

RESIDENTIAL GUIDE

STATE OF OUR
ESTUARIES
2023



Photo by Jerry Monkman

WHAT YOU CAN DO TO HELP
IMPROVE ESTUARINE AND
WATERSHED HEALTH



PREP[™]

Piscataqua Region Estuaries Partnership

About This Guide

From the headwaters in Wakefield, New Hampshire and Acton, Maine to the coast, the Piscataqua Region Watershed encompasses 1,086 square miles, 52 towns, two beautiful estuaries, and more than 400,000 residents. Since 1995, the Piscataqua Region Estuaries Partnership (PREP), as part of the United States Environmental Protection Agency's National Estuary Program, has been committed to monitoring, protecting, and preserving these nationally significant lands and waters. Every five years we release the *State of Our Estuaries* report to provide decision-makers, communities, and **residents like you** with a comprehensive look at the health of our region's estuaries – Great Bay and Hampton-Seabrook.

The *2023 State of Our Estuaries* report sends a clear message: **the challenges we face are significant and so is our power to bring about positive change.** Fortunately, there are simple actions for all of us who live, work, and play in the region can take to improve water quality and ensure healthy communities. This *Residential Guide* is a companion document to the *2023 State of Our Estuaries* report. It contains specific actions you can take at home, with your family, in your community, and regionally to become a **Clean Water Champion!** It even includes a fold-out poster that you can hang on your fridge, wall, or office as a quick reference for what you can do to help our estuaries!



PREP is your partner in clean water solutions and go-to resource for the latest data on the estuarine and watershed health.

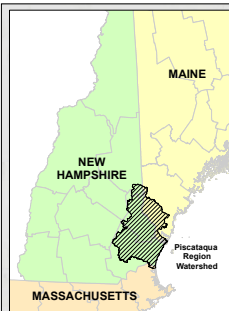


PREP GOAL Encourage all who live, work, and play in the Piscataqua Region Watershed to take actions to help protect and preserve the places we love.

