



Herring River Restoration Project

“Return of the Tide”

Friends of Herring
River
Annual Meeting
August 16, 2016



www.friendsofherringriver.org



Agenda

- **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

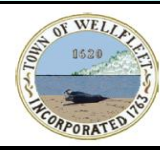


1970's – Dike Reconstruction





Cape Cod National Seashore Towns of Wellfleet and Truro

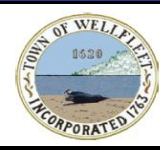


Original vs. current opening

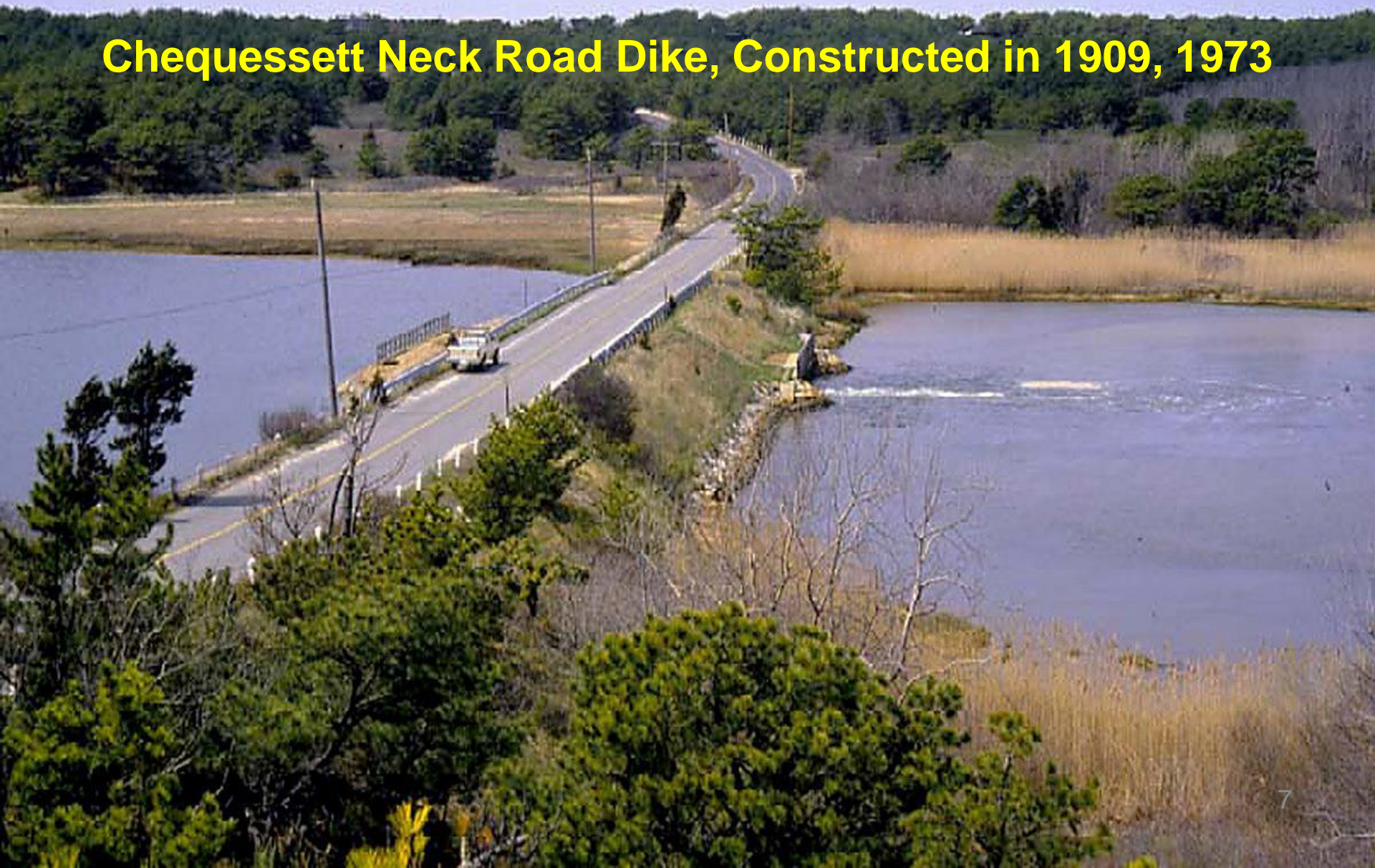




Cape Cod National Seashore Towns of Wellfleet and Truro



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

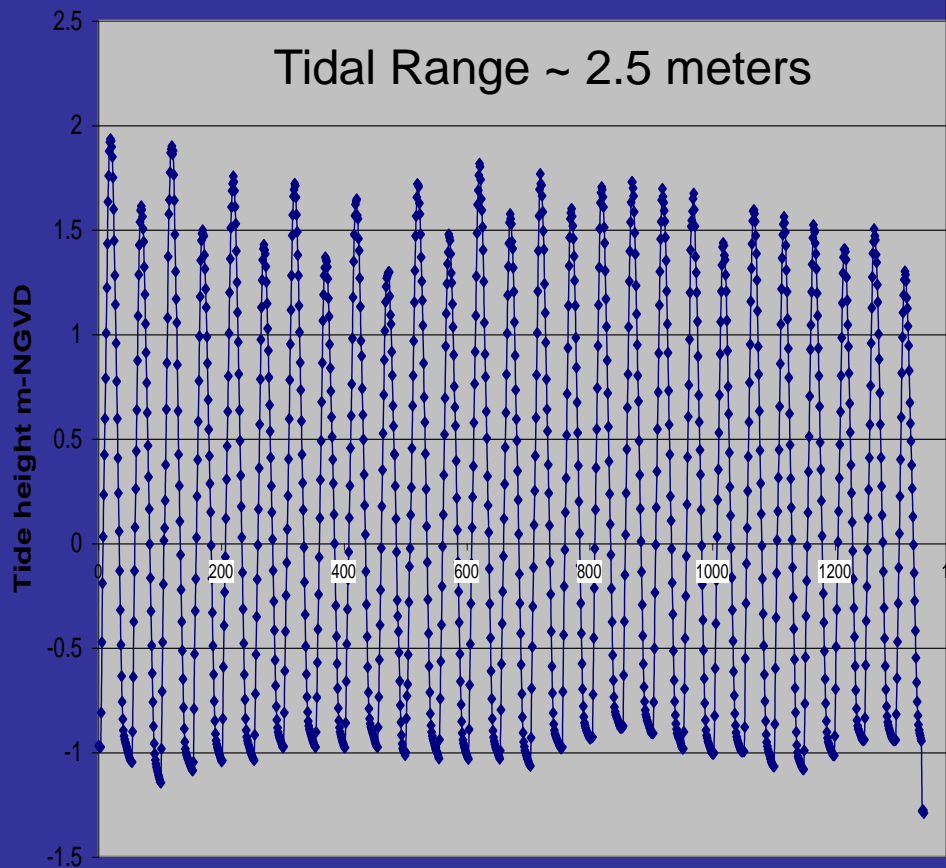
By
Roland Duhaine
Mark Adams





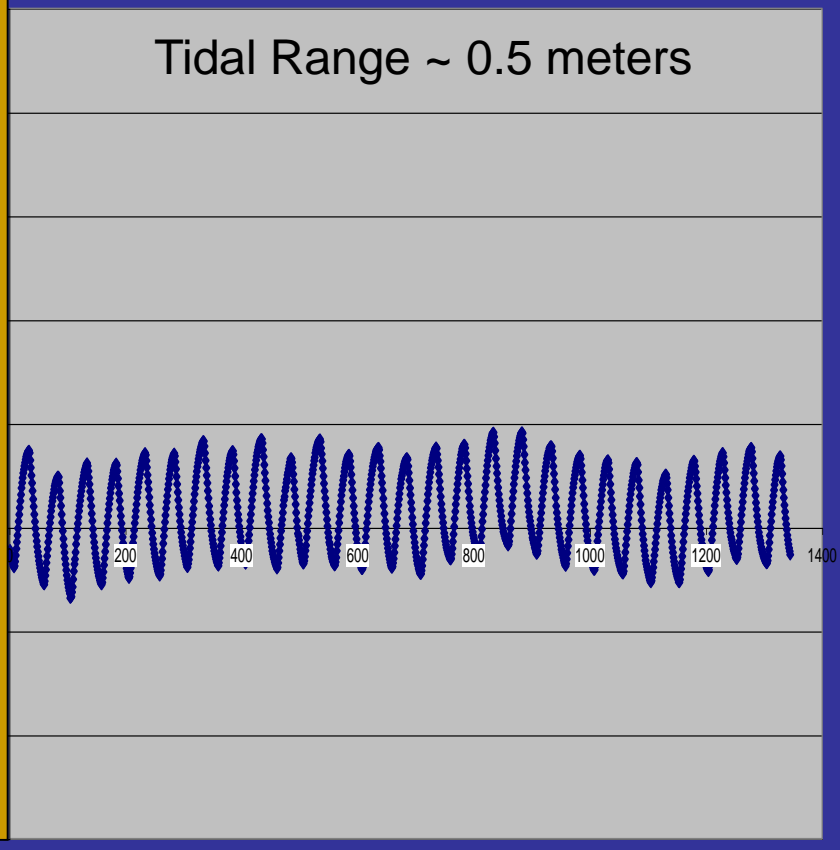
Harbor

Tidal Range ~ 2.5 meters

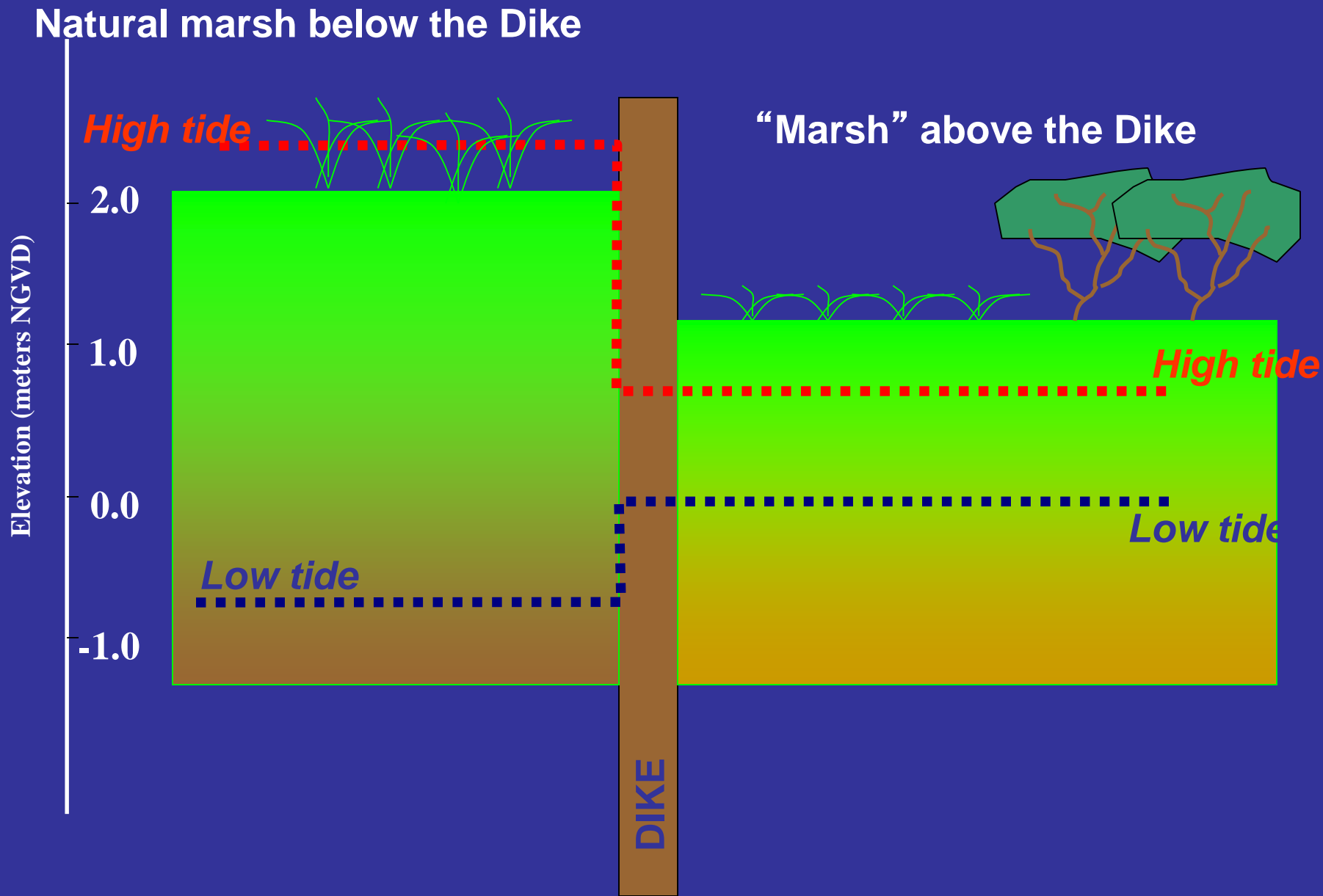


