Herring River Restoration Project
“Return of the Tide”

Friends of Herring River
Annual Meeting
August 16, 2016

www.friendsofherringriver.org
• Welcome
  • This Year’s Annual Meeting
  • Celebrate NPS Anniversary

• A bit of history
  • Key events over 100 years
  • A trip over the Herring River

• Project Status Today
  • Designs prepared
  • Final EIS/EIR published

• What’s next?
  • Project permits
  • Fundraising
Friends of Herring River
Mission

Promote the restoration and environmental vitality of the Herring River Estuary

• Conduct public education, awareness and outreach activities
• Administer grants and contracts
• Raise funds
The Restoration Project

Objective:
- Restore the 1000 acre Herring River Estuary

How:
- Remove existing restrictions in the river
- Return natural tidal flow

Why?
- Prevent ongoing degradation of the estuary
- Achieve ecological and social benefits
- Current dike is leaking
Early Significant Milestones

1909 – Construction of the Chequessett Neck Road Dike

1970’s – Dike Reconstruction
Cape Cod National Seashore
Towns of Wellfleet and Truro

Original vs. current opening
Chequessett Neck Road Dike, Constructed in 1909, 1973
Recent Milestones

2005 – Memorandum of Understanding I
  • Established stakeholder and technical committees
  • The Towns and CCNS agreed to examine the feasibility of restoration

2007 – Memorandum of Understanding II
  • Decision to develop jointly a detailed restoration plan
  • Established the Herring River Restoration Committee

2016 – Publication of the Final EIS/EIR
2016 – Draft Memorandum of Agreement III
  • Defines roles and responsibilities to implement the approved plan
The Herring River Estuary

Acreage

Originally – 1100 acres

Today – 7+/- acres of tidal marsh remain

View from above

By
Roland Duhaine
Mark Adams
Tidal Range ~ 2.5 meters

Tidal Range ~ 0.5 meters
Herring River Dike Effects on Tidal Range, Sediment and Vegetation

Natural marsh below the Dike

Elevation (meters NGVD)

“Marsh” above the Dike

DIKE

High tide

Low tide
Current Conditions of Herring River

Degraded Habitat for River Herring

Ponded Freshwater = Methane Emissions

Fecal Coliform Bacteria Pollution = Closed Shellfish Areas

Poor Water Quality = Fish Kills
Rebuild Chequessett Neck Road Dike and Tidal Control Structure
Herring River Restoration: Benefits & Significance of the Project

1100 Acres: Largest Coastal Wetland Project in the Northeast

RESTORED COASTAL HABITAT

✓ Restored Water Quality
✓ Naturally Sustainable Salt Marsh Habitat
✓ Habitat for Marine Species; Striped Bass, Winter Flounder, Diamond-back Terrapin
✓ 11+ River Miles and access to 160 pond acres for River Herring
✓ 200+ Acres Clam and Oyster Habitat
✓ Engine of Productivity for Near- and Off-Shore Marine Habitats
Herring River Restoration: Benefits of the Project
1100 Acres: Largest Coastal Wetland Project in the Northeast

RESTORED ECOSYSTEM SERVICES

✓ Reduce Methane Emissions: Equal to Taking 635 Cars off the Road Each Year
✓ Natural Mosquito Control: Tidal Flush of Breeding Areas, Larvae-eating Fish
✓ Recreation: Boating, Hiking, Fishing
✓ Managing Sea Level Rise: Habitats Resilient to Coastal Flooding
✓ Local Economy: $1 Spent on Coastal Restoration = $13 to Local Businesses
  (Center for Amer. Progress/OXFAM 2014)
Project Status Today

What has been accomplished?
• Technical studies and modeling of effects of restoration
• Special studies: cultural resources and rare species
• Preliminary design of key infrastructure features
• Contact with owners of low-lying property
• Publication of the Final EIS/EIR

Major current activities
• Preparation for permitting activities
• Public outreach & discussions with property owners
• Seeking continued funding support
• Development of the Adaptive Management Plan
Adaptive Management

Observe → Analyze → Predict → Implement
Major Projects

- Chequessett Neck Road Dike & Tide Control Gates
- Mill Creek & Pole Dike Creek Dikes and Tide Control Gates
- Low-Lying Roads
- Mitigation to Protect Private Property Structures
CNR Bridge
Low Roadways
Project Permits

- **Town of Wellfleet** – Order of Conditions (under local bylaw and MA Wetlands Protection Act)
- **Town of Truro** - Order of Conditions (under local bylaw and MA Wetlands Protection Act)
- **MA Department of Environmental Protection** - 401 Water Quality Certification
- **MA Department of Environmental Protection** - Chapter 91 Waterways License
Project Permits

- **US Army Corps of Engineers** – Section 10 Permit / Section 404 Individual Permit
- **MA Office of Coastal Zone Management** – Federal Consistency Review
- **US EPA / MA Department of Environmental Protection** – National Pollutant DischargeElimination System Permit (NPDES)
Project Timeline

- Fall 2016: Final EIS & Record of Decision
- 2016-2017: Continue on-going work with owners of low-lying properties
- 2016-2017: Prepare permit applications
- 2017-2018: Obtain local, state & federal permits
- 2016-2018: Secure project funding
- 2017-2018: Final design & construction bids
- 2018-2019: Begin construction
Supporting Organizations

- Association to Preserve Cape Cod
- Cape Cod Conservation District
- Cape Cod National Seashore *
- Coastal America Foundation
- Conservation Law Foundation
- Ducks Unlimited
- Friends of Cape Cod National Seashore
- Friends of Herring River
- Herring River Technical & Stakeholder Committees
- MA Audubon
- MA Bays Program

* Herring River Restoration Committee

- MA Division of Ecological Restoration *
- MA Environmental Trust
- National Park Service
- Natural Resource Conservation Service *
- The Nature Conservancy
- National Oceanic & Atmospheric Administration *
- Town of Truro *
- Trout Unlimited
- US Geological Survey
- US Fish & Wildlife Service *
- Town of Wellfleet *
- Wellfleet Conservation Trust
What You Can Do

Be Informed – Participate in public meetings

Express your support and concerns

Call on Friends of Herring River for general information or to address specific questions

Volunteer – Herring count, work projects, etc.

Become a contributor – time, talent, funding or advice – your thoughts always welcome
Tidal Water
A History of Wellfleet’s Herring River

John W. Portnoy, Alice M. Iacuessa, Barbara A. Brennessel

and special thanks to:

- Wellfleet Cultural Council
- Wellfleet Historical Society and Museum
- Cape Cod National Seashore
- Park Historian Bill Burke

- John T. Cumbler
- Lisbeth Chapman
- Bill Iacuessa
- Marisa Picariello
- Susan Dunn