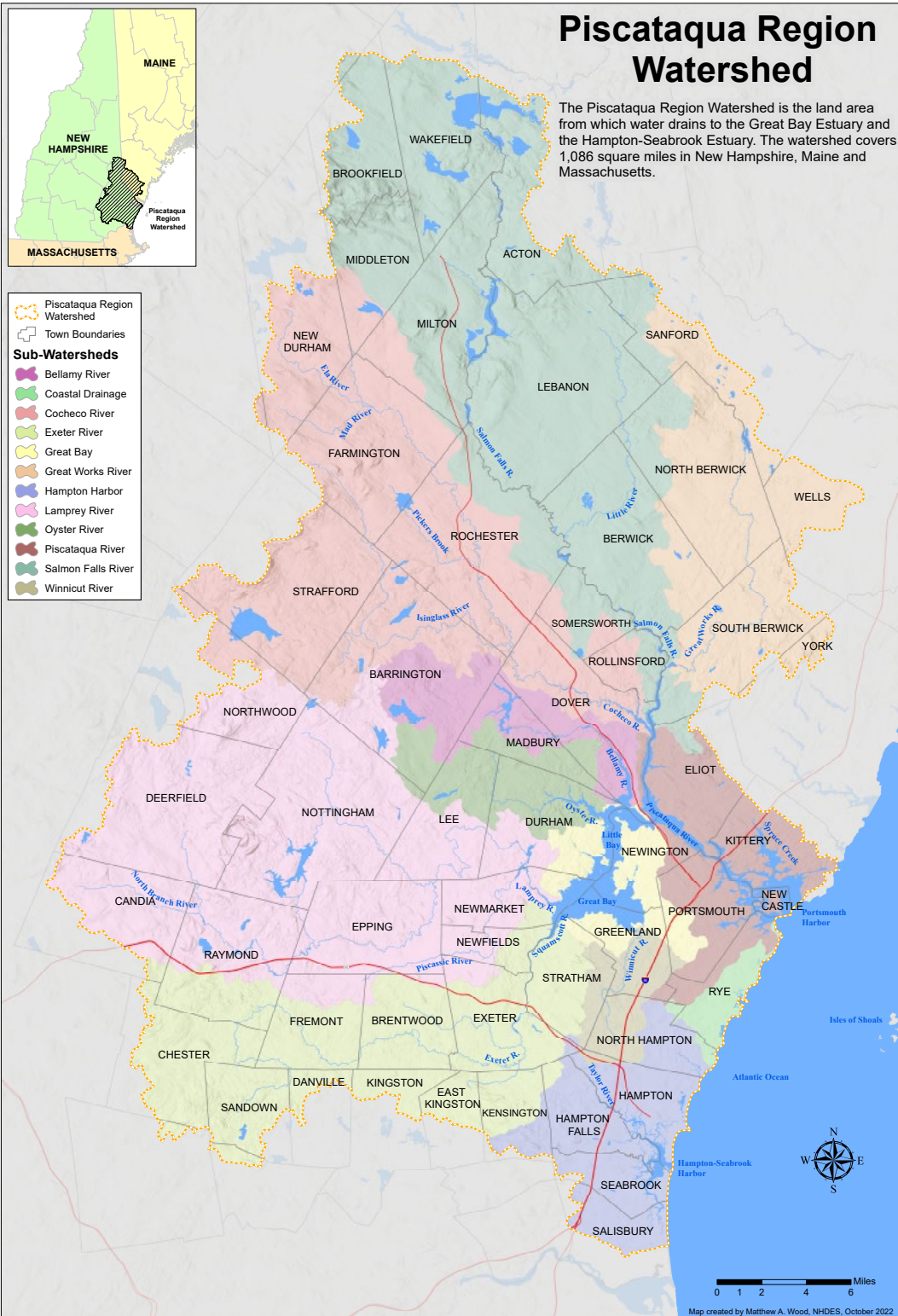


Piscataqua Region Watershed

The Piscataqua Region Watershed is the land area from which water drains to the Great Bay Estuary and the Hampton-Seabrook Estuary. The watershed covers 1,086 square miles in New Hampshire, Maine and Massachusetts.



- Piscataqua Region Watershed
- Town Boundaries
- Sub-Watersheds**
- Bellamy River
- Coastal Drainage
- Cochecho River
- Exeter River
- Great Bay
- Great Works River
- Hampton Harbor
- Lamprey River
- Oyster River
- Piscataqua River
- Salmon Falls River
- Winnicut River



Map created by Matthew A. Wood, NHDES, October 2022

What can you do to help protect and preserve the places we love?

Clean rivers, lakes, marshes, and estuaries are something we can all agree on, and it is our responsibility as residents to protect clean water in our region for ourselves, our neighbors, and our health, happiness, and enjoyment. As the Community for Clean Water, PREP works to unite and encourage you, your friends, and family to take simple steps to reduce water pollution caused by our actions every day. The power to make a difference lies in each of us changing small behaviors so that all of us can continue to enjoy this fantastic place we call home.

Display our poster to follow everyday actions for becoming a Clean Water Champion!

