

Jun 28th, 4:25 PM - 4:45 PM

Session B6- Dam removals in an urban setting

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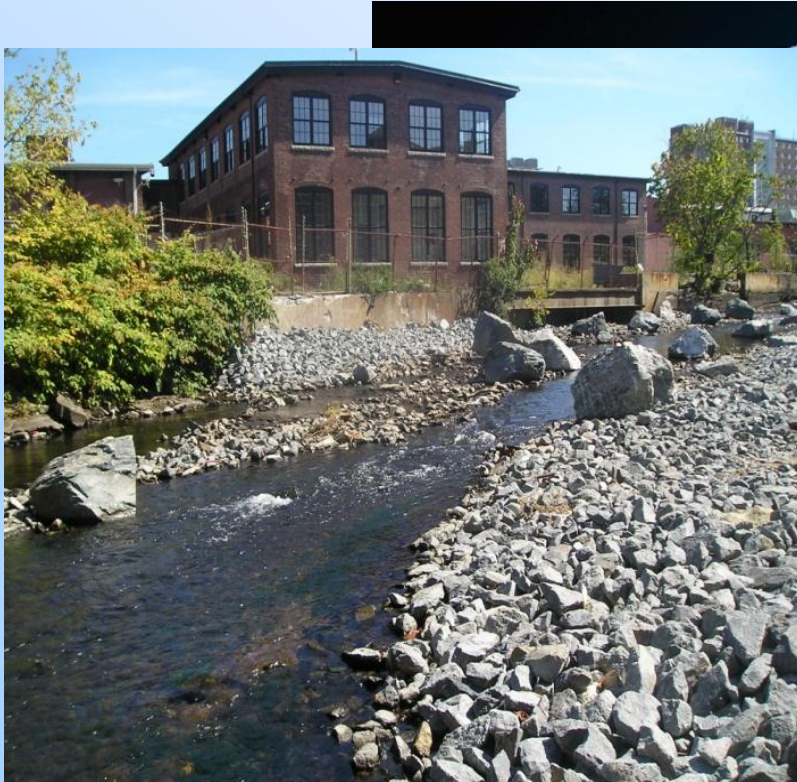
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Dam Removals in an Urban Setting



Prepared for:
Fish Passage 2011
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WOONASQUATTUCKET RIVER
WATERSHED COUNCIL

 NRCS Natural Resources
Conservation Service

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Project Partners

*Paragon Dam Partial Dam Breach and Dyerville Dam Full Removal
Woonasquatucket River Fish Restoration Program
Providence, Rhode Island*

*U.S. Department of Agriculture
Natural Resources Conservation Service (NRCS)*

US Fish and Wildlife Service (USFWS)

Other Project Partners:

*Woonasquatucket River Watershed Council
Paragon Mills, LLC (Paragon Dam)
The Groden Center (Dyerville Dam)
EA Engineering, Science, and Technology, Inc.*

Partner Goals

Restore river herring (blueback herring and alewife), American shad, and American Eel to Woonasquatucket River; Paragon Dam and Dyerville Dam are the second and fourth dams on the river. Denil fishways and eel ladders have been installed at Rising Sun Mills Dam and Atlantic Mills Dam, which are the first and third dams on the river.



Project Overview

EA Contracted by NRCS for:

Paragon Dam Removal

- 30% Design – Plan and profile of proposed removal option
- 60% Design – Construction details necessary for permitting
- Permit Applications – USACE RI Programmatic General Permit, RIDEM Wetlands Program, and RIDEM Water Quality Certification
- 100% Design Documents – Structural design, construction drawings, specification, bid pricing sheet, and construction cost estimate
- Construction Support – Weekly onsite meetings, review contractor submittals, resolution of design changes, review of fabrication drawings, and progress inspections

Dyerville Dam Removal

- Engineering support to NRCS as needed for permitting and construction drawings

Partner Participation

Paragon Mills, LLC – Condominium and office park; as owner of Paragon Mills Dam, responsible for permit applications and construction contract.

The Groden Center – owner of Dyerville Dam and adjacent land; responsible for construction contractor access agreement.

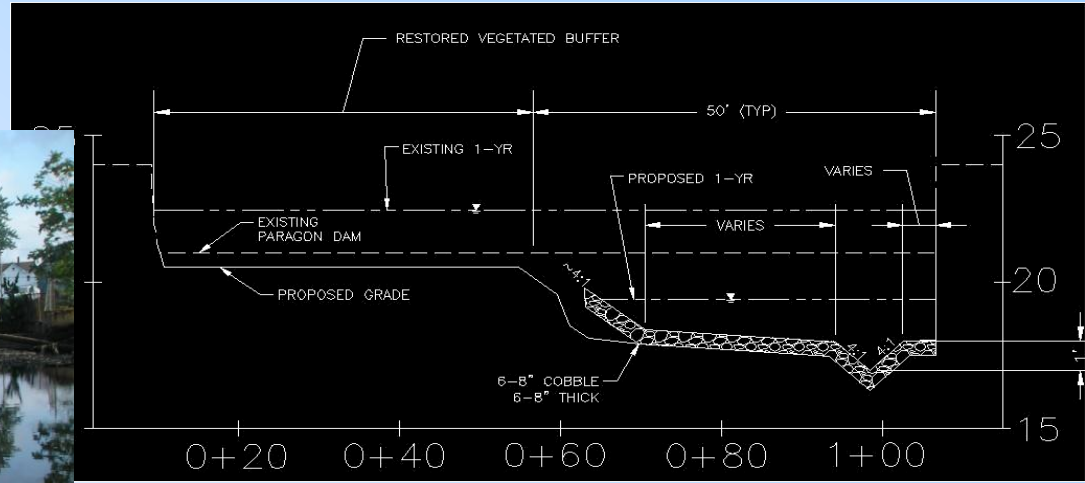
Woonasquatucket River Watershed Council (WRWC) – Responsible for partial funding, watershed coordination, permit, and construction contract.

NRCS – Responsible for funding engineering and design and 75% funding of construction.



Paragon Dam Design Considerations

Contaminated sediment



Construction access

Condition of abandoned intake and discharge structure



Paragon Dam Construction Challenges

7

March 2009 flood substantially
changed conditions
subsequent to Design



Paragon Dam Construction Challenges



Construction sequencing

Paragon Dam Construction Challenges

Cofferdams



Paragon Dam Construction Challenges



Control of water with the flashy river conditions

Boulder placement

Paragon Dam Construction Challenges

Roof drains



Dyerville Dam Design Considerations

Reduce differential head at low flows
Minimize work in water



Minimize impacts on active parking lot



Dyerville Dam Removal Considerations

Water quality protected by manual effort; no equipment in river



Dyerville Dam Removal Considerations

Approach: cut with chain saw; drag with wire rope winch; load with tractor



Project Status

Dyerville Dam removal completed in 2009

Paragon Dam removal completed in 2010

WRWC is preparing grant applications for a fish bypass at Manton Avenue Dam, which is several miles upstream from the Dyerville Dam location

RIDEM will monitor fish at Rising Sun Mills and Atlantic Mills Dam Fishways



Passage of river herring above Dyerville expected this year.