



Rethinking the  
**Potter Hill Dam**  
Pawcatuck River, RI

# Goal of the Charrette

To assist stakeholders to make informed recommendations on the future of the Potter Hill Dam.



The charrette is an opportunity for:

- Collaboration amongst community members
- Sharing opinions and perspectives
- Problem solving and decision making

# Charrette Schedule

1

## Charrette Topic and Goals

Brief **Introduction** to Potter Hill Site

20 mins

2

## Potter Hill Dam: History, Issues, and Opportunities

Look at **Boards** and Collect **Cards**

20 mins

3

## Small Group Discussion

Introduce **Participants** and Discuss **Cards**

30 mins

**Break- 10 min**

4

## Introduce Scenarios

In Depth Description of **Scenarios** and **Model**

30 mins

5

## Small Group Discussions

Fill Out and Discuss **Matrix**

30 mins

6

## Summary

Reflect on the Charrette and Propose Recommendations

20 mins

# The Issues

## Environmental

- Fish passage
- Release of sediment
- Water quality

## Economic

- Potential hydro electric power

## Cultural

- Historical structures
- Potential fisheries
- Landscape Identity

## Safety and Liability

- Flood hazard



# Region

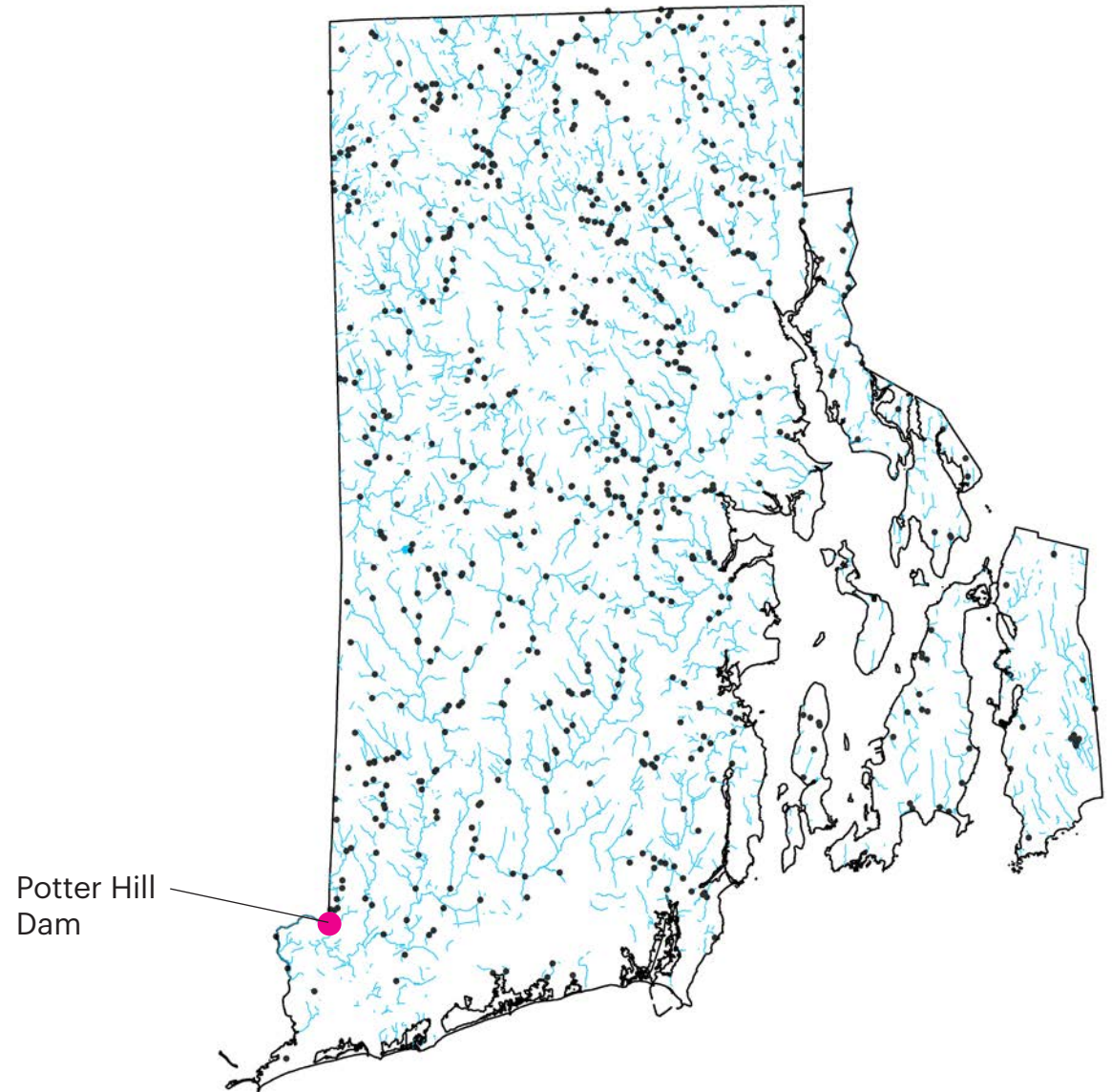
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New England