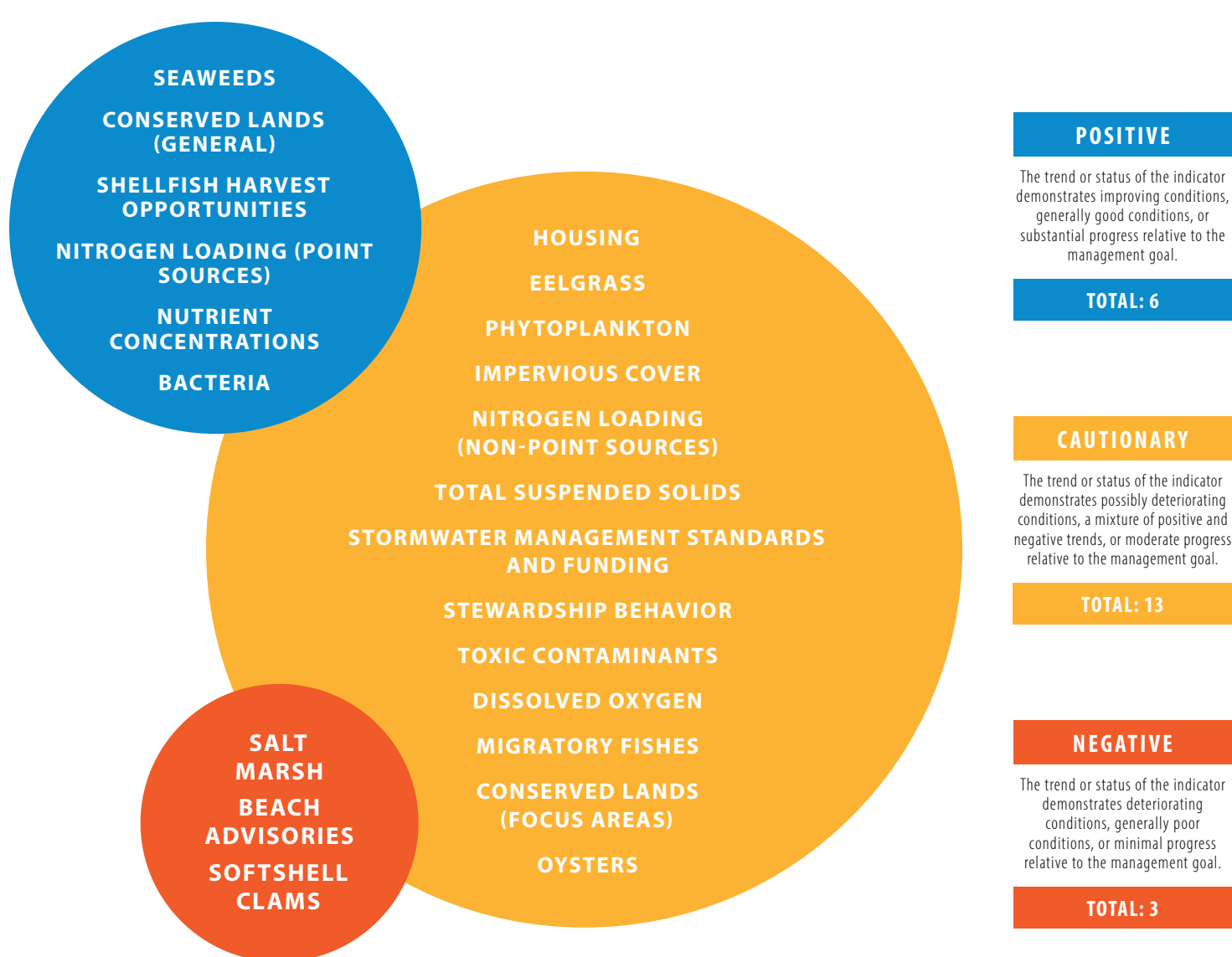
Photo by Nature Groupie



Display our poster to follow everyday actions for becoming a *Clean Water Champion!*

BECOMING A CLEAN WATER CHAMPION

2023 STATE OF OUR ESTUARIES INDICATOR SUMMARY



WHAT YOU CAN DO

Citizen science happens when volunteers collaborate with researchers on science projects, often collecting data about the natural world.

Did you know you can volunteer for one of many citizen science opportunities in your region? Many organizations are looking for concerned citizens like you who are interested in contributing to the world of scientific monitoring and research. Many of the projects that occur in our watershed would not be possible without volunteers like you! For a list of opportunities visit: [Extension.UNH.Edu/About/Volunteering](https://extension.unh.edu/about/volunteering)



AROUND YOUR HOME

Maintain Your Septic System Dumping chemicals down the drain interferes with the ability of a septic system to process waste. It is recommended that septic systems be pumped every two to three years. Failure to pump your septic tank can cause premature failure and overflows that pollute water, threaten public health, and are expensive to repair or replace.

