



# THE FLOW OF... TRASH FREE WATERS

## ISSUE 13

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*This newsletter is intended to provide the latest information to all of our Trash Free Waters (TFW) partners and friends.*

*The Flow...of Trash Free Waters is our opportunity to highlight recent successes, as well as shine a spotlight on news and other related items. It is produced by the U.S. Environmental Protection Agency, with support from IEC. Mention of commercial products, publications, or Web sites in this newsletter does not constitute endorsement or recommendation for use by EPA, and shall not be used for advertising or product endorsement purposes.*

## HOW'S IT FLOWING?

### Administrator Wheeler Discusses Marine Litter During Visit to Brazil

In February, U.S. Environmental Protection Agency (EPA) Administrator Andrew Wheeler became the first Administrator to visit the Amazon. He participated in a variety of events in Manaus, Brazil to increase awareness around recycling and projects that address marine litter.

“Building partnerships to reduce marine litter is one of my priorities. EPA looks forward to developing collaboration with Brazil to reduce marine litter through the sharing of information and best practices,” said Administrator Wheeler.

Among other activities, Administrator Wheeler met with Minister of the Environment Ricardo Salles and Amazonas State Governor Wilson Miranda Lima to discuss shared environmental challenges including marine litter. He joined them to witness the



*Administrator Wheeler, Minister Salles, Governor Lima, and Congressman Ramos participate in a beach cleanup event.*

signature of a Brazilian decree to implement a national agenda on urban environmental quality, in partnership with the Amazonas state government. This program promotes stakeholder engagement to reduce the volume of

plastic waste transported by the rivers to the oceans.

Following the signing, Administrator Wheeler volunteered with other dignitaries and community members to clean up trash at Ponta das Lajes beach.

### Philadelphia “Community Cans” Ribbon Cutting Event

On December 12th, 2019, a ribbon cutting press event was held in recognition of the ongoing Philadelphia Community Cans project. Community Cans is a public-private partnership program through which the City of Philadelphia partners with community organizations, commercial corridor managers, and businesses to increase public trash can coverage along Philadelphia commercial corridors. Community partners take responsibility for maintaining the cans, which are strategically

*(continued on p.2)*



*Tiden Middle School students painting can lids for Southwest Philly.*

(continued from p.1)

placed to improve litter conditions along each specific corridor. The City consults with each participating group to determine the best location for each Community Can, using [City-wide Litter Index](#) data along with maps of existing trash can locations to place the Community Cans to most effectively reduce litter and illegal dumping.

The initiative was adopted under Clean PHL's Zero Waste and Litter Cabinet, which is working towards the ambitious city-wide goal of becoming zero waste and litter-free by 2035. The Partnership for the Delaware Estuary, the Philadelphia Water Department, and Mural Arts Philadelphia are additional partners. This project was supported by a 2018 EPA grant. Read more about this initiative at: <https://www.metro.us/news/local-news/philadelphia/trash-can-painted-art-installed-southwest-philly-juniata-park> and <https://cleanphl.org/portfolio-item/2018-progressreport/>.



Photo courtesy of the Partnership for the Delaware Estuary.

## Trash Free Texas Adopt-a-Spot Program Expands

The Trash Free Texas (TFTx) Adopt-A-Spot site and online mapping tool works to foster a litter-free environment in Texas watersheds and track trash removal activities by connecting volunteers to litter cleanup opportunities. Locations from Waco, Texas have just been added to the Trash Free Texas network thanks to ongoing engagement with regional stakeholders and partners including affiliate chapters of Keep Texas Beautiful, the Texas Department of Transportation, the North Central Texas Council of Governments, and more.

New communities are coming on board each month as the initiative expands across the state. The TFTx team is currently developing a Communications and Outreach Strategy for the program to help enhance reach and solidify brand and messaging. This strategy will be complemented by new outreach material explaining the responsibilities of joining as a coordinator and helpful resources to get started. Learn more at: <https://www.trashfree-texas.org/volunteer>.

In addition, on April 15, 2020, TFTx Champions from the City of Fort Worth, Keep Texas



Beautiful, and the host, Texas State University, held a webinar in which they explained the history, use and evolution of this important tool. Look for the archived webinar at: <https://www.epa.gov/trash-free-waters-webinar-series>.

## Alaska Marine Debris Summit

On February 14th, 2020 the EPA Alaska Operations Office hosted a Marine Debris Summit, "Leveraging our Collective Efforts, Identifying Needs, and Moving Forward," to complement the [Alaska Forum on the Environment](#) hosted by the National Oceanographic and Atmospheric Administration (NOAA). The Summit attendees included other federal agency partners (e.g., NOAA, US Department of Agriculture, National Park Service), tribal representatives, local and state government representatives, academics, NGO partners, and representatives from Senator Sullivan's office.

