WATERSHED WATCH
ST. MARY'S RIVER WATERSHED ASSOCIATION
PO Box 94
St. Mary's City, MD 20686
October 14, 2020

State Says No Concern over PFAS Chemical Pollutants in St. Mary's River

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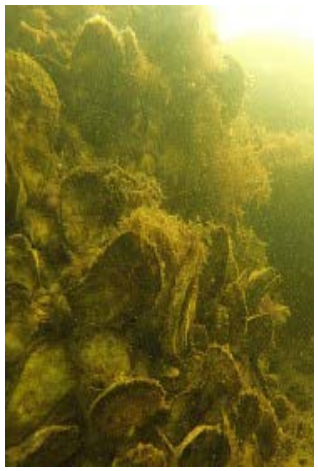
INSIDE THIS EDITION

SAVE-THE-DATE
A River Affair
Monday, May 25, 2020
1 to 4 pm
Ruddy Duck Seafood & Alehouse
Purchase Tickets



The Maryland Department of the Environment has completed their St. Mary's River Pilot Study of per- and polyfluoroalkyl substances (PFAS) and stated in an October 5 press release, "No levels of concern found within study area..." MDE studied surface water at 23 sites in the St. Mary's River and St. Inigoes Creek, one site in Smith Creek, two sites at the mouth of the Patuxent River, and one site on the eastern shore (Fishing Bay). Levels of individual PFAS compounds detected ranged as high as 6.72 ppt (parts per trillion) for the compound PFOS in the central St. Mary's River. The State tested for 36 PFAS compounds and total PFAS for this same site was 13.45 ppt.

PFAS compounds in the environment, including in foods and drinking water, are an emerging concern for human health and safety. Human exposure to PFAS is associated with cancer, birth defects, developmental damage to infants, and impaired functioning of the liver, kidneys, and immune system. First manufactured and used in industry in the 1940s, today more than 8,300 of these compounds, known as "forever compounds" for their persistence in the environment, are used in a wide variety of household products, industrial coatings, and fire-fighting foams. Last winter attention was heightened at a Navy-held public meeting where the Navy discussed the use of PFAS-laden fire-fighting foams at the Patuxent Naval Air Station. An earlier study from 2002 found high levels of PFAS in oysters along the Base shoreline at Hog Point near the mouth of the Patuxent River.

Source: Australian Department of Defence

"The Maryland Department of the Environment is committed to developing a comprehensive plan for understanding, communicating and reducing unacceptable risk related to PFAS," said Maryland Environment Secretary Ben Grumbles in an October 5, 2020 press release. "The results from the St. Mary's River pilot study provide valuable information as we move forward in future monitoring of PFAS to protect the environment and public health."

In a study conducted last June, the St. Mary's River Watershed Association tested the surface waters and oysters of the St. Mary's River. Those findings were very similar to the state's findings for surface waters and for oysters.

"We are encouraged to hear the state's finding are closely matched to ours. Testing for minute quantities of these compounds is extremely difficult and the similarities of the two studies indicate a high level of credibility," said Bob Lewis, executive director of the Association. "It's likely that the St. Mary's River is very similar to many others rivers in our Bay as these compounds are everywhere in the environment."

But a follow-on study last month, funded by Public Employees for Environmental Responsibility (PEER) and the Association, tested oysters at two locations in the St. Mary's River and found three PFAS compounds.

PFAS in St. Mary's River Oysters (September 2020)

PFAS	Mouth of St. Inigoes Creek	North Side of Church Point
Perfluorobutanoic acid (PFBA)	800 ppt (J)	
Perfluoropentanoic acid (PFPeA)	220 ppt (J)	
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)		1,100 ppt (J)
TOTAL	**1,020 ppt**	**1,100 ppt**

(J) indicates that these PFAS are present, but it is difficult to quantify the precise concentration

The Association/PEER study on oysters differed from MDE's in that the level of detection was a magnitude higher. In other words, MDE's study found no detects in parts per billion. The Association/PEER study detected PFAS in parts per trillion. The three compounds that were detected in oysters were at levels too low to be precise, so the lab estimated their concentration.

Not everyone agrees with MDE's determination that there is no concern. The Environmental Working Group, a non-profit, non-partisan organization dedicated to protecting human health and the environment, has studied PFAS-related health concerns and claims that no level of

exposure is acceptable. EWG is pushing for federal legislation to ban use and production of all PFAS related chemicals and to set food and drinking water limits at 1 ppt.

On its website, the Center for Disease Control states, "CDC/ATSDR recognizes that exposure to high levels of PFAS may impact the immune system. There is evidence from human and animal studies that PFAS exposure may reduce antibody responses to vaccines (Grandjean et al., 2017, Looker et al., 2014), and may reduce infectious disease resistance."

"The larger issue is these chemicals continue to be manufactured and continue to be largely unregulated," said Timothy Whitehouse, Executive Director of PEER, in response to the PEER/Association September study that detected PFAS in St. Mary's River oysters. "Until the state and federal governments step in to regulate them, the problem will only grow worse. These levels should be a red flag for Maryland officials, and more comprehensive testing of other fish and shellfish must be conducted."

"The public needs to know that these contaminates are out there. And we all need to understand that these compounds are not just in some oysters, they are found in everyday products such as sunscreens, water repellant fabrics, paints, food containers, non-stick cookware, cosmetics, pesticides, artificial turf and other foods," said Lewis. "It's a cumulative exposure from multiple sources."

Studies show that nearly every human being has PFAS in their blood. Most experts agree that seafood and contaminated drinking water are the two biggest sources for human ingestion. Recent studies are looking at PFAS absorption through the skin especially from cosmetics and sunscreens.

MDE's full report can be found at:
https://mde.maryland.gov/programs/Water/FishandShellfish/Documents/St%20Mary%27s%20PFAS%20Pilot%20Study_09242020.pdf

The Association plans to publish on its website a white paper "PFAS in St. Mary's" by the end of this year. www.SMRWA.org

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ST. MARY'S RIVER Watershed Association

Upcoming Events:

- Oyster Planting
  Saturday October 17
  Horseshoe Bend
  (Invitation only due to pandemic)

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.

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