

OUR ELIZABETH: EXECUTIVE SUMMARY



THE UPDATED STRATEGY FOR COMMUNITY-WIDE ACTION TO RESTORE THE ELIZABETH RIVER



VISION

A beautiful and healthy
Elizabeth River,
abundant in diversity,
accessible to all.

PURPOSE OF THE PLAN

To update the roadmap for
community-wide partners,
from governments to
businesses, residents,
scientists, students and
non-profits, to continue
one of the great urban river
restorations of our time.

GUIDING PRINCIPLES

Achieve equity and
environmental justice
through all actions
in this plan.

Take proactive steps to
address sea level rise and
a changing climate
throughout this plan.

CRITERIA FOR ACTION

Effective,
equitable,
fundable.

ABOUT THE PLAN

This plan is presented by the non-profit Elizabeth River Project in its mission to restore the environmental quality of the Elizabeth River through residential, government and business partnerships. The plan represents the consensus recommendations of a large group of stakeholders from all walks of life, Watershed Action Team 2021. About every six years since 1996, Elizabeth River Project has convened such a group to set the next priorities and action steps for all sectors and partners - not just the Elizabeth River Project - to continue progress with restoring a healthy Elizabeth; an urban river once presumed dead.

Today most major industries lining the shore are among 140 organizations - including government agencies, universities, non-profits and businesses - voluntarily documenting pollution prevention and wildlife habitat achievements as “River Star Businesses” with Elizabeth River Project. Meanwhile, more than 6,100 residents carry out 7 steps as “River Star Homes.” And thousands of students participate each year as “Resilient River Star Schools.”

Returning dolphins, river otters, bald eagles and seahorses are harbingers of success so far.

Find your starring role. Be part of the momentum of this fifth plan update.

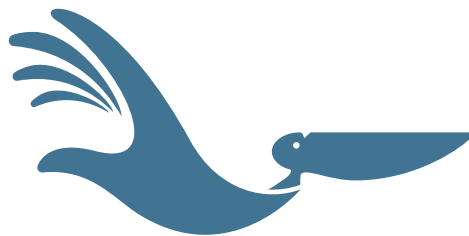
This plan was made possible by an Innovative Nutrient & Sediment Reduction Grant from the National Fish & Wildlife Foundation, with funding from the U.S. Environmental Protection Agency, the Altria Group and other generous supporters of the Elizabeth River Project. The Environmental Finance Center at the University of Maryland researched opportunities for financing regional environmental needs. The University of Virginia’s Institute for Engagement and Negotiation provided planning facilitation.

This material is based on work supported by the U.S. Environmental Protection Agency and the Chesapeake Bay Program’s Innovative Nutrient and Sediment Reduction grants program, which supports efforts with the Chesapeake Bay watershed to accelerate nutrient and sediment reductions with innovative, sustainable, and cost-effective approaches. The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its founding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or by the National Fish and Wildlife Foundation or its funding sources.

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ELIZABETH RIVER
PROJECT

INTRODUCTION

A river for all the people

Of the five plans we have spearheaded for the Elizabeth River across the last 25 years, this feels most like the first one, and that's a good thing.

The first plan for the Elizabeth brought old men to tears. I saw them and heard the standing ovation that went on and on. The setting was Nauticus, brand new then, in 1996, in the auditorium with the huge screen that rolls back to show the Elizabeth beyond. A staged sailboat floated past with a banner, "Making restoration a reality."

There was such power in that plan. The river's disparate interests - regulators, ship repairers, the port, watermen, environmentalists and more - had never before agreed on a common path to reclaim the health of their infamous waterway.

There was so much commitment to that first plan, on behalf of the original Watershed Action Team of 120 from all walks of life, they refused to prioritize any area as more important than another. Though we published a shorter "Executive Summary," the real plan was densely packed with so many hopes.

This 2022 version (See full plan at ElizabethRiver.org/WAPV) is also densely packed with many hopes. This

time, the power comes in part from confidence, with so much that has been achieved already. Half the hotspots, once so daunting, have been cleaned up. Dolphins are common in all branches. Industries, schools, government and residents readily help as "River Stars."

With that confidence comes the real power of this plan: Its commitments, new this go around, to raise up all the people to have fair access to the river, and to reduce unfair pollution burdens. Its heightened commitment to take on the existential challenge of our region and our times, climate change and sea level rise.

Thank you, Watershed Action Team 2021, a team of 150 who met doggedly throughout the year despite virtual meetings and COVID. At Elizabeth River Project, we have always believed this urban river would be cleaned up most effectively through collaboration. You have given that model its fullest expression.