- **14,000** dams

Rhode Island

- **668** dams
- **53%** privately owned



# Watershed

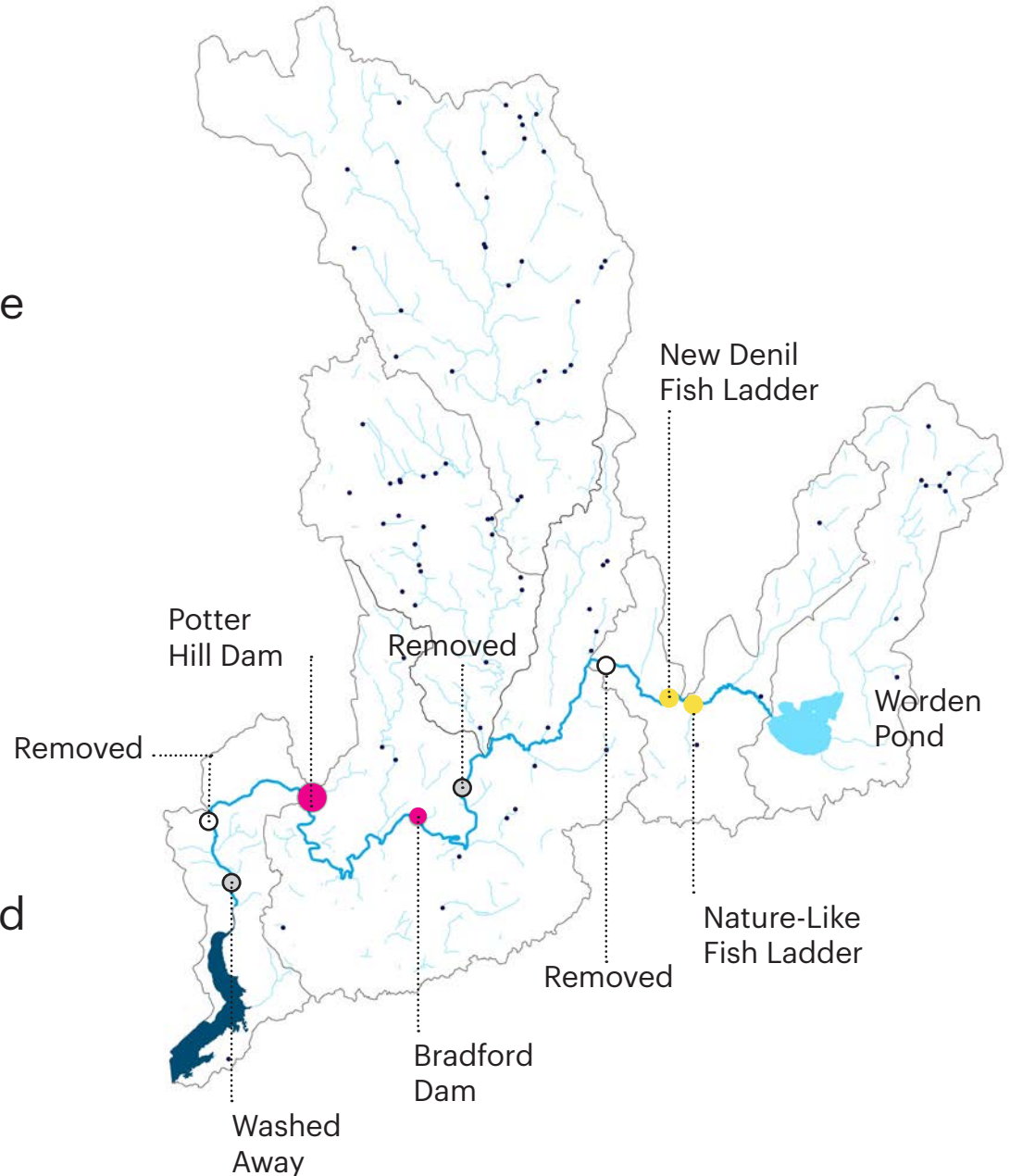
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## Wood-Pawcatuck watershed

- **95** dams
- Potter Hill Dam is located on the Wood-Pawcatuck Watershed

## Pawcatuck River

- **8** dams
  - **2** removed
  - **2** washed away
  - **2** modified
  - **2** remain; Potter Hill Dam and Bradford Dam



