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SHORELINE ADAPTATION, INVENTORY AND DESIGN

A PARTNERSHIP BETWEEN CRMC, URI CRC / SEA GRANT, SAVE THE BAY AND RWU
FUNDED BY THE NATIONAL FISH AND WILDLIFE FOUNDATION



WELCOME TO OUR ZOOM EVENT!

Agenda:

1. Zoom Introduction and Housekeeping Items (Teresa Crean)
2. Welcome & Project Intro (Caitlin Chaffee)
3. Presentation - SAID Overview (Caitlin Chaffee)
4. Shoreline Adaptation Inventory Map Demo (Caitlin Chaffee)
5. Site Nomintation JotForm Demo (Caitlin Chaffee)
6. Site Nomintation in the field via MyCoast (Janet Freedman)
7. Chat Box Questions / Comments

HOUSEKEEPING ITEMS

1. Please mute your microphone. We want you to see and hear us, but we shouldn't be able to hear you.
2. Please enter any questions or comments in the chat box (no need to use the "raise hand" function). Access chat box from the lower taskbar.
3. Feel free to enter questions or comments in the chat box throughout the presentation. We will look at the chat box and respond when the presentations conclude.
4. This session is being recorded and will be made available online after today.

OUR TEAM

Wenley Ferguson, *Save The Bay*

Teresa Crean, *URI CRC Sea Grant*

Janet Freedman, *RI CRMC*

Caitlin Chaffee, *RI CRMC*

Julia Wyman, *RWU Marine Affairs/Rhode Island
Sea Grant Legal Program*

Read Porter, *RWU Marine Affairs/Rhode Island Sea
Grant Legal Program*

Jacob Cytrynbaum, *Save The Bay*

Kimberly Koriath, *SUNY ESF*

Municipal Partners: Bristol and Providence

Funding: National Fish and Wildlife Foundation
Coastal Resilience Planning Grant





SHORELINE ADAPTATION PROJECTS

Address the impacts of coastal storms, sea level rise and stormwater such as erosion, flooding, loss of habitats and shoreline public access. They help to improve the resilience and safety of our shoreline while increasing the benefits of natural systems such as water quality improvement and enhancement of habitat for fish and wildlife.



SHORELINE ADAPTATION PROJECTS

- Multiple benefits
 - Public safety
 - Natural habitat enhancement
 - Public shoreline access
 - Water quality improvement
 - Shoreline protection
- Add value to infrastructure projects



FUNDING SOURCES

Potential funding for shoreline adaptation projects



NFWF National Coastal Resilience Fund

Provides funding for nature-based community resilience projects. Emphasis on habitat and water quality.

www.nfwf.org/coastalresilience/Pages/home.aspx



The value of Rhode Island's network of bikeways, open spaces, and waterways goes beyond beautiful places and scenic views for public enjoyment. This network is important to the state's economy and ability to attract people and businesses to Rhode Island. The health of Narragansett Bay and our local waters is central to our way of life in Rhode Island. Each year, our state's recreational facilities delight millions of visitors and generate jobs and revenue that support state and local economies, while our farms support the continued growth of our vibrant food sector.

LOCAL RECREATION: \$3 MILLION to create new and improve existing community parks and recreation facilities. Studies show, access to green space improves health, promotes stronger social ties, and enhances neighborhood satisfaction and pride. Refined recreation applications for funds for development of local recreational facilities historically have far exceeded available funds.

BIKEWAYS: \$5 MILLION investment to expand and improve the state's bikeway network that runs through many Rhode Island communities, for bicyclists and pedestrians. More than 40 miles of bike paths in Rhode Island are used by nearly two million people each year.

OPEN SPACE: \$2 MILLION investment for the Open Space Grant program to support land protection and conservation efforts of local communities and non-profits. Since 1988, over 10,000 acres of land have been protected in Rhode Island. A cohesive network of protected lands and habitat have economic, health, and recreational benefits for communities. In past grant rounds, applications for open space preservation have exceeded available funds.

FARMLAND: \$2 MILLION investment to preserve working farms and Rhode Island's growing network of local farmers. Rhode Island leads the nation in food-system planning and innovation—spurred on by a growing demand for fresh, locally grown food among consumers.

BROWNFIELDS: \$4 MILLION to clean up former industrial sites or "brownfields" through the Brownfields Remediation and Development Fund, so they can be returned to tax rolls, create jobs, and revitalize our neighborhoods. Rhode Island is home to thousands of brownfields, and many occupy desirable commercial and industrial space. Since 1993, some 800 brownfields sites have been cleaned up in Rhode Island. Using past brownfield bond funding, \$7.4 million has been invested in 33 projects, which leveraged over \$430 million in private investment and created nearly 5,000 jobs.