Dispose of Chemicals Responsibly Leftover medicines, paint, pesticides, or other chemicals must be disposed of safely and should never be poured down the drain or flushed. Contact your community to learn about hazardous waste collection in your area.

Choose Eco-Friendly Products Using “environmentally friendly” products that use biodegradable alternatives and less packaging can reduce the number of contaminants that find their way into our rivers, lakes, marshes, and estuaries. Be sure to read the ingredients of the products you use in your home.



IN YOUR GARDEN

Capture the Rain Directing downspouts into rain barrels or onto lawns or rain gardens helps slow stormwater runoff and reduces the amount of polluted water running off your land. Water captured in rain barrels can be reused to water your garden.

Build Healthy Soil When mowing your lawn, set the blade to 3” or higher and leave clippings. This will reduce the need for water and synthetic fertilizers. If necessary, supplement your soil with mulch, compost, or other all-natural soil amendments.

Use Less Pavement Instead of paving, consider using pervious pavement or paving stones set into permeable stone dust. Pervious alternatives allow rain to soak into the ground instead of running off into waterways. Maintaining these systems after installation is key to their continued success.

Plant Less Lawn & More Native Plants Gardens allow for more water to soak into the ground than lawns, and can be great for pollinators, too! Use erosion control mulch to stabilize bare soils and sloped areas.



WITH YOUR CAR

Dispose of Fluids Properly Never pour anything down a storm drain, since most drains empty directly into streams or rivers. Recycle oil at registered collection centers throughout the region.

Fix Leaks Chemicals leaking from cars are a major source of pollution and can easily wash into a nearby stream.

Wash Your Car the Green Way Washing your car on a permeable surface like your lawn allows the water to soak into the ground and not run off into a drain or stream. Use biodegradable or environmentally friendly soap to ensure you do not pollute groundwater through your lawn.

Drive Less Carpooling, biking, or using public transit helps reduce air and water pollution and can save you money.



WITH YOUR PETS

Clean Up Pet Waste Pet and domesticated animal waste contains fecal coliform bacteria and other disease-causing organisms, such as *Salmonella*, roundworms, and *Giardia*. Pick up after your pets and dispose of their waste so pollution does not runoff into our waterways and cause harmful public and environmental health issues.

Bathe Pets the Green Way Wash your pets indoors or at a do-it-yourself grooming shop or use a professional groomer. If your dog or animal is so big that they must be washed outdoors, use the lawn or another permeable surface to keep the soapy water from running into a storm drain. Considering using biodegradable soap.



WITH YOUR VOTE

Talk to Your Representatives Write or call your local, regional, and state representatives to start a conversation about clean water issues that are important to you. Ask candidates what they will do to protect and restore our estuaries.

Vote for Clean Water Support protections for clean water in your community such as upgrades to wastewater treatment facilities, stormwater management projects, land conservation bonds, and natural resource protection regulations (i.e., those that protect buffer lands along water bodies).



WITH YOUR TIME

Get Involved Local and regional conservation and watershed organizations rely on volunteers. Whether you want to get dirty in the field, teach the next generation about protecting our environment, or help stuff envelopes, our community needs people like you! You can also make a difference by volunteering on your town’s conservation commission, planning board, energy committee, or select board. This is one of the most effective ways to ensure that your voice is being heard in the conversation about land use and water quality issues.

Become a Citizen Scientist Organizations are looking for concerned citizens like you who are interested in contributing to the world of scientific monitoring and research. Many research projects that occur in our watershed would not be possible without volunteers! Visit the Stewardship Behavior indicator in the 2023 *State of Our Estuaries* report for more information.



