



# 2021 Year in Review & Action Plan 2022



Our Mission: To **Protect, Improve, and Promote** the sustainability of the St. Mary's River Watershed through the collaborative efforts of economic, agricultural, environmental, social, cultural, and political stakeholders in the community.

# Our 2021 Successes

Thanks to members like you, the St. Mary's River Watershed Association was able to maintain our programming, credibility, and effectiveness in 2021, despite the limitations posed by the COVID pandemic. Our successes are your successes because it is you who provide the moral and financial support that make this all possible. Your generosity is greatly appreciated!

## Large-Scale Oyster Restoration

- ⇒ (See cover photo) Maryland will restore 24.6 acres in the upper St. Mary's, of which 8.7 acres will receive up to 12 inches of granite stones as substrate, and 15.8 acres will receive oyster seed.
- ⇒ 35.1 additional acres meet restoration criteria as a result of harvest prohibition over the past ten years.
- ⇒ 5.0 additional acres restored (2012-2021) as the St. Mary's Oyster Reef Project.
- ⇒ SMRWA with funding from the National Fish & Wildlife Foundation will seed an additional 5 acres in 2022 and 2023.
- ⇒ Goal = 69.7 acres:  
State = 24.6; SMRWA = 10.0; Nature = 35.1

## SMRWA Assists with Studies on Oysters

- ⇒ Plastics impact on developing oysters—Dr. Laura Eireman & Rylin Sorini *SMCM'19* found that PET plastic substrate interfered with gamete development and reduced growth rates. At two years of age nearly all the oysters were female, whereas a control group were mostly male, as expected.



## Cara Gathers Oysters for Lab Analysis

- ⇒ Pathogens & parasites in oysters—Dr. Santos & Cara Newman *SMCM'22*—Oysters from six sites in the St. Mary's were collected and analyzed—results coming spring 2022.
- ⇒ Tyson Johnson's *SMCM'22* senior thesis studied the growth rate of oysters on the river bottom compared with oysters higher in the water column on our oyster reef site. Growth rate increased closer to the surface where algae is more abundant.



Contractor Deploying Granite Stones



## Oyster Restoration in St. Mary's River

- ⇒ Interns deployed 471 reef balls on our five-acre oyster reef project site, and made an additional 473 balls for deployment in 2022.
- ⇒ Prior to the natural spawn, we spread 380 bushels of oyster shells to harden 3,700 square feet of river bottom. After the June-July spawn this area had recruited 2.4 spat per shell.
- ⇒ Natural spat recruitment throughout the sanctuary was exceptional this year, countering most of the impact from the high mortality event in August 2020.



## Rotary Oyster Cage Build Service Day

- ⇒ Rotary District 7620 (Area 12) convenes monthly for service events—September was environmental service day.
- ⇒ Rotarians from five southern Maryland clubs made 100 oyster cages in just 90 minutes!



## Future Bay Leaders + Summer Interns

- ⇒ Interns learned skills and gained experience in a field directed toward their future professions.
- ⇒ They learned to be capable watercraft operators, educators on sustainability, and successful advocates for the Bay.
- ⇒ Interns learned life lessons like how to evaluate risk to determine how best to proceed with decisions.

## Monitoring Spatfall and Water Quality

- ⇒ 2021 marked our fourth year studying oyster recruitment throughout the tidal St. Mary's.
- ⇒ Throughout most of the tidal river, spatfall was best this year followed by 2020—two good years in a row.
- ⇒ Spatfall is highest in areas where oyster density is high, such as the sanctuary.
- ⇒ Our data adds to the body of science on larval drift and natural recruitment success.
- ⇒ Watermen have used our data to decide how they might enhance the public wild harvest by shelling “reserve” areas, which recruit wild spat for future harvests.
- ⇒ This study is contracted by the Department of Natural Resources to our partner, St. Mary's College of Maryland.

# Top Challenges for 2022

## Finding Safe Ways to Engage Youth

- ⇒ 2022 will likely begin with continued COVID precautions and ongoing restrictions in school programs. We have proposed in-school field trips in April to engage students out-of-doors in making reef balls in school parking lots. Students will learn about Chesapeake Bay health and the importance of oysters in the ecosystem.

## Working with Our Local Watermen

- ⇒ We will continue the study of spat recruitment in the St. Mary's River and provide useful data and recommendations for enhancing the local wild harvest.
- ⇒ We will continue to assist homeowners with installing rain gardens, under dock oyster reefs, and greening their lifestyles.

## Informing the Public on PFAS

- ⇒ In 2021 we published a guide to PFAS in St. Mary's on our website, providing the public with information on how they can reduce their exposure to these toxic chemicals.
- ⇒ We will advocate for federal regulations and state advisories on the health impacts from PFAS in food—particularly in seafood.

## Oyster Restoration & MGO

- ⇒ With a grant from the National Fish & Wildlife Foundation, we will restore oysters on 5 acres in the St. Mary's River on bottom that currently has very few oysters.
- ⇒ Our MGO program will continue to support more than 160 volunteers hosting 600 oyster cages at about 100 piers along the St. Mary's River.
- ⇒ We will continue to support the Breton Bay and St. Clements Bay MGO programs through our formal partnership with Friends of St. Clements Bay.

## Sharing Our St. Mary's River

- ⇒ Access to the river is free at St. Mary's College of Maryland (kayaks & paddleboards) and at the Piney Point county boat ramp. Access is also available for a fee at Dennis Point Marina. Let's all get out and have fun!

Thank you for your support and dedication as a member of the St. Mary's River Watershed Association.

COVER PHOTO: Two huge barges are staged in Horseshoe Bend. One is piled high with granite stones and the other with the crane that will be used to deploy the stones onto the river bottom, as part of the large-scale oyster restoration of the St. Mary's oyster sanctuary.