The morning sessions characterized marine debris in Alaska and discussed

microplastics in the Arctic. The afternoon session, led by EPA Region 10, focused on marine debris disposal. A special emphasis of the meeting was on best practices, successes, challenges, needs, and case study lessons learned regarding the nexus of waste disposal and marine debris. Summit sessions worked to: 1) Characterize marine debris issues onshore/nearshore, reporting, and points of contact, 2) Discuss microplastics in the Arctic, 3) Cover marine debris disposal in Alaska through case studies and a discussion panel, 4) Identify action plan inputs, and 5) Discuss next steps.

The session on characterizing marine debris and reporting highlighted impediments to disposal and solutions to address these issues. Cost, lack

of transportation infrastructure, inaccessibility of shoreline, volume and weight of debris, contaminants/hazardous waste, and a large geographic area are all potential barriers to more efficient marine debris cleanups. Prevention efforts such as recycling education, reduced plastic consumption, and improved infrastructure for disposal of old fishing nets and gear were identified as strategies to reduce the impact of marine debris in the region. Clean up protocol training and assistance in navigating funding opportunities were identified as community needs moving forward.

—Layne Marshall,  
EPA ORISE participant,  
[Marshall.Layne@epa.gov](mailto:Marshall.Layne@epa.gov)

## Trash Capture in the Proctor Creek Watershed

Trash capture in the Proctor Creek watershed serves as an example of interagency collaboration and private sector engagement to advance clean, trash-free communities. The Proctor Creek Urban Waters Federal Partnership ambassador and the Region 4 Trash Free Waters coordinator work closely to leverage resources and reach goals within the community. Thanks in part to their advocacy, Coca-Cola has invested in the watershed to enhance trash capture efforts as part of their World Without Waste campaign. Coca-Cola has now funded two trash capture projects in six locations within the Proctor Creek Watershed. One project is being carried out in partnership with the Chattahoochee RiverKeeper and the other through the National Recreation and Park Association (NRPA) and City of Atlanta. Various trash capture

devices such as litter gitters have been installed both in the main spine of Proctor Creek and in several tributaries. They are placed in accessible and highly visible areas close to elementary schools, greenways, and pedestrian walking bridges where people can view first-hand the amount of in-stream trash being collected.

Other aspects of the projects include data collection using the EPA's Escaped Trash Assessment Protocol (ETAP) tool, continued maintenance training and workforce development, and outreach and education with schools and adult learning centers. This trash capture network is considered a demonstration project which can be used to provide information for parties domestically and abroad that could be interested in planning and designing a similar



Photo courtesy of Georgia Stand Up.

Trash capture device in Proctor Creek, Atlanta.

system of traps to clean up waterbodies.

The Proctor Creek UWFP is currently discussing next steps for the project after it officially ends in December 2020.

Litter gitter technology has greatly expanded since the first test site in 2017. By the end of

March 2020, there will be a projected 29 total active litter gitter sites throughout the nation including 6 in the Dog River Watershed outside Mobile, AL and 3 in the Mill Creek Watershed outside Cincinnati, OH.

—Chris Plymale, USEPA Region 4, [Plymale.chris@epa.gov](mailto:Plymale.chris@epa.gov)

## Stormwater & Litter Workshop

On February 10th, Clean Virginia Waterways hosted the 2020 Stormwater and Litter Workshop in Ashland, VA. The goal of the workshop was to help stormwater and litter-prevention professionals address urban trash pollution and implement strategies and engineered solutions to intercept trash. Topics included the connection between stormwater and our oceans, state legislative solutions to reducing litter, stormwater technology, using MS4 permits to monitor and control plastic pollution, and reducing littering behavior

through community-based social marketing. The second half of the workshop included a group discussion and exercise to help direct future trash interception efforts under the Virginia Marine Debris Reduction Plan. The Clean Virginia Waterways Stormwater & Litter Workshop has now become an annual event for professionals to gain insight and training.

Visit <http://www.longwood.edu/cleanva/stormwater.html> to view the workshop presentations.



## Update on Hayward Youth Based Capture Expansion

Under the San Francisco Bay Area storm-water permit, Hayward is one of 76 municipalities responsible for achieving a 100% reduction in trash discharges into the Bay by 2022. From 2015- 2019, the City of Hayward installed three large trash capture devices treating over 1,000 acres of the city's watersheds, with the goal of preventing over 20,000 gallons of trash from entering San Francisco Bay per year. EPA's

San Francisco Bay Water Quality Improvement Fund provided the funding to support this project. A fourth trash capture device will be implemented this fall in another high trash-generating area. The scope of this project includes not only capturing trash, but also characterizing and quantifying the trash collected and implementing actions to engage the public (specifically youth) to prevent littering. Hayward is continuing to

implement a 1st-through-12th grade trash reduction curriculum in all schools during the project period in partnership with public and private schools and college interns. High school curricula will include more sophisticated aspects of trash reduction, including trash capture design and attending trash capture device installation and/or clean-outs. Learn more [here](#).