Diked River

Tidal Range ~ 0.5 meters



Herring River Dike Effects on Tidal Range, Sediment and Vegetation





National Park Service Cape Cod National Seashore



Current Conditions of Herring River

Ponded
Freshwater =
Methane
Emissions

Fecal Coliform
Bacteria
Pollution =
Closed Shellfish
Areas



Degraded
Habitat for
River
Herring



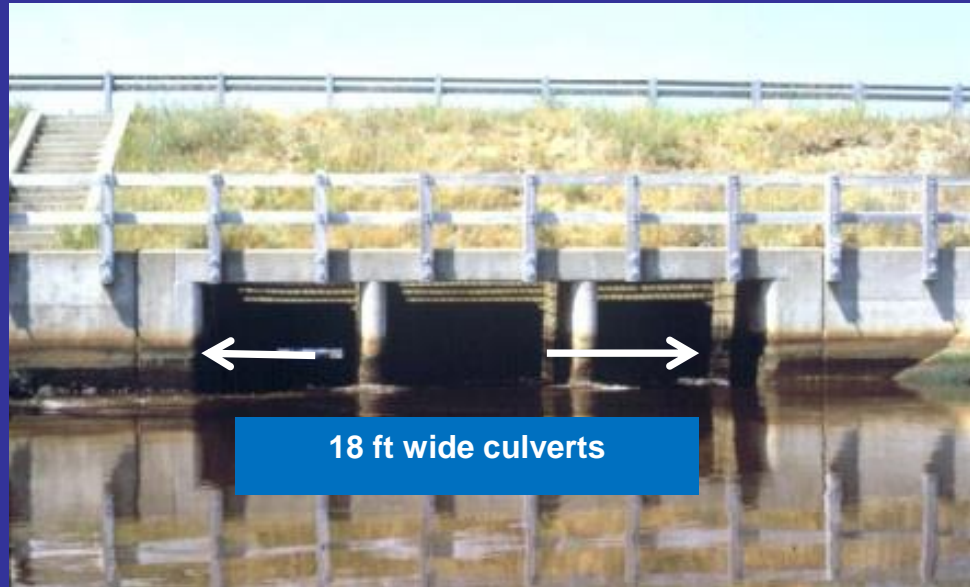
Poor Water
Quality =
Fish Kills



Cape Cod National Seashore Towns of Wellfleet and Truro



Rebuild Chequessett Neck Road Dike and Tidal Control Structure





Cape Cod National Seashore Towns of Wellfleet and Truro



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





Cape Cod National Seashore Towns of Wellfleet and Truro



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?

