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WATERSHED WATCH

ST. MARY'S RIVER WATERSHED ASSOCIATION
PO Box 94
St. Mary's City, MD 20686

June 3, 2021

Restoration Continues in the St. Mary's River

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INSIDE THIS EDITION

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Over the past month, executive director Bob Lewis, program director Jack O'Brien, and a number of hardworking volunteers have deployed reef balls, concrete rubble, and oyster shells on the five acre restoration site adjacent to St. Mary's College of Maryland in the St. Mary's River Oyster Sanctuary. The manufacturing and deployment of reef balls and other substrates has been an ongoing project for the summer work teams of the St. Mary's River Watershed Association (SMRWA). This year the team has deployed 354 reef balls bringing the total number of reef balls on the 5-acre reef site to well over 2000. (We have another 75 to deploy this spring.)

CANCELLED

A River Affair



Of the 429 reef balls planned for deployment this year, 273 were manufactured last summer in partnership with Carruth & Son at their Lexington Park concrete plant. [Coastal Conservation Association Maryland](#) (CCA) provided an additional 135 reef balls that they made two

years ago. Both SMRWA and CCA have worked to engage numerous elementary, middle, and high school students to construct reef balls as a part of educating them about the health of waterways and the



importance of oysters in the Chesapeake Bay ecosystem.

The life cycle of a reef ball begins one year before it will be placed into the river. Building and "hatching" of reef balls is a two day process; the first day is spent setting up the molds and pouring the concrete, the second is



spent taking the molds off and gingerly rolling the balls off their platforms. Next the reef balls are moved into the spot where they will spend the next year "conditioning" so that the PH of the concrete becomes more hospitable for oyster larvae. Finally, when the time comes to deploy the structure into the river, it is transported to the St. Mary's College waterfront, rolled down the dock onto a barge and pushed into the river. Once in the river the reef balls are placed into position depending on the structure of the reef being constructed. The five acre reef site contains thriving artificial reefs of many shapes and sizes.

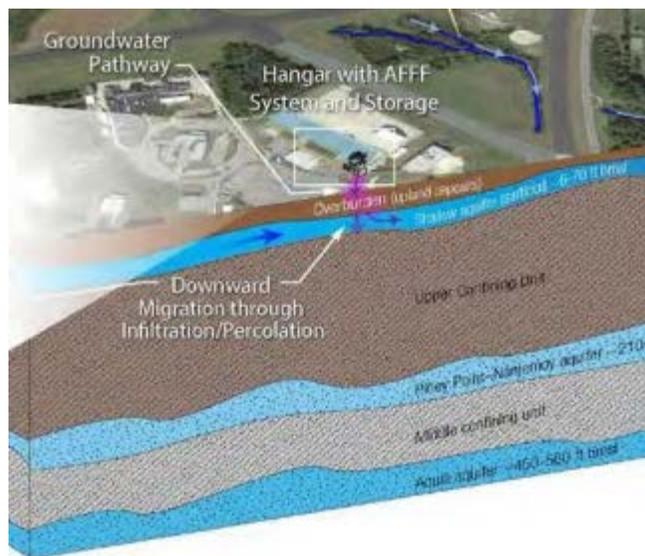
Over the past years the methodology to deploy reef balls has been refined to be more and more efficient with each reef ball that has been deployed. The team has been able to deploy as many as 60 reef balls in four hours (that's a reef ball in the river every four minutes!). However, the most rewarding part of reef ball deployment is not when the day is over and all of the reef balls are in the river, it's when you are in the water moving the structures into place and one looks around at a reefs that were deployed years ago to see them completely covered in oysters, hook mussels, barnacles, and other aquatic life.



In addition to reef ball deployment, the SMRWA team has also spent time in the past month hardening bottom with oyster shells. The oyster shells are being placed on a site in the reef that contains few oysters and a firm mud bottom. The goal is to harden the bottom to three inches thickness of shells thus providing natural larvae a hard surface where they will live the rest of their lives. Timing is important: the reef balls and shell are being placed into the river ahead of the wild oyster spawn. Hopefully good reproduction this summer will populate the shells and reef balls and the substrates could be completely encrusted in one inch oysters by late fall.

PFAS Threat to Private Wells

The Navy has disclosed PFAS contamination in soils and surface waters at three sites in southern Maryland—Patuxent Naval Air Station, Webster Outlying Field, and the Naval Research Center. The levels of PFAS detected are alarming and pose a significant threat to the immediate areas, to nearby waterways, and to our deep aquifers where most of us get our drinking water. And yet the Navy has suggested there is no threat to our aquifers because they are below impervious confining clay layers. "There is no threat of migration to the deep aquifer..." one Navy spokesperson told SMRWA at the March 3, 2020 meeting held at the Lexington Park Library.



SOURCE: Navy RAB virtual meeting April 28, 2021
(left click to enlarge)

The science does not support the Navy's position. First, other toxins such as the gasoline additive MTBE has migrated into confined aquifers in many locations nationwide. The EPA warns of this type of contamination on their [website](#). PFAS is highly soluble, like MTBE, and

readily migrates through groundwater and soils. Maybe our confining layers are more impervious than other places?

Second, there are tens of thousands of wells roughly 200 or more feet down to the aquifers and each one is a conduit between the surface and the aquifer below. Each one poses a slight threat as a route for PFAS to enter our drinking water supply. Abandoned wells are most likely to pose the biggest threat. How many were properly sealed? And there are some that have sunk below the surface of the Chesapeake as our land area subsides and Bay waters rise. Were these sealed properly? Salt water intrusion has occurred in some parts of the state—where did the salt water come from? Answer: Above a confining clay layer.

The Navy should come clean on this fact—our aquifers are threatened. The Navy needs to quickly step up and begin testing private and public wells in and around these three contamination sites. A long term monitoring program of these wells should also be funded and implemented to insure no future contamination occurs. Clean-up of these sites must begin immediately before PFAS migrates out and down.

[NAS RAB April 2021 Meeting PaxRiver & Webster](#)

[NAS RAB Report Chesapeake Beach](#)

[SMRWA PFAS Webpage](#)

A River Affair Fundraiser Cancelled

Please donate what you might have spent at the affair.

[Click here to donate online.](#)



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.

[We're on the web!](#)

www.smrwa.org



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Upcoming Events:

- A River Affair
Will Not Be Held May 31
Due to Covid
- RiverFest 2021
Saturday September 25
11 am to 4 pm
Historic St. Mary's City Museum

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