## New Story Map Highlighting Marine Debris Clean Up in Samish Traditional Territory

A GIS story map tool was recently developed by the Samish Indian Nation Department of Natural Resources (DNR) with support provided by EPA Region 10. Over the past six years, the Samish DNR partnered with the Washington Department of National Resources, Washington Conservation Corps, Veterans Conservation Corps, and EarthCorps to remove over 76,000 pounds of treated wood and other marine debris (equivalent to 18,000 gallons of chemical creosote) from public and private shorelines of Skagit County, Island County, Southern Whatcom County and the San Juan Islands within the San Juan Archipelago off the coast of mainland Washington. Projects highlighted in the story map include removing creosote treated wood and other debris like plastic and Styrofoam that washes onto beaches, lagoons, and estuaries, as well as removing derelict shoreline structures.

The story map highlights which shorelines were addressed under the cleanup project each year. In 2017, the Samish DNR

decided to survey the region for marine debris before sending out cleanup crews. They found that over 325 creosote or marine debris sites were present within the San Juan Islands and used imagery, GPS coordinates, and size of debris to expedite the process and prioritize highly contaminated shorelines. Pre-cleanup data collection was used to make informed decisions about where to allocate resources for efficient cleanup and removal efforts. In 2019, the team resurveyed the 2017 survey area and found 141 fewer contaminated sites.

The Samish DNR and its partners plan to continue their cleanup efforts this summer. Restoring the Samish Territory ensures the protection of the Samish People's cultural identity which is deeply connected to the Salish Sea coastal environment. Check out the Creosote Marine Debris Data Summary Report Story Map here: <https://storymaps.arcgis.com/stories/907423ba45d84895b769db1dbd061502>



*A creosote piling being removed from Lopez Island, WA.*

Photo from the Samish Indian Nation story map.

## Salish Sea Hydrodynamic Model for Microplastics Hotspots

In 2018, EPA hired the Pacific Northwest National Laboratory (PNNL) to use their Salish Sea Hydrodynamic Model to examine transport and accumulation patterns of waste plastics entering the Salish Sea, the complex fjord system shared by Washington State and British Columbia. The southern part is frequently referred to as Puget Sound. Coast Salish people in the region use the term Salish Sea for these waters, north and south, to highlight their longstanding stewardship of it and the cross-border interconnections. The increasing level of escaped plastic trash in the Pacific Northwest has been identified as a significant concern to the health of the Salish Sea marine ecosystem.

The Salish Sea Model (SSM) was developed through a collaborative effort between PNNL and state and federal agencies to model water circulation and transport throughout the Salish Sea watershed. The 2018 Trash Free Waters study sought to answer four questions: 1) If microplastics were uniformly entering the Salish Sea, where would they accumulate? 2) How is the micro plastic load from wastewater treatment plants expected to travel in the

Salish Sea? 3) How great is the potential for microplastics to accumulate in regions where shellfish beds are located? and 4) Where would macro trash (greater than 5 mm) accumulate if it was uniformly entering the Salish Sea watershed?

When the questions were posed, the uniform entry of microplastics seemed unlikely, and the model run was proposed to better understand comparative factors between scenarios. Since the model run, EPA has become aware of findings that indicate that tire particle wear, a normal part of tire use, may be releasing micro plastics in what is indeed a broad scale across the landscape and that storm water is bringing those particles into waterways such as the Salish Sea.

While the SSM is geographically specific, there are similar hydrodynamic models in other waterways. Using them for studies like this help us all determine where to focus our efforts. For more information on the Salish Sea Model, visit <https://salish-sea.pnnl.gov/SSM/projects/marine-pollution/microplastic-transport.stm>.



Salish Sea Model Domain (from website)

## Coastal Heartland NEP “Trash Tackle” Cleanup Event

The Coastal & Heartland National Estuary Partnership (CHNEP) held a ‘Trash Tackle’ on Saturday, February 29<sup>th</sup>, in partnership with Keep Charlotte Beautiful and to celebrate #EmbraceTheGulf2020 and Great American Cleanup month. CHNEP staff educated the 33 volunteers about single use plastics and microplastics. Volunteers and staff then picked up marine debris out of the mangroves and shoreline along Charlotte Harbor in Punta Gorda, FL. This event was part of a monthly volunteer event series that CHNEP offers to educate and equip citizens to protect and restore the natural resources in their own communities.