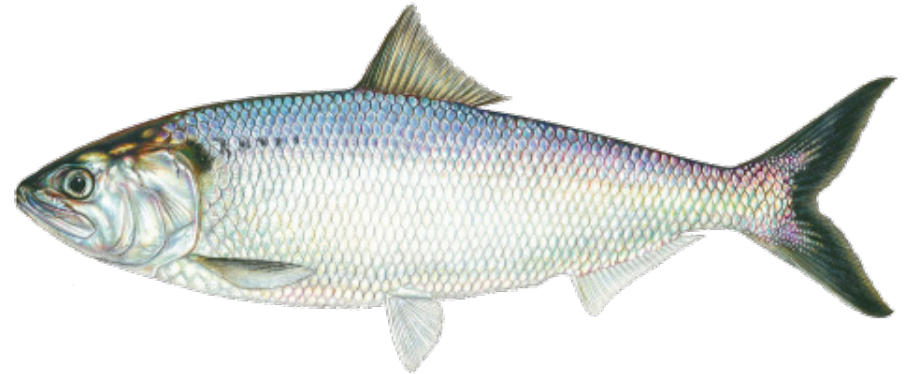
# Migratory Fish

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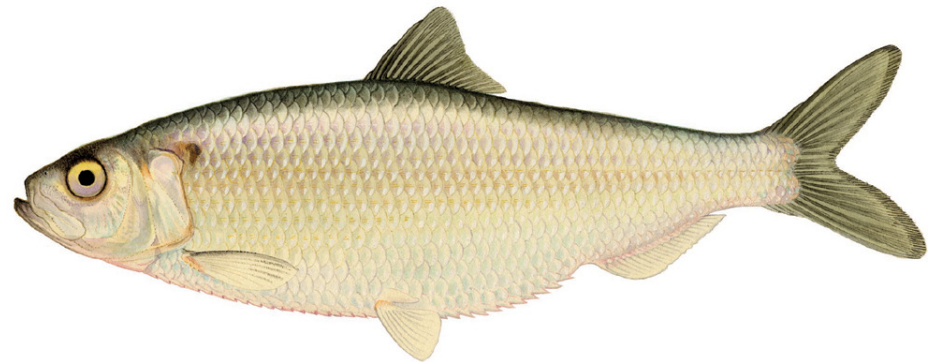
Dams are physical barriers to fish swimming upstream to high quality spawning grounds.



**American Eel** | *Anguilla Rostrata*



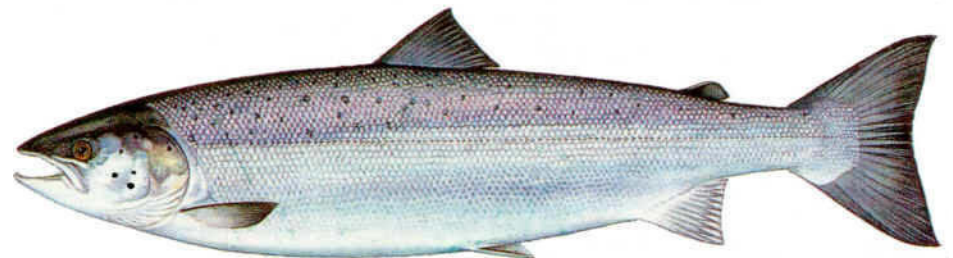
**American Shad** | *Alosa Sapidissima*



**Blueback Herring** | *Alosa Aestivalis*



**Alewife** | *Alosa Pseudoharengus*



**Atlantic Salmon** | *Salmo salar*

# Flood Hazard

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- Storm events can cause dams to breach.
- Westerly, RI, population **22,787**, is located **3 miles downstream** from Potter Hill Dam.