WITH YOUR MONEY

Support Local Business Visit the local businesses you know support clean water. The Green Alliance and NH Businesses for Social Responsibility are helpful resources for identifying local, environmentally responsible businesses.

Support Local Nonprofits Our region is lucky to have so many nonprofit organizations that are working to protect our waterways, educate children and community members, conserve land, and address climate change. These organizations depend on public support to do their important work, so consider donating where you can.



WITH YOUR BUSINESS

Design with Water in Mind Think about how you can help protect the waters around you. For assistance in “greening” your business, visit the NHDES’ New Hampshire Pollution Prevention Program (NHPPP) which can help businesses implement strategies that protect the environment and save money at the same time. Some actions may include reducing the size of your parking lot (a great way to increase infiltration of rain on your property), implementing stormwater best management practices (like a rain garden on site), or utilizing proper snow and ice removal techniques. To become a NHDES certified Salt Applicator through a Green SnowPro training, visit [DES.NH.Gov/Land/Roads/Road-Salt-Reduction/GreenSnowPro-Certification](https://des.nh.gov/Land/Roads/Road-Salt-Reduction/GreenSnowPro-Certification)



WITH FAMILY & FRIENDS

Spread the word Be a positive example and help your family and friends implement some of the practices above around their homes, in their yard and with their cars, pets, voices, and time. Be an advocate for your watershed and community!

YOU AND YOUR FAMILY

IN YOUR COMMUNITY

Ordinary People Making an Extraordinary Difference

As shown in the 2023 *State of Our Estuaries* report, supporting the health of the Great Bay and Hampton-Seabrook Estuaries depends on bettering the condition for critical habitats and species and reducing the stressors that harm them. This takes significant work from not only local organizations and municipalities, but also from engaged community members like you! Here are just a few examples of how residents in our communities have come together to reduce pollution, remove barriers to fish migration, and help educate others who live, work, and play in this watershed we call home.

Piscataqua Region Youth Address Runoff Pollution

Pollution caused by runoff might not be on the top of your mind, but it is for the Youth Conservation Corps! Hosted by the Acton Wakefield Watersheds Alliance (AWWA), the Youth Conservation Corps (YCC) is a crew of eager and dedicated high school students working with local homeowners and residents to implement erosion control projects on streams, rivers, lakes, and ponds in the Acton and Wakefield regions of our watershed. This crew (accompanied by a crew leader and technical director) offer their services to install landscaped features on local homeowner's properties that are designed to reduce the pollution of our waterways caused by runoff from rain events and seasonal melt water.



The process starts with a site visit; it's here where AWWA's technical director and the YCC crew leader meet with the resident and assess the property's impact on water quality related to erosion and runoff. During the assessment, AWWA educates the homeowner about why the design features of certain best management practices (BMPs) are recommended, what they accomplish, and how to maintain them. After receiving a report and list of recommended BMPs, the homeowner can choose to apply for the YCC program. With the crew's labor funded by donations and grants, the homeowner is only responsible for the costs of materials. Since the program's inception in 2006, the YCC has completed 307 projects across 10 water bodies! AWWA intends to continue the expansion of the YCC crew size and capacity as funding allows to meet the needs of the community and the environment.

"We loved having the YCC crew at our home. They were considerate, kind and full of energy, and most importantly had a clear commitment to helping protect our local waters. It was great to see some of them fish off our dock during lunch. Our family has lived on Great East Lake for over 50 years and is thankful to AWWA for helping us be stewards of this special place."