Marjorie Mayfield Jackson,
Executive Director,
Elizabeth River Project



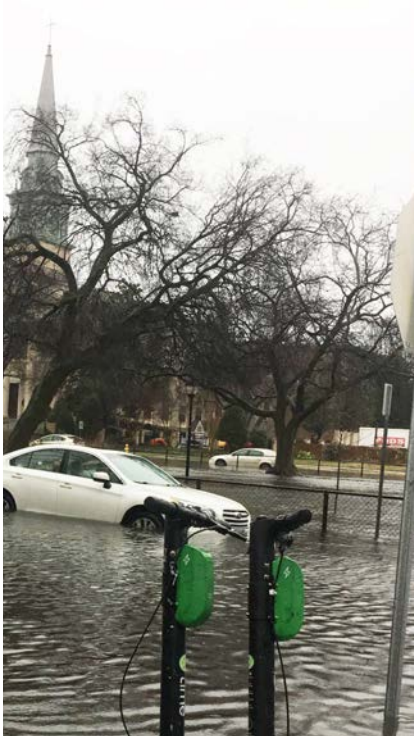


OUR ELIZABETH STRATEGY FOR COMMUNITY-WIDE ACTION TO RESTORE THE ELIZABETH RIVER

Executive Summary



Norfolk State University students grow native plants for river restoration.



We're ranked #19 in the world for assets at risk from increased flooding.

ACTION 1: Achieve fair and equitable restoration of the Elizabeth River, reducing unfair pollution burdens and advancing community-wide engagement

- The first enslaved people stepped ashore in America just a few miles north of the Elizabeth River. It's time to reclaim our river's history with people of color, while achieving more equitable river restoration and education.



- Look for this icon throughout the plan, indicating this plan's top priority: To reduce unfair pollution burdens for vulnerable communities while increasing these communities' access to river benefits; not as a stand-alone focus but integrated throughout all actions. The new Elizabeth River Environmental Justice mapping tool helps identify the most vulnerable communities for priority focus focus (<https://cmap2.vims.edu/EREJTool/>).

ACTION 2: Collaborate regionally to become a model for resilience to rising seas and a changing climate. Support this with strong research, examples, policies.

- One of the world's busiest ports, the Elizabeth River ranks 19th worldwide in value of assets at risk from tidal flooding by 2100. Sea level rise will significantly impact under-resourced communities while causing more toxics to enter the river through floodwaters. Massive changes in river habitat will occur.
- Two prongs of approach are prescribed: 1) Help reduce the root cause of sea level rise by reducing carbon emissions across the region; and 2) Facilitate better regional strategies to prepare for rising sea levels. While ambitious for an area that struggles with regional cooperation, a regional plan spanning the four cities may help the most.

10-YEAR GOALS:

- Enlist all sectors to reduce carbon emissions across all four river cities (Chesapeake, Norfolk, Portsmouth, Virginia Beach).
- Facilitate community resilience and adaptation to face rising sea levels and higher rates of flooding, especially for communities at risk.



View the full plan, ElizabethRiver.org/WAPV



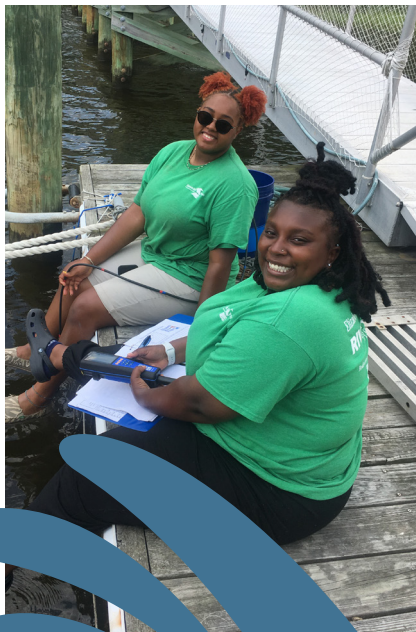
ACTION 3: Restore clean water. Reduce nutrients, chemicals and harmful bacteria and improve water clarity in the river, with a focus on reducing pollution in under-served communities and those vulnerable to rising seas.

• Once presumed dead after four centuries of abuse, the Elizabeth River rose to a “C” in the last scorecard. Improvement has come through the collaboration of many partners, guided in part by earlier versions of this plan. Water quality, though, still suffers. Some problems are new, including plastic pollution and “contaminants of emerging concern.” Others are chronic, such as excess nutrients, pathogens and suspended solids. Accelerating these risks: Increased intensity and frequency of rain as well as urbanization.