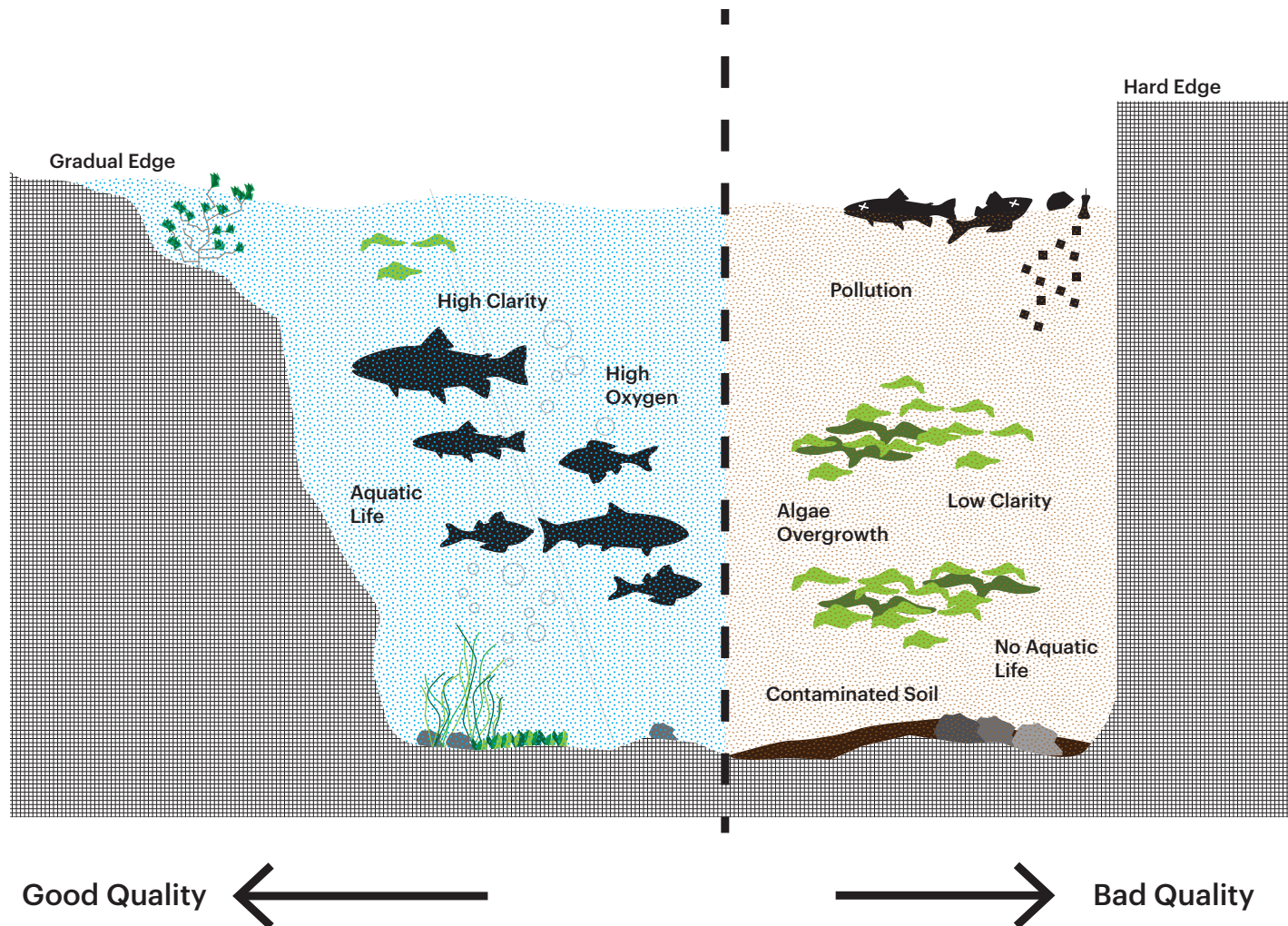




# Water Quality

## Impairments in Pawcatuck River

- Dissolved Oxygen
- Nutrients
- Bacteria
- Contamination

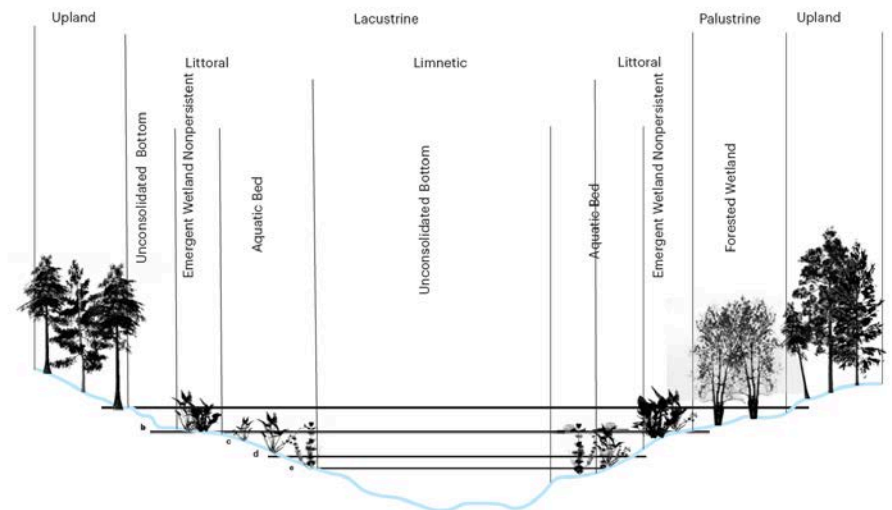
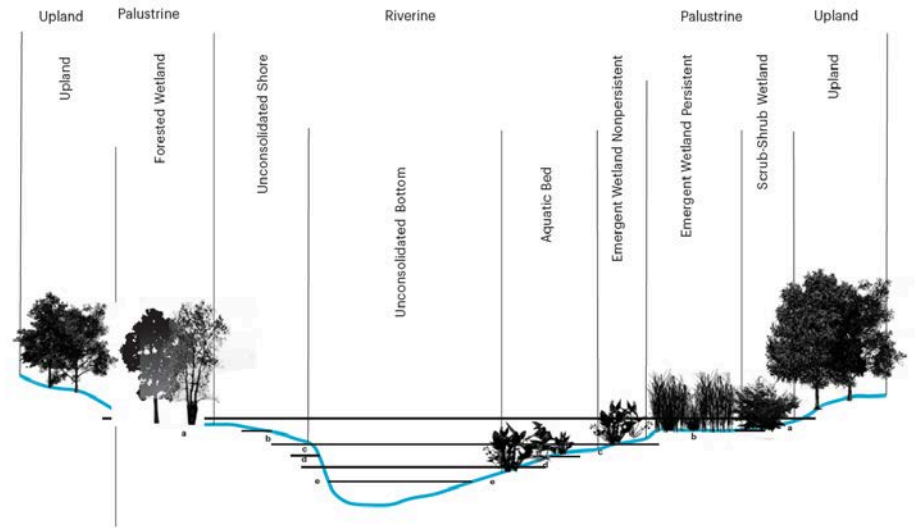