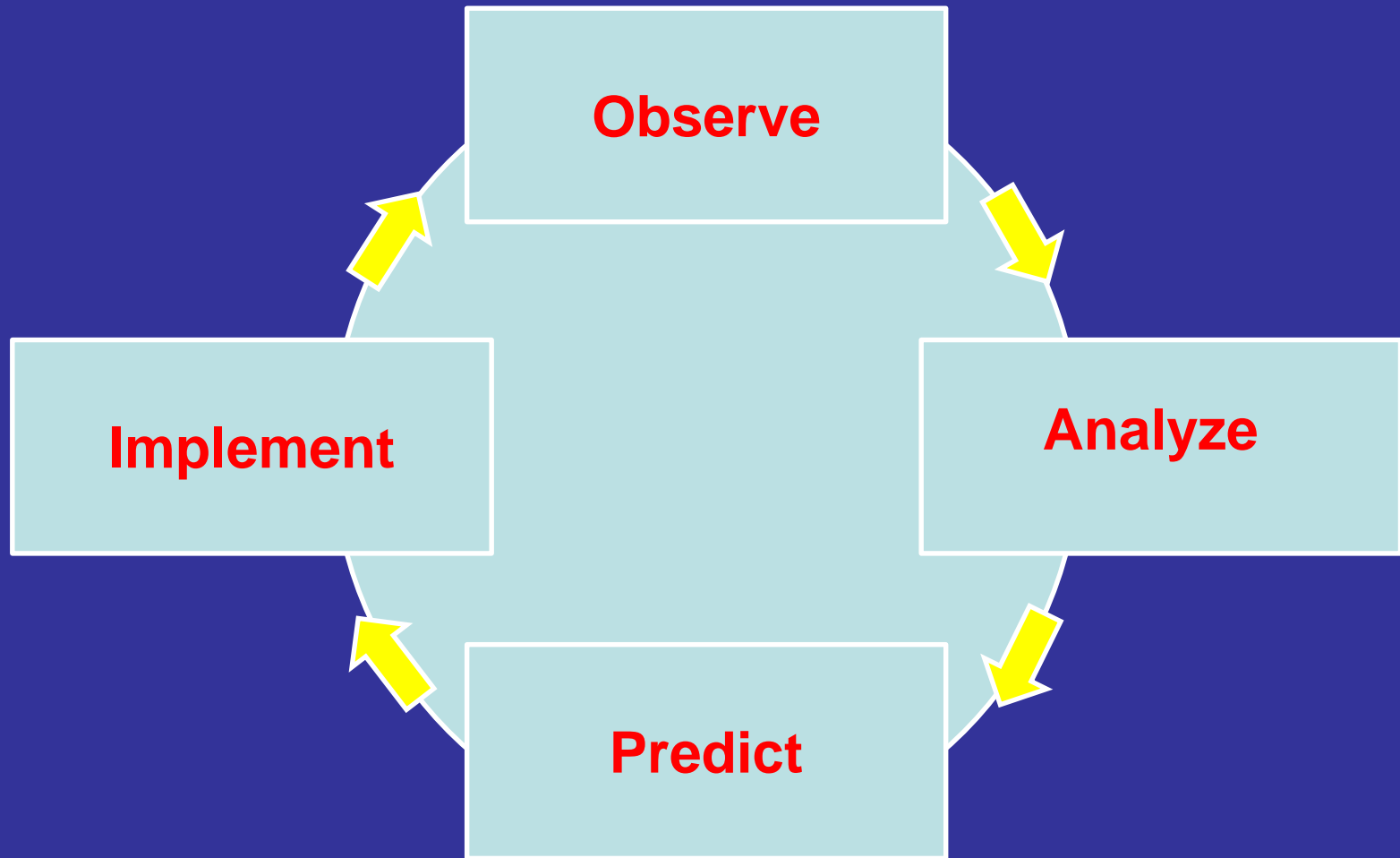
- Technical studies and modeling of effects of restoration
- Special studies: cultural resources and rare species
- Preliminary design of key infrastructure features
- Contact with owners of low-lying property
- Publication of the Final EIS/EIR

Major current activities

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



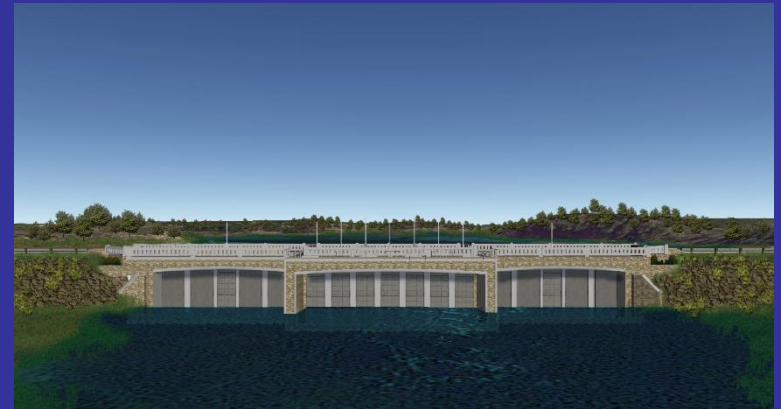
Adaptive Management





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 Discharge Elimination 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. Iacuesa, 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 Iacuesa
- Marisa Picariello
- Susan Dunn