10-YEAR GOALS



- Expand water quality projects in vulnerable communities, identifying them through the Elizabeth River Environmental Justice mapping tool and other locally relevant data and prioritizing them in ranking criteria when partners pick and fund projects.
- Reduce nutrients and sediments so that all sections of the river earn “C” or better for nitrogen, phosphorus, and/or clarity by the 2030 State of the Elizabeth River Scorecard.
- Reduce bacteria so that all sections of the river earn “C” or better for Enterococci



ACTION 4: Create an inclusive river revolution led by people of all ages and walks of life who understand, embrace and promote the restoration of the Elizabeth.

- Not long ago, few even knew the name of the Elizabeth River. Urban legend had it, you would need six shots if you fell in.
- Today there is a groundswell of support for restoring the river. Up to 20,000 children yearly conduct hands-on investigations with Elizabeth River Project aboard its Dominion Energy Learning Barge, at its Paradise Creek Nature Park or through the non-profit’s Youth Resilience Program. Adults fly yard flags as River Star Homes and Bay Star Homes, committed to do their part alongside River Star Businesses. From the Virginia Zoo to Norfolk Botanical Gardens, Nauticus, area cities and the Hampton Roads Planning District, many join in presenting river ecology and stewardship programs.
- Yet large swaths of apathy remain. Of greatest concern are under-resourced communities with little access and few recreation opportunities to enjoy the Elizabeth.



ACTION 4: Cont'd

10-YEAR GOAL: Establish regional centers in each river city focusing on education and empowerment relating to environmental justice and equity.



5-YEAR GOALS:

- Elizabeth River Project and area schools and partners connect 25,000 children Pre-K-12th grade to the river each year with inclusive river education.
- Encourage community leaders, localities and educators to prioritize need in selecting where environmental education efforts take place.
- Listen to and empower the most under-resourced to become fully engaged in river restoration and education and fully informed of flooding and other environmental risks.
- Share the river's beauty & bounty, achieving more equitable opportunities for experiencing the river's benefits. Hold at least two fishing, kayaking or art events for these communities annually, attended by at least 500.
- Achieve an inclusive historical narrative about the Elizabeth River, led by Norfolk State University with participation of the maritime and environmental communities and all relevant area keepers of history.

ACTION 5: The goo must go! Clean up contamination in the river bottom while also reducing PCBs (highly toxic polychlorinated hydrocarbons) in fish.

- "The goo must go!" was the top focus of prior versions of this plan but drops down in priority this time because of so much progress. While Elizabeth's bottom still harbors hotspots with some of the highest levels of sediment contamination in the Chesapeake Bay, scientists estimate as many as half of the river's hotspots have now been addressed.
- The bottom of rivers forms the foundation of the food chain, and cleaning up remaining legacy contamination sites is still very important. Remaining legacy contaminants include PCBs and polycyclic aromatic hydrocarbons (PAH), both toxic to marine life and also posing human health risks.

10-YEAR GOAL: Reduce cancer in the indicator fish, the mummichog, to background levels in known hotspots by reducing polycyclic aromatic hydrocarbon (PAH) in river sediment to below 45 parts per million (a level at which adverse effects are seen in marine life).

5-YEAR GOALS:

- Achieve sediment cleanup goals for Paradise Creek and Atlantic Creosote in addition to cleanups already achieved.
- Improve data collection and dissemination.





Youth Conservation Interns at Paradise Creek Nature Park plant and care for native trees.

ACTION 6: Create and protect healthy wildlife habitat, despite rising sea levels.

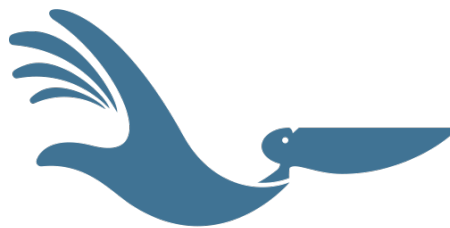
- The director of Virginia's Department of Environmental Quality vividly recalls his astonishment, decades ago as a biology student. Trawling the Southern Branch of the Elizabeth River for an hour and a half to catch fish to sample, he could land "only one toad fish," David Paylor recalls.
- Today many species of fisheries are abundant in the Elizabeth including large shrimp in the Lafayette branch. Dolphins are common; river otters are back and bald eagles are nesting. In fact, partners on the Elizabeth now lead the state in restoration of oyster habitat. With more than 50 million oyster larvae placed on dozens of new reefs, the emphasis shifts in this plan to other forms of habitat.