# Wetlands

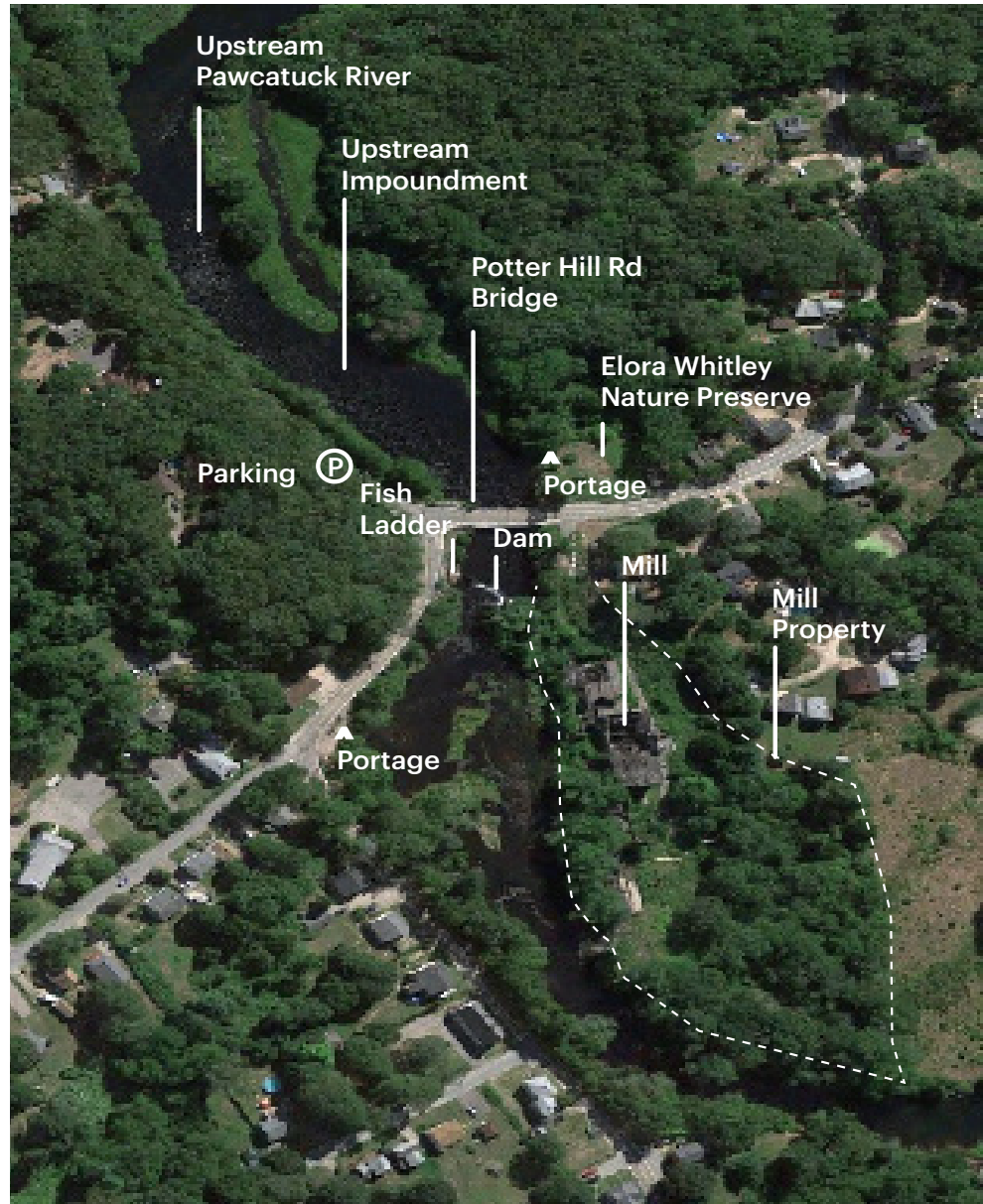
Wetlands act as systems of flood control.

Two types of wetlands

- **Lacustrine habitat** within the impoundment
- **Riverine habitat** below the dam



# Potter Hill Site



North 

# History of the Potter Hill Site

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- 1634** Narragansetts win control of Shannock Falls and river salmon from Pequots
- 1762** Potter Hill Mill and crib dam built
- 1796** George Potter sued for not opening gap for alewives and shad
- 1903** **Crib dam breaches and current existing dam is built**
- 1955** Mill closes
- 1973** Fish ladder built
- 1977** Mill destroyed by fire
- 1992** Town council preserved mill for historical significance
- 1993** New dam ownership
- 2010** Flood event inundates Westerly
- 2012** Flood event damages Potter Hill Dam



# Sense of Place

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Elements that make up the characteristic identity of a place.

- Open water view
- Vegetated edge mostly canopy trees
- Direct light
- Sound of water



