

A COMPREHENSIVE PLAN TO RESTORE WATER QUALITY IN HUNDRED ACRE COVE



PROBLEM:

Hundred Acre Cove (HAC) is an important embayment bounded by Barrington and East Providence, RI, and Seekonk, MA. The waters of HAC are **impaired by bacteria pollution** and have been **permanently closed to shellfishing** since the 1990s.

At the same time, **users of HAC are likely unaware** of its chronic water pollution problems.

Over the past 28 years, towns, state agencies, and private watershed associations in RI and MA have tried to pinpoint sources of pollution affecting HAC, including studies of the Runnins River, with mixed results.



For years, numerous studies and reports from federal, state, and local entities have detailed monitoring efforts, bacteria pollution sources, and potential corrective actions.

However, there is no single source document that brings this tremendous body of knowledge forward in a comprehensive, actionable way.

Since these early studies, significant development has occurred in the watershed, particularly along the Runnins River/Rte. 6 corridor in East Providence and Seekonk, but little progress has been made to clean up pollution sources that affect the one square mile estuarine waterbody.

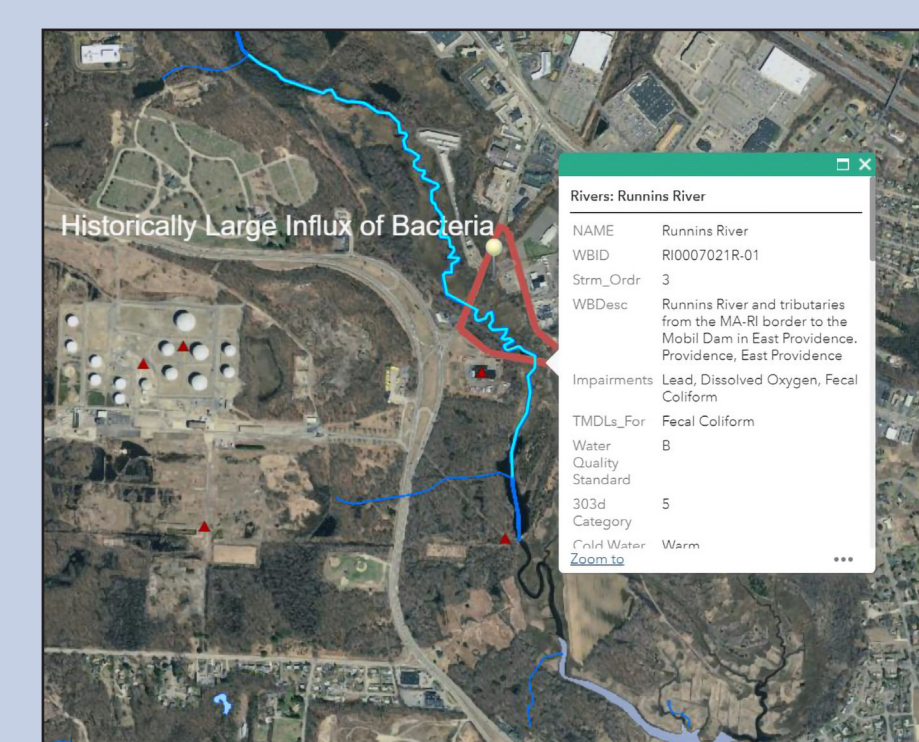
INITIAL AREAS OF CONCERN:

The "Triangle"

The upstream area known as the Triangle has historically been a major source of pollutants—bacteria in particular—for HAC.

Mobil Dam

This dam, located in the Runnins River, approximately 1.5 miles upstream of HAC, is believed to be negatively impacting water quality by altering the river's natural temperature range by warming surface water and blocking sediment transport.



PROJECT LOCATION:

Hundred Acre Cove, Barrington, RI and surrounding communities (Barrington, RI; East Providence, RI; Seekonk, MA)

PROJECT PARTNERS:

Rhode Island Department of Environmental Management
Narragansett Bay Estuary Program
City of East Providence
Town of Barrington
Town of Seekonk

LOCAL & REGIONAL IMPACT

This project...