10-YEAR GOALS:

- To accommodate rising seas, ensure upward marsh migration paths for native wetlands and "living shorelines," restoration projects providing natural erosion control.



- Increase tree canopy by net 5% above existing canopy cover in environmentally and demographically vulnerable areas identified in the Elizabeth River Environmental Justice mapping tool.
- Conservation landscaping and living shorelines become the accepted standard for residential, commercial and public shorelines and gardens, measured by the adoption of standards, policies and guidelines by localities.
- Create or restore 10 acres of tidal wetlands, four acres of oyster habitat, and 15 acres of "riparian buffers" or shoreline plantings to filter pollution, control erosion and provide habitat, at participating River Star Homes and Businesses.



**ELIZABETH RIVER
PROJECT**

DO SOMETHING BEAUTIFUL

The Elizabeth River Project is the non-profit leading community-wide efforts to implement this plan. Join us.
ElizabethRiver.org

10 WAYS YOU CAN HELP OUR ELIZABETH



Composting is the fastest way to fight climate change.

1 Compost.

California now requires it by law as “the single fastest and easiest thing that every single Californian and every American can do to fight climate change” Organic waste that breaks down in landfills gets trapped without air and gives off methane, a potent greenhouse gas which contributes to climate change, NPR explains.



2 Make a plan to reduce your carbon emissions.

Start by calculating and reducing your carbon footprint at calc.zerofootprint.net. Own a business? Follow the lead of Elizabeth River Project's River Star Businesses that have set ambitious net-zero carbon targets such as the Port of Virginia, CMA CGM, and Cox Enterprises. Contact pboatwright@elizabethriver.org to get started.

3 Store all hazardous materials out of the way of extreme weather and rising seas.

Better yet, check with your city for hazardous waste disposal events and locations. Own a business? Make an emergency preparedness plan. Compile and share knowledge of where and how to shut off critical facility utilities, such as electric power, gas, water, hydraulics, compressed air and sewer systems. Visit AdaptVA.com for tools to assess risk, resources, case studies, forecasts and more.



Dog poop is a big contributor to river bacteria.

4 Scoop the poop.

The average dog creates 274 lbs of poop per year that can contribute harmful bacteria into the river if left unscooped. Clean up after your pet and help keep the river healthy for humans, fish, and wildlife. Earn your free River Star Home garden flag when you commit to this and other river-friendly practices, www.riverstarhomes.org.



When you flush leftover drugs, they can end up in marine life.

5 Don't flush medicines.

That's another step of being a good River Star Home. Many pharmaceuticals make it to the river when you flush them, since sewage treatment may not be up to removing them. Find a take-back program or mark out your name, stabilize the meds with kitty litter or sawdust, seal with a lid and put in the trash.



"Living shorelines" help adapt your shore to rising seas.

6 Consider a "living shoreline" to adapt your shore naturally to rising seas. Contact Elizabeth River Project, 757-399-7487. Not on the water? Plant native trees and shrubs to absorb the rain before it becomes polluted runoff and restore wildlife habitat. Visit local native plant nurseries like Southern Branch Nursery or Lady Fern's Native Plants.



The fish are back - and need you to fish responsibly.

7 Fish responsibly. Your "ghost gear" can be the deadliest litter.

"Ghost gear" is any discarded, lost, or abandoned, fishing gear in the environment such as crab pots, fishing line, hooks and weights. These can trap, entangle and kill marine life.

8 Tell the full story of the Elizabeth River. Bring your organization into the fold to help us compile and share a new, diverse river history with diverse audiences. Our goal is many partners and many mediums, from art to walking tours to websites and publications.

9 Schedule a student field trip

to the Elizabeth River Project's Dominion Energy Learning Barge or Paradise Creek Nature Park. Education organizations - join in a new effort to coordinate river education across multiple regional partners. Visit ElizabethRiver.org/education to learn more.



The Elizabeth River Project's Dominion Energy Learning Barge

10 Become a member of the Elizabeth River Project

at elizabethriver.org. The Elizabeth River Project coordinated development of this plan by many partners and is committed to keeping momentum strong for its implementation, with your help.



Join the movement to restore our home river: ElizabethRiver.org.

View the full plan, ElizabethRiver.org/WAPV

ELIZABETH RIVER WATERSHED ACTION TEAM 2021

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Bob Ake, Birder

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Carol Considine, Old Dominion University

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Jennifer Anne Cotting, University of Maryland Environmental Finance Center

Sydney Covey, STRUCTUR

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Madison Teeter, Wetlands Watch
Dan Terry, Lyons Shipyard
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View the full plan, ElizabethRiver.org/WAPV