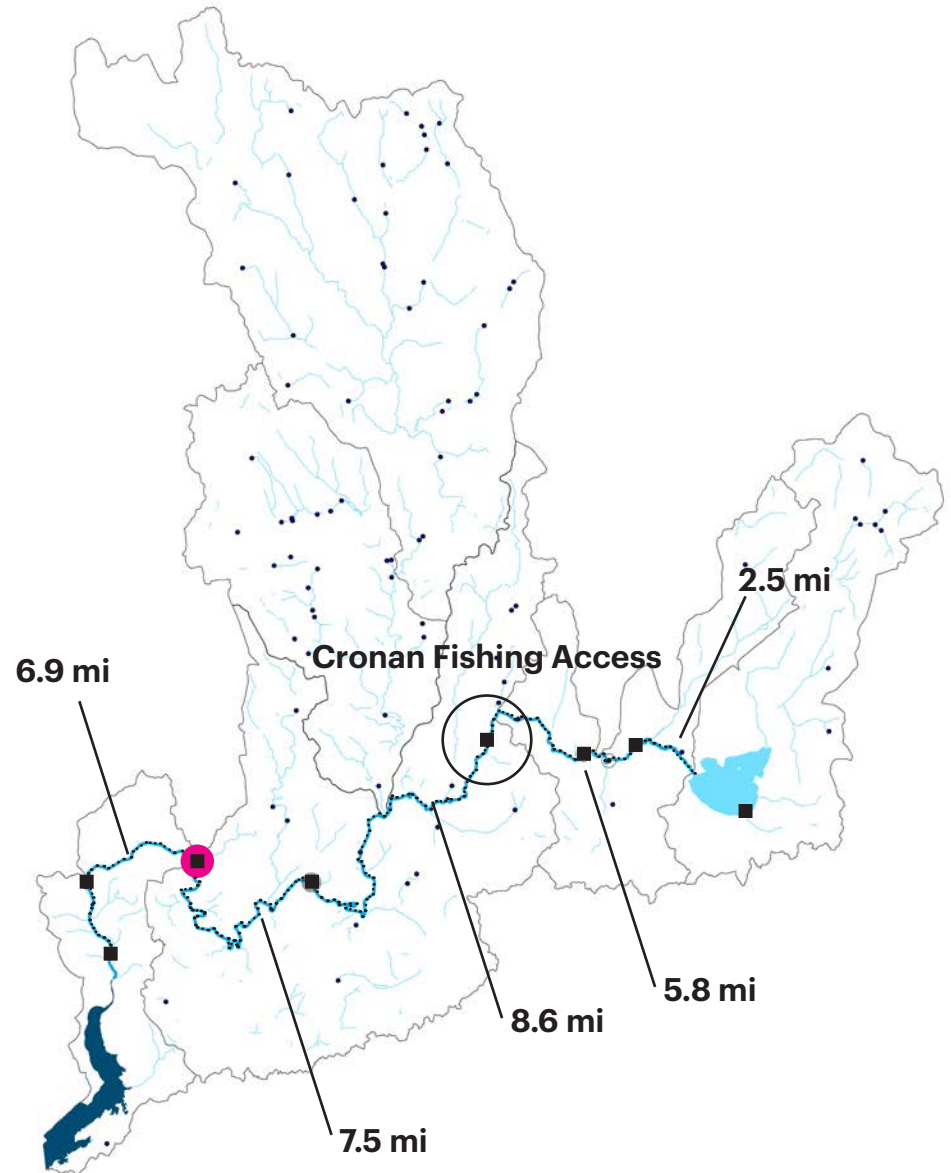
# Recreation

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## Pawcatuck River

- **34** miles long
  - **30.8** miles for kayaking
  - **7** possible paddle/kayak trails
  - **34** miles for fishing
  - **8** identified 'access to water' locations (■ icon on map)