- Supports a bi-state commitment to restore water quality in HAC.
- Will lay the foundation for future implementation of projects and policies that directly impact and improve water quality.
- Is replicable in other watershed locations, particularly those with impaired waters that cross state or municipal lines, or those that support critical ecosystem services at risk of impairment.
- Results support ecosystem services of HAC, Runnins and Barrington Rivers, including:
 - *Water quality protection*
 - *Stormwater mitigation*
 - *Recreational opportunities*
 - *Fisheries*
 - *Storm/flood protection*
 - *Wildlife habitat conservation*
- Considers the protection of unprotected natural lands and existing salt marshes.
- Considers the impact of changing climate conditions, including:
 - *Increased flooding*
 - *Increased frequency of storms*
 - *Rising sea levels*

SUPPORTS SNEP GOALS & PRINCIPLES:

- ✓ Restoring water quality
- ✓ Assessing, tracking and communicating changes in conditions
- ✓ Bi-state partnership to expand approaches for watershed resilience
- ✓ Enabling innovative solutions/ approaches to improve habitat and water quality
- ✓ Fostering new programs in the SNEP region to advance solutions to regional environmental issues
- ✓ Stimulating local policies and partnerships to advance common priorities

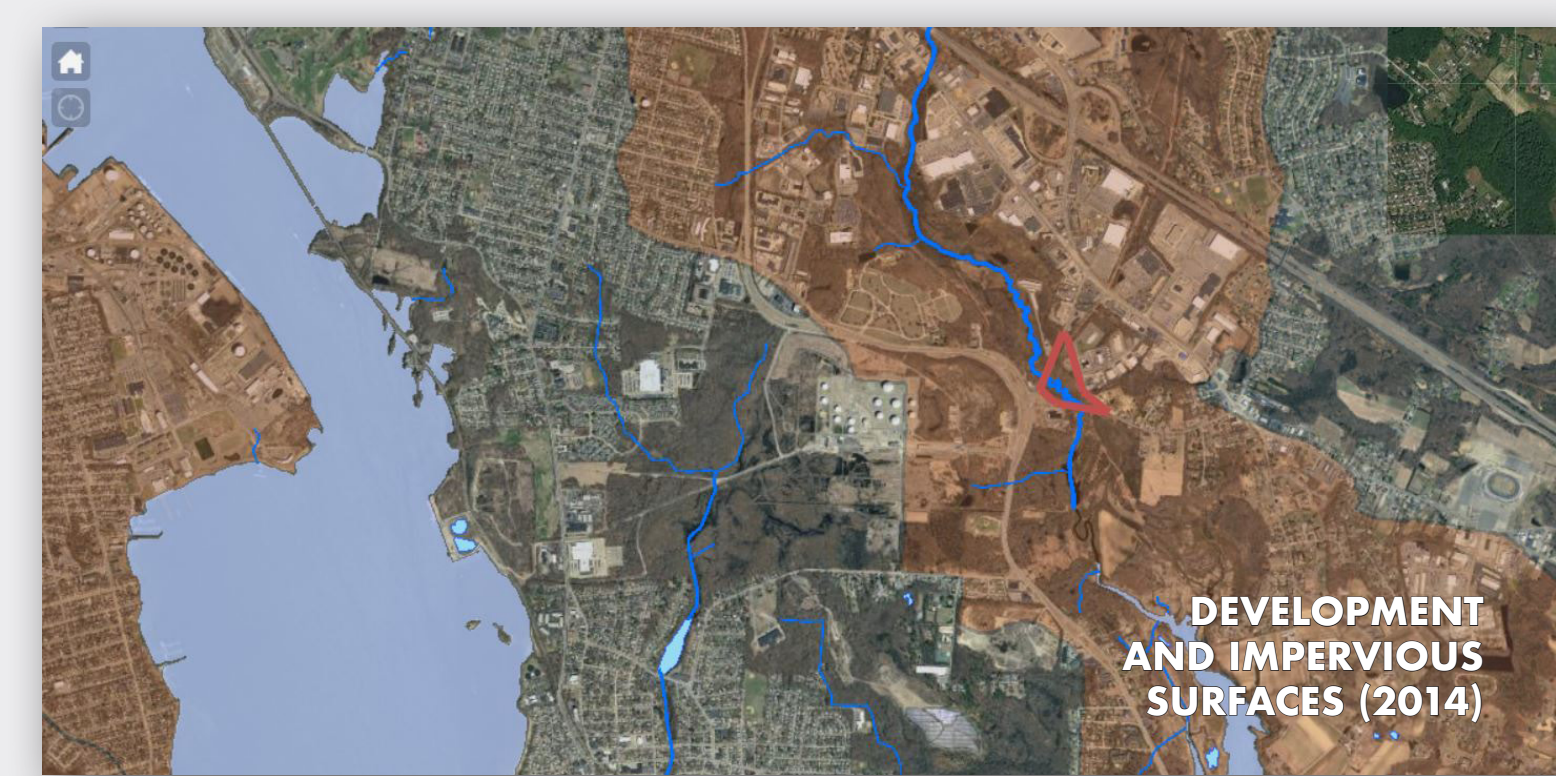
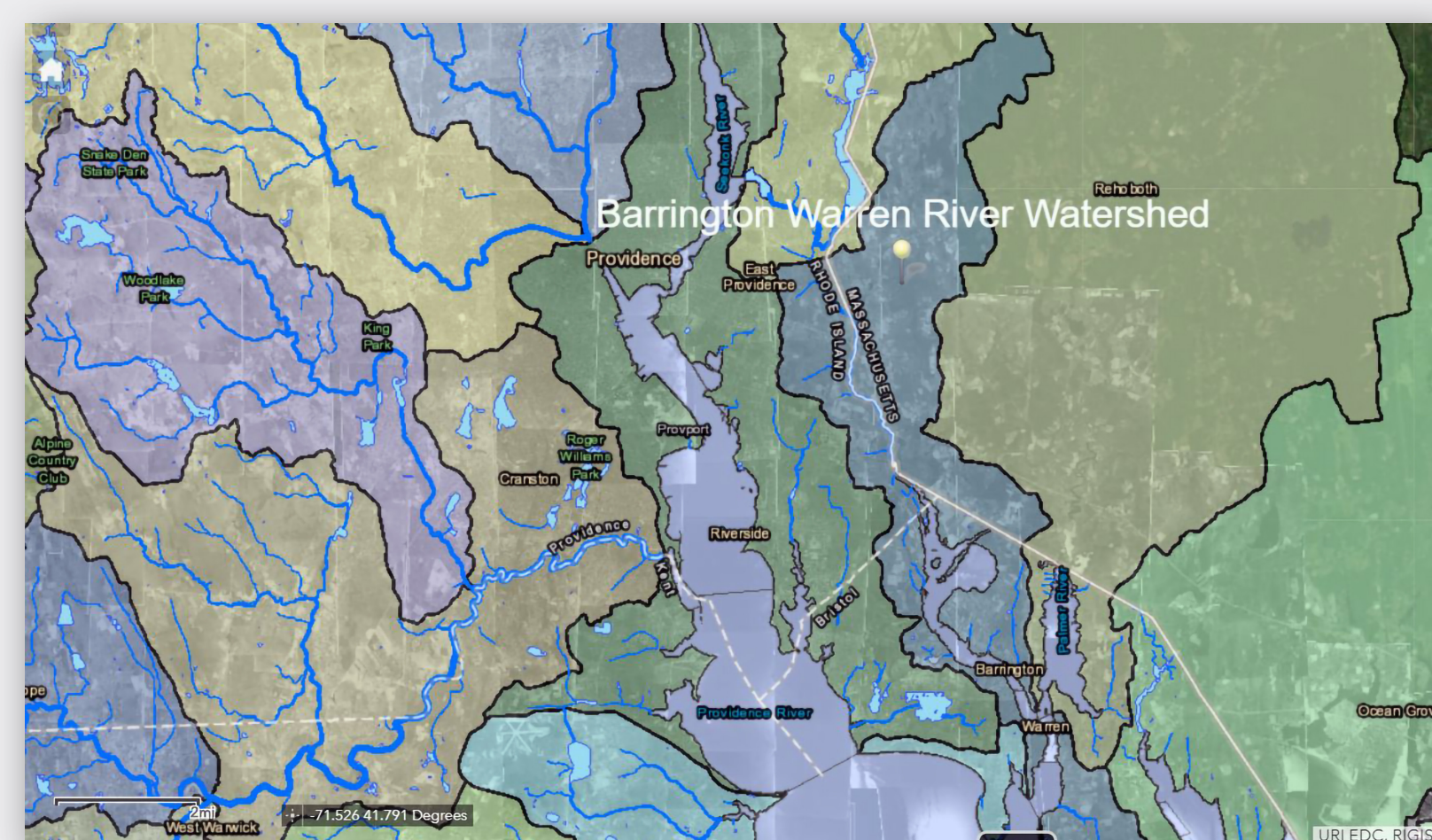
PROJECT DESCRIPTION:

With support from the SNEP program, Save The Bay and bi-state partners will create a detailed (printed and digital) Water Quality Restoration Plan (Plan) for HAC. Save The Bay has chosen the creation of a detailed Water Quality Restoration Plan as the deliverable for this grant in order to **synthesize existing data** and **identify actionable projects and tasks that are manageable, realistic, and detailed** enough to be implemented with the objective of improving water quality and restoring HAC.

The project team will undertake distinct tasks to complete the project, including:

TASK #1

A detailed review of existing studies and reports



TASK #2

Creation of updated GIS and watershed characterization maps

TASK #4

A review of existing water quality data



TASK #3

A geospatial analysis of the project area and existing data

TASK #5

Detailed listing of restoration, adaptation, communication, policy, and regulatory actions to improve water quality

TASK #6

Creation of an implementation plan for future actions