RI Green Economy and Clean Water Bond

Includes \$5M for coastal and riverine resilience projects.

<http://dem.ri.gov/greenclean/>



PROJECT GOALS

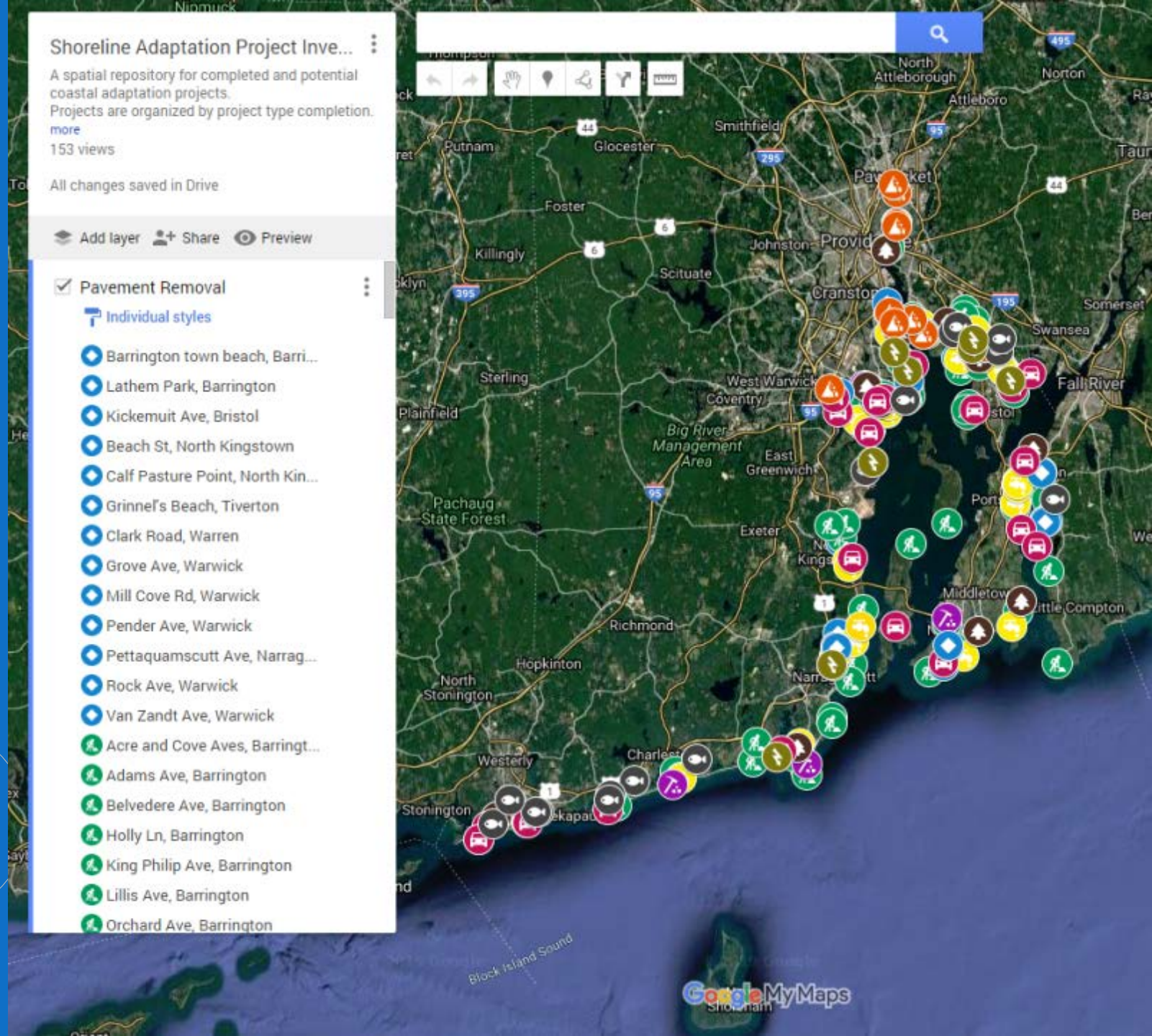


- 1. Create a robust, vetted, state-wide inventory of completed and potential shoreline adaptation projects**
- 2. Design and permit a subset of projects to build a pipeline for future funding sources**
- 3. Develop municipal legal guidance for project implementation**

PROJECT INVENTORY

Maps projects by category:

- Pavement Removal
- Stormwater Management
- Structure Removal
- Natural Feature Restoration
- Road Relocation / Limit Vehicle Access
- Bank Re-Grading / Stabilization
- Culvert Redesign
- Utility Removal / Relocation





PAVEMENT REMOVAL

These projects often occur at the ends of roads along the shoreline where tidal flooding has eroded and damaged the existing pavement.