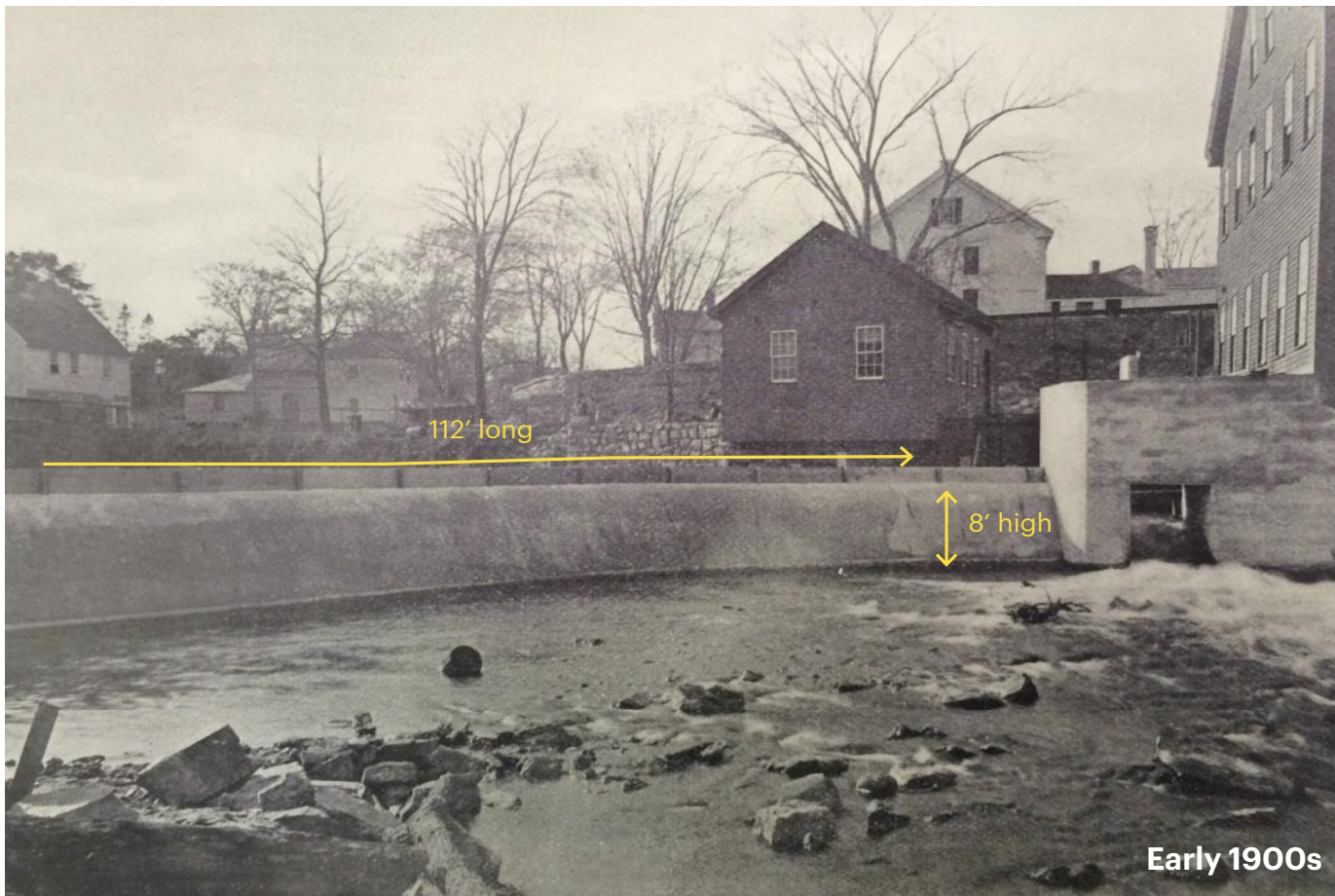
Potter Hill Site has a portage



# Potter Hill Dam Then

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In the 1900s, Potter Hill Dam used to be surrounded by working mill buildings.



# Potter Hill Dam Now

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Today, Potter Hill Dam is surrounded by overgrown vegetation and ruins of the sluice gate.

In 2015, RIDEM had classified this concrete dam as **low hazard**.





# Hydropower

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- Potter Hill Dam has the potential to be a source of a **small amount** of hydropower.