ROB & ALISON TOZIER
RESIDENTS OF WAKEFIELD, NH

Seabrook Students Becoming Citizen Scientists

It's never too early to engage residents in watershed science, and in 2022 local Seabrook 6th graders achieved junior citizen scientist status thanks to a collaborative program spearheaded by the Seabrook Middle School's Curriculum Coordinator and their 6th grade science teacher. The program, supported and facilitated by the Seabrook-Hamptons Estuary Alliance (SHEA), included a slideshow presentation from a local NH Certified Wetland Scientist about the different vegetation types unique to a salt marsh and a subsequent field trip out to the salt marsh adjacent to the school. Using 'bingo' cards and hand lenses, students searched for and identified several plants they learned about in the classroom. Students were also asked to observe their surroundings by drawing something in the marsh that

caught their attention and making a list of natural and man-made things they saw. Finally, they explored the school's newly installed Picture Post at the edge of the salt marsh, where SHEA shared the importance of monitoring and how taking photos at the Post and uploading them contributes to our knowledge base about changes in the surrounding salt marsh from day to day, season to season, and year to year. Throughout the program's activities, the 6th graders honed their science skills by learning about plants present in salt marshes, improving their observational skills, and understanding how they can use the Picture Post to become "citizen scientists." Seabrook's curious and adventurous students loved this program and SHEA is working with Seabrook Middle School staff to make it an annual event.



Photo by Seabrook-Hampton Estuary Alliance

“These community partnerships allow our students the opportunity to see beyond the walls of the classroom and experience learning through the lens of experts in the field. These types of projects also help students develop curiosity about

where they live and promote stewardship of the natural world.”

**LAUREN DECONSTANT
CURRICULUM COORDINATOR FOR THE
SEABROOK SCHOOL DISTRICT**

A Vote for the Oyster River

Never underestimate the passion of a community and their power when speaking up to make change. This is especially true in the case of the Mill Pond Dam. Dams fragment freshwater habitats and pose significant challenges to migratory fish, like river herring, limiting their movement upstream to reproduce. Removing these constructed barriers allows river herring returns to respond in a big way. For example, after the Town of Exeter removed the Great Dam in 2016, more fish have migrated up the Exeter River than at any time in at least the last half century (see “Migratory Fishes” in the 2023 *State of Our Estuaries*). Dam removals and restoration projects are challenging, but engaged community members can make a huge difference. .

Recently, the Mill Pond Dam – a 140-foot long, head-of-tide dam on the Oyster River – had been the subject of heated debate in the Town of Durham, NH. In September of 2021, after months of public hearings with feedback from residents and experts alike, the town council voted to remove the 110-year-old structure. That decision was met with a citizens’ petition from those opposed to the dam’s removal. In response to the petition and the upcoming town vote that would decide the fate of the dam and a free-flowing Oyster River,



Photo by Melissa Paly

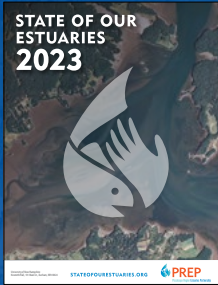
the Oyster River Conservation Alliance (ORCA), a grassroots group of primarily Durham residents, partnered with a number of citizens, scientists, and local environmental nongovernmental organizations to help spread the word of the benefits of dam removal. Through a truly citizen-led outreach campaign, ORCA encouraged residents to get out to vote! And with a turnout of more than double the average town election, the people of Durham agreed to restore the Oyster River with 74% of voters supporting removing the dam.

“It’s rare that we get such an opportunity to right environmental wrongs. Given a chance like this, we needed to unite, correct misconceptions, engage experts, talk with our neighbors, listen to our indigenous groups, and take decisive action. Putting in the time and consistency of messaging, as well as an unwavering team, led the Oyster River and the Great Bay Estuary to a much brighter future.”

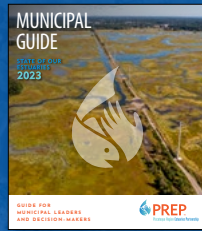
**SCOT CALITRI
ORCA CO-FOUNDER**

LOOK FOR OUR OTHER PUBLICATIONS

Visit StateofOurEstuaries.org to view and download.



A full 108-page *State of Our Estuaries 2023* report that has deeper explanations, tables, graphs, and future priorities.



A guide for municipal leaders and decision-makers that provides a short list of priority policy options for consideration and model efforts from our own communities.



For more information, contact:

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