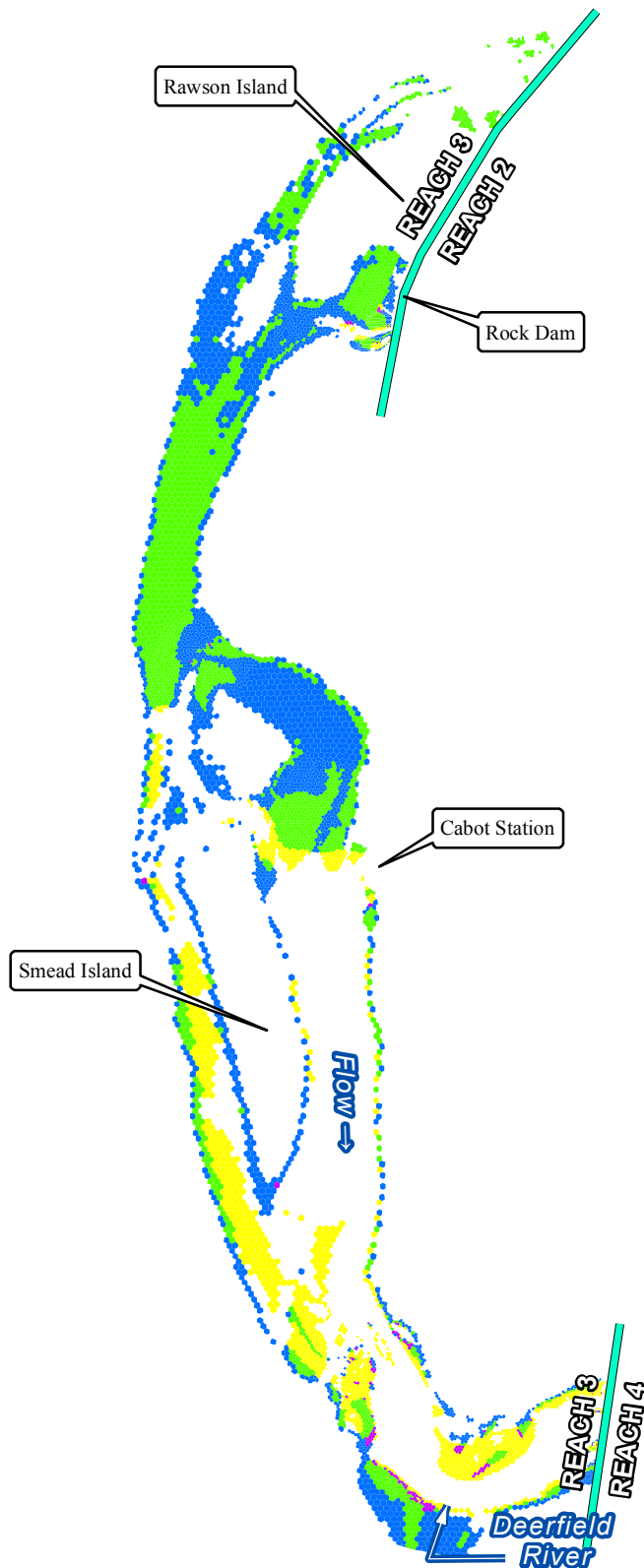
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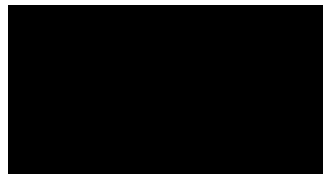
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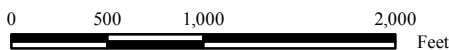


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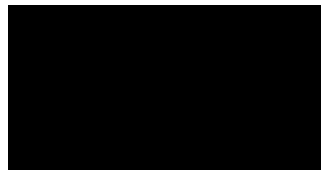
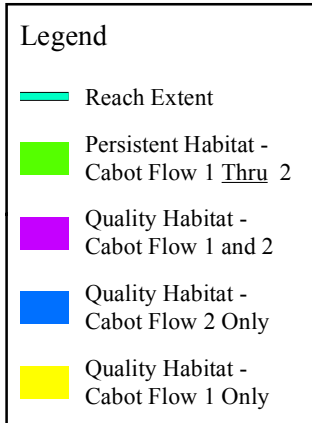
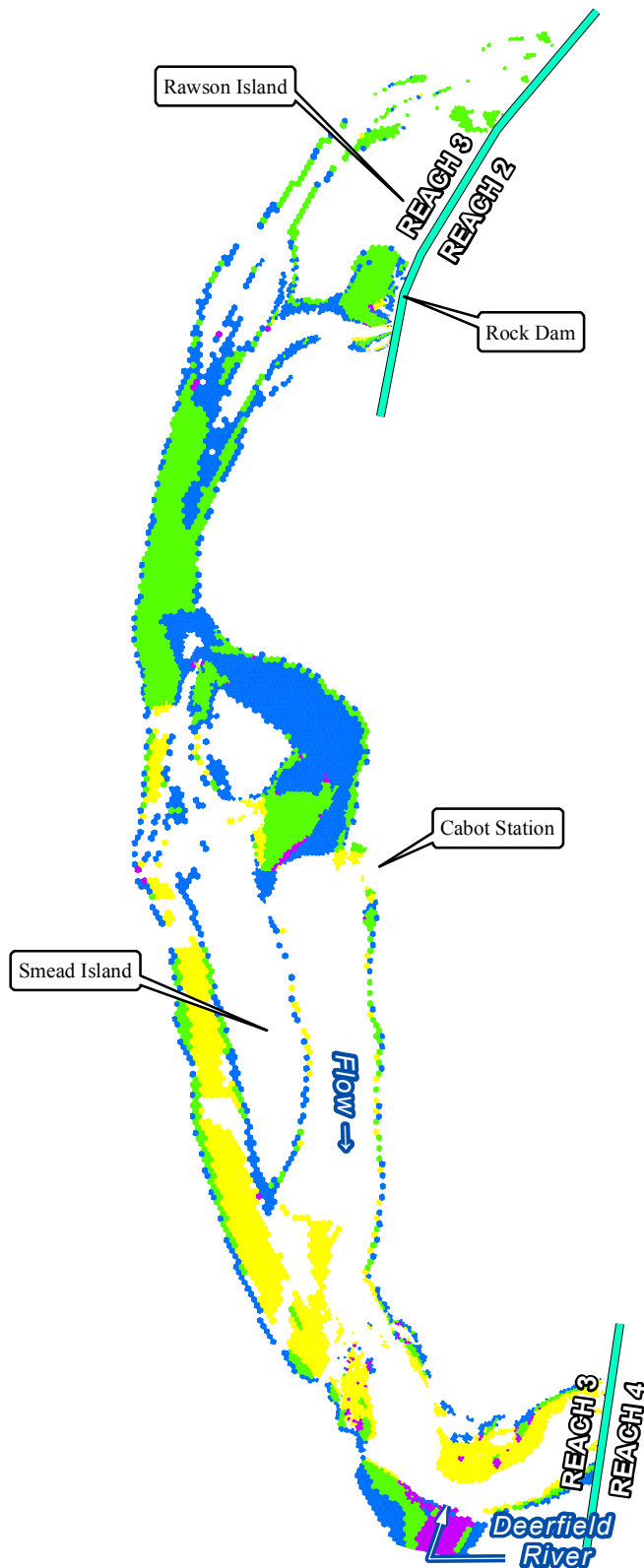
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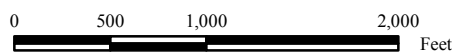
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