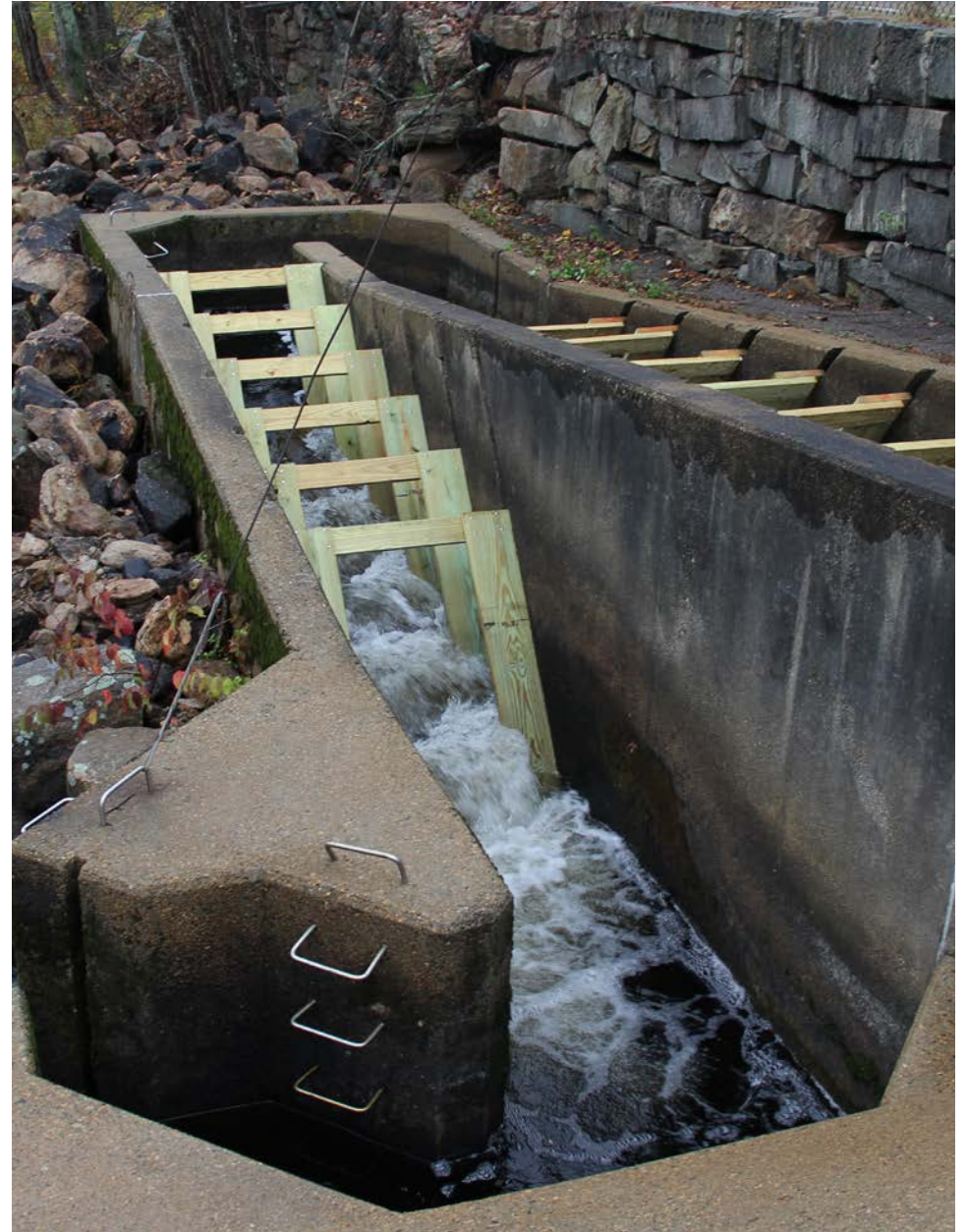
# Fish Passage

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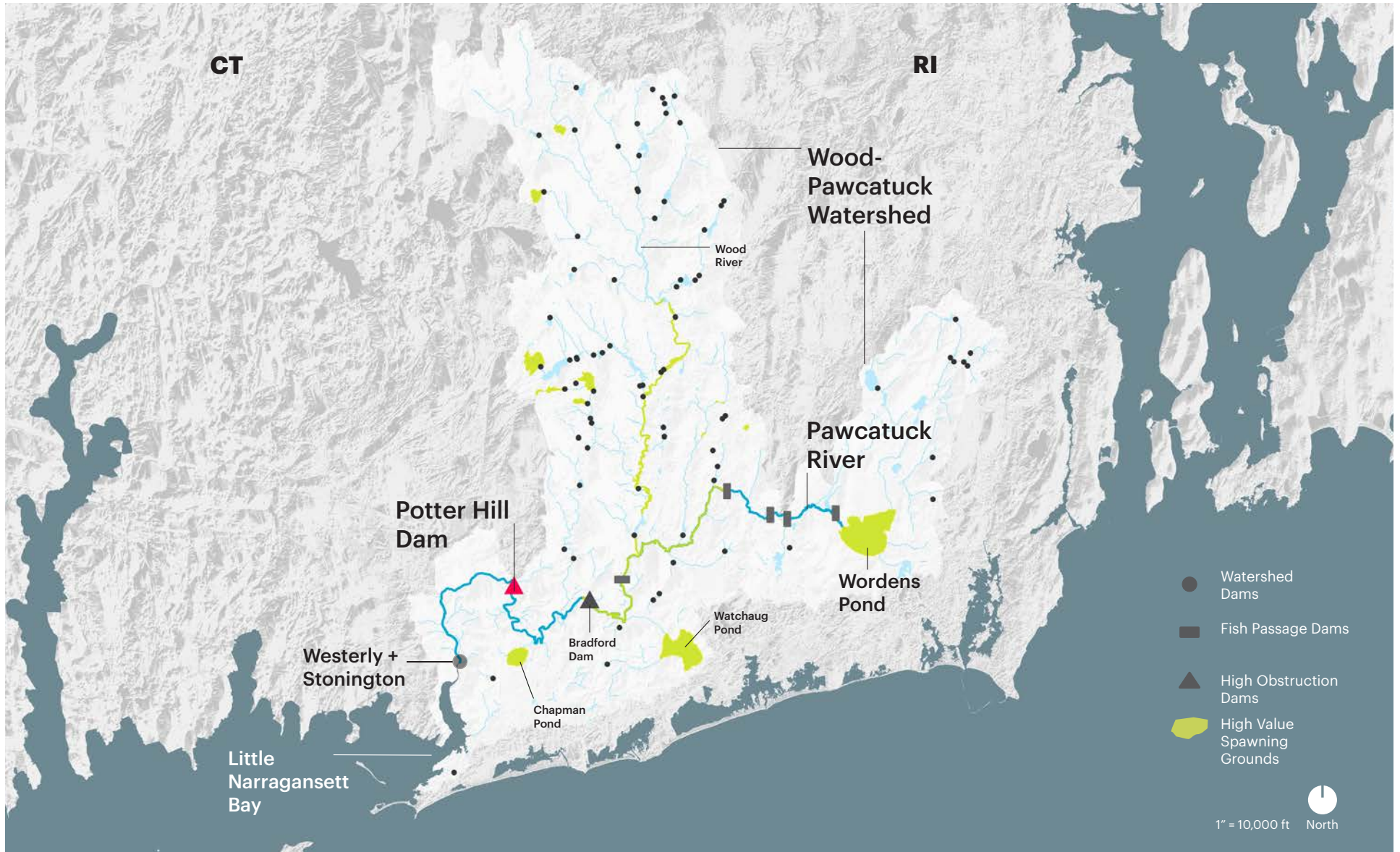
The existing denil fish ladder

- low passage rate
- lack of maintenance
- old age (43 years)
- entrance often blocked by debris

Newer fish passage designs offer higher rates of fish passage.



# The Big Picture



# Key Issues and Scenarios



## Issues

Public safety  
Improved fish passage  
Habitat connectivity  
Landscape identity  
Recreational opportunities  
Heritage  
Potential hydropower

## Scenarios

Keep the Dam  
Keep the Dam and  
Replace with New Denil Fish Ladder  
Keep the Dam and  
Construct a Nature-like Fish Passage  
Keep the Dam and  
Create Bypass Channel  
Remove the Dam (Leaving Traces)

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