Use of Dam* Removals for S.404 Mitigation in New England

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**Including other barriers such as perched or inadequately sized culverts*

New Corps Guidance!

Regulatory Guidance Letter 18-01

- “Determination of Compensatory Mitigation Credits for the Removal of Obsolete Dams and Other Structures from Rivers and Streams”
- Issued 9/25/2018
- https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/

RGL 18-01 Major Points

- Applies to removal of structures that still fulfill their purpose(s) but are proposed to restore structure, function, & dynamics
- Structures include dams and undersized or perched culverts
- Removal may have adverse effects
  - ► Disturbance by equipment
  - ► Blanketing of downstream habitat by released sediments
  - ► Long-term contamination from released sediments

RGL 18-01 Major Points (cont.)

- Most adverse impacts are short-term
- For mitigation credit, consider environmental and watershed changes
- Objectives generally should NOT include recovery to pre-construction state because of subsequent watershed changes
- If functional or condition assessment is available, use it

RGL 18-01 Major Points (cont.)

- If no assessment method is available consider:
  - Area of channel that physically responds to the removal
  - Reestablishment or rehabilitation of buffers/riparian areas and floodplains
  - Benefit to T&E species, diadromous fish, WQ
  - Distance to next barrier up and downstream
  - Give credit for all benefits

RGL 18-01 Major Points (cont.)

- Long-term protection of the stream may not be realistic
- Reestablishment/rehabilitation of wetlands, riparian areas, floodplains should have permanent protection
- Loss of wetlands as a result of barrier removal should not require compensatory mitigation