BEFORE

Clark Road, Warren



AFTER



BEFORE



AFTER

STORMWATER MANAGEMENT

These projects address shoreline impacts of stormwater runoff from upland areas and can include practices such as vegetated swales and bioretention areas.



BEFORE



AFTER

STRUCTURE REMOVAL

These projects may include removal of structures or parts of structures (such as foundations) that have been damaged by coastal flooding and storm surge, or the relocation of at-risk structures farther inland.





BEFORE



AFTER

STRUCTURE REMOVAL

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NATURAL FEATURE RESTORATION

These projects may involve planting of native vegetation such as shrubs or dune grass or protecting areas so they can revegetate on their own.



BEFORE



AFTER



BEFORE



ROAD RELOCATION / LIMIT VEHICLE ACCESS

These projects may include closure of frequently flooded road sections to vehicular traffic and rerouting or relocation of vehicular access.

AFTER





BANK RE-GRADING / STABILIZATION

These projects address shoreline erosion through activities such as re-grading steep slopes and reinforcing banks with biodegradable materials and vegetation.



BEFORE



DURING



AFTER



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BEFORE



DURING



AFTER



CULVERT REDESIGN

These projects restore tidal connectivity or address upstream flooding by removing or replacing undersized culverts.





UTILITY REMOVAL / RELOCATION

This category is included to identify sites where utility poles are at risk from coastal flooding and erosion.





WE NEED YOUR HELP!

Use these tools to
nominate potential
projects

Help us build our inventory and get to know your project sites!

The screenshot shows the 'Shoreline Adaptation Project Inventory Project Nomination Form' page. At the top, there are logos for 'Maine Coast Services', 'Sea Grant Rhode Island', 'CRMC', 'SAVE THE BAY. WARRAGANSETT BAY', and 'CRMC COASTAL RESILIENCE MANAGEMENT COUNCIL'. The main heading is 'Shoreline Adaptation Project Inventory Project Nomination Form'. Below this is a section titled 'About This Inventory' which explains that shoreline adaptation projects address impacts of coastal storms, sea level rise, and stormwater. It also mentions that the form was created by CRMC and partners as part of the SAID project. A section titled 'A Brief Explanation of Shoreline Adaptation Project Types' lists 'Pavement Removal' and 'Stormwater Management' as primary project activities.

Jot Form

Use this online form to submit sites for inclusion in our inventory.

www.jotform.com/form/91013984690158

MyCoast

RI MyCoast King Tides StormReporter Register Log In

MyCoast: Rhode Island

A project of the Rhode Island Coastal Resources Management Council, URI Coastal Resources Center, Rhode Island Sea Grant, and Save The Bay

MyCoast: Rhode Island is a portal to collect and analyze pictures and data relating to coastal events. Information collected through this site is used to visualize the impact of coastal hazards and to enhance awareness among decision-makers and stakeholders. Scroll down to view [existing](#) reports, or use the [button](#) below to submit a new report.

Rhode Island MyCoast has 3 Tools Activated



King Tides

Capturing Rhode Island's Highest Tides



StormReporter

Documenting Storm Damage in Rhode Island



Coastal Resilience

Monitoring Living Shorelines & Coastal Change

My Coast Application

Use the Coastal Resilience feature on this app to nominate sites and submit photographs in the field for inclusion in our inventory.

<https://mycoast.org/ri>



UPCOMING EVENTS



Join us for one of our upcoming field trips!

Wednesday, June 12th
1:00 p.m. to 4:00 p.m.

Mill Cove Road, Warwick

- Visit completed pavement removal project
- Visit potential project site at Strand Ave.

Thursday, June 13th
9:00 a.m. to 12:00 noon

Grinnell's Beach, Tiverton

- Visit completed structure removal, dune / beach restoration project
- Visit potential project site at Common Fence Point, Portsmouth



NEXT STEPS



- 1. Review the Shoreline Adaptation Inventory Google Map and spread the word!**
- 2. Attend a project field trip on June 12th (West Bay) or 13th (East Bay)**
- 3. Submit potential project nominations via Jot Form or My Coast app or contact us with edits to existing inventory items**

THANK YOU

cchaffee@crmc.ri.gov