New England
Stream Barrier Removals

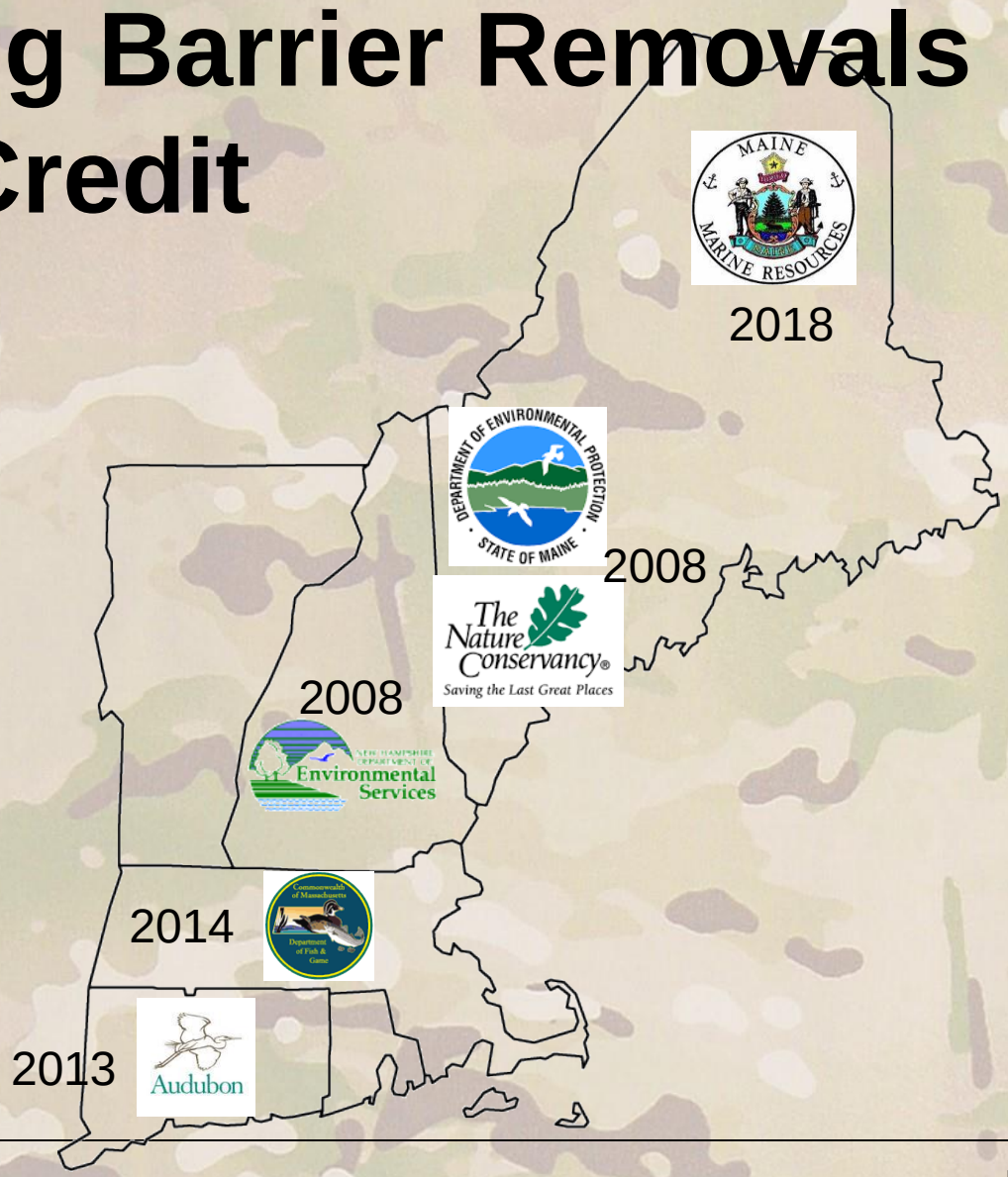
BUILDING STRONG®

PRM Using Dam Removals (not many)

- ME –
  - Brewer Dam in 2009 – 2.5 miles opened up
  - Edwards Dam in 2000 – 15 miles opened up; prompted breach of next upstream dam and then addition of improved fish passage at the next dam
- MA –
  - May Brook Dam in 2009 – 1 mile
  - Lower Hathaway Dam in 2010 – 2 miles

New England ILF Programs Using Barrier Removals for Credit

Only program which hasn't is the VT ILF program



Barriers Removed Through ILF Programs

- 20 dams/barriers removed
  - 7 dams; 13 undersized/perched culverts
  - 13 in ME; 1 in CT; 6 in NH
- 44+ stream miles opened up
- 32 acres of wetland hydrology restored

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Benefits of Dam Removal as Mitigation

- Ecosystem benefits well beyond footprint
- Benefits wide range of aquatic organisms – flora and fauna
- Maintenance generally minimal beyond monitoring period
- Usually broad public support
- ILF can pay for ≥5 years of monitoring (other funding sources for monitoring very limited)

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Obstacles to Use of Dam Removals for Mitigation

- Permitting process may be long
  - ▶ Historic (S.106) issues
  - ▶ Endangered species (S.7)
- Contaminated sediments behind dams
- Downstream flooding concerns
- Aesthetic concerns (loss of pond/lake)


Old Rt 32
32
Google earth
N
200 ft

Addressing Challenges

- Preservation
  - ►Generally impossible to preserve entire watershed. Some:
    - Involve no preservation
    - Involve preservation of just the dam/barrier site
    - Involve preservation of dam/barrier and portion of former impoundment
    - Are on already protected lands (ideal!)
    - This issue has been basically removed by the RGL!


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Crediting in New England

- If only direct benefits to stream/river
  - Restoration credits for channel formerly under impoundment
  - Rehabilitation credits for channel above former impoundment up to next barrier (max of 10 miles)
    - Upstream end of former impoundment to 3 miles – small multiplier
    - >3 – 10 miles – smaller multiplier
  - Potential credits for channel downstream – case-by-case
- If direct benefits also to wetlands (new ones establish or existing have appropriate hydrology restored)
  - Restoration/rehabilitation credits IF preserved
- Preservation credit for preserved buffers


Sawmill Rd
32
Main St
Google earth


Sawmill Rd
32
Main St
Google earth
200 ft

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