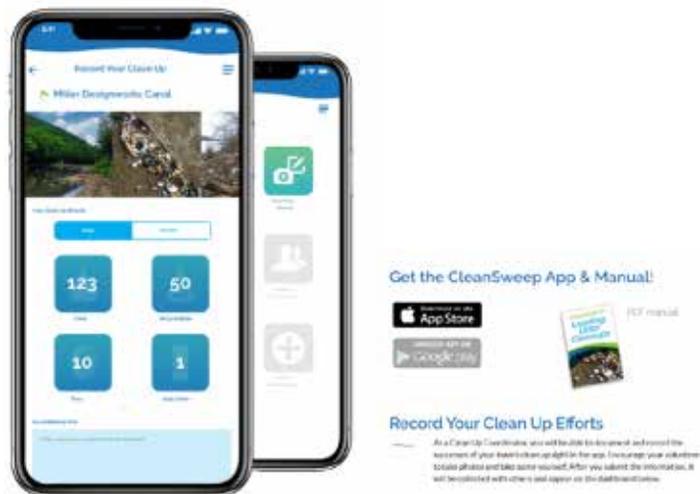


Volunteers at the CHNEP cleanup event (photo courtesy of CHNEP)

## Schuylkill CleanSweep App

The new and improved Schuylkill CleanSweep App (Streets and Walkways Education and Enforcement Program) is officially up and running. CleanSweep is a free tool which can be used to find and record cleanup efforts, register cleanup events and teams, and report and adopt litter hotspots. The expansion of the CleanSweep App was designed to help volunteer cleanup coordinators document and record team successes within the watershed. The app is complemented by a "Guidebook for Leading Litter Cleanups." Project sponsors include the

Schuylkill Action Network, Partnership for the Delaware Estuary, Schuylkill River Greenways, and William Penn Foundation. This litter data collection system expansion was supported by a 2018 EPA Urban Waters grant. Metrics and photos uploaded through the app will also be displayed on the Schuylkill CleanSweep website here: <https://schuylkillcleansweep.org/>. This app will serve to enhance the ongoing work being done in the Schuylkill watershed to connect people, science, and nature for a healthy Delaware River and Bay.



*Schuylkill CleanSweep app and manual.*

## The Rapids: News Drops

### NEWS

#### Gulf of Mexico Trash Free Waters Grant Program

On September 24th, 2019, EPA announced the availability of grant funding for innovative projects focused on reducing the amount of trash in our waterways through trash prevention and/or removal in the Gulf of Mexico. Overall, EPA's Gulf of Mexico Division received just over 40 grant applications. Final awards are expected by June 2020. For updates, visit the Trash Free Waters website at: <https://www.epa.gov/trash-free-waters>

#### Save Our Seas 2.0

On January 9th, the Senate unanimously passed the Save Our Seas 2.0 Act (SOS 2.0). The related bill in the House is still in committee. The legislation seeks to help reduce the creation of plastic waste, find uses for the plastic waste that already exists to keep it from entering the oceans, spur innovation, and tackle the problem on a global scale. It builds on the initial progress of the Save Our Seas Act of 2018.

#### NOAA Announces Release of 2020 Florida Marine Debris Reduction Plan

The 2020 Florida Marine Debris Reduction Plan was created through the voluntary, collaborative effort of 41 organizations to address marine debris in Florida through coordinated actions. This Reduction Plan encompasses work that will be undertaken in the next five years (2020-2025) and establishes a comprehensive framework for strategic action to help ensure that Florida and its coasts, people, and wildlife are free from the impacts of marine debris. Learn more at: <https://marinedebris.noaa.gov/regional-action-plan/florida-marine-debris-reduction-plan>

#### Nurdle Patrol Update

In February 2020, Nurdle Patrol volunteers removed 8,524 nurdles from beaches primarily around the Gulf of Mexico. (Nurdles are small round plastic pellets that are the base material used to manufacture most plastic items.) The [Shedd Aquarium](#) in Chicago is now partnering with Nurdle Patrol, and will be holding education programs and spreading the word in the Great Lakes region. This makes 28 Nurdle Patrol partners to date. In addition, The [Nurdle Patrol methodology paper has been published](#) and is open access. Facebook page [Nurdle Patrol](#) now has 2,162 followers. Visit [www.nurdlepatrol.org](http://www.nurdlepatrol.org) for more information.

—Jace Tunnell, Mission-Aransas National Estuarine Research Reserve, [jace.tunnell@austin.utexas.edu](mailto:jace.tunnell@austin.utexas.edu)

## FUNDING OPPORTUNITIES

### National Science Foundation Proposal: Micro- and Nano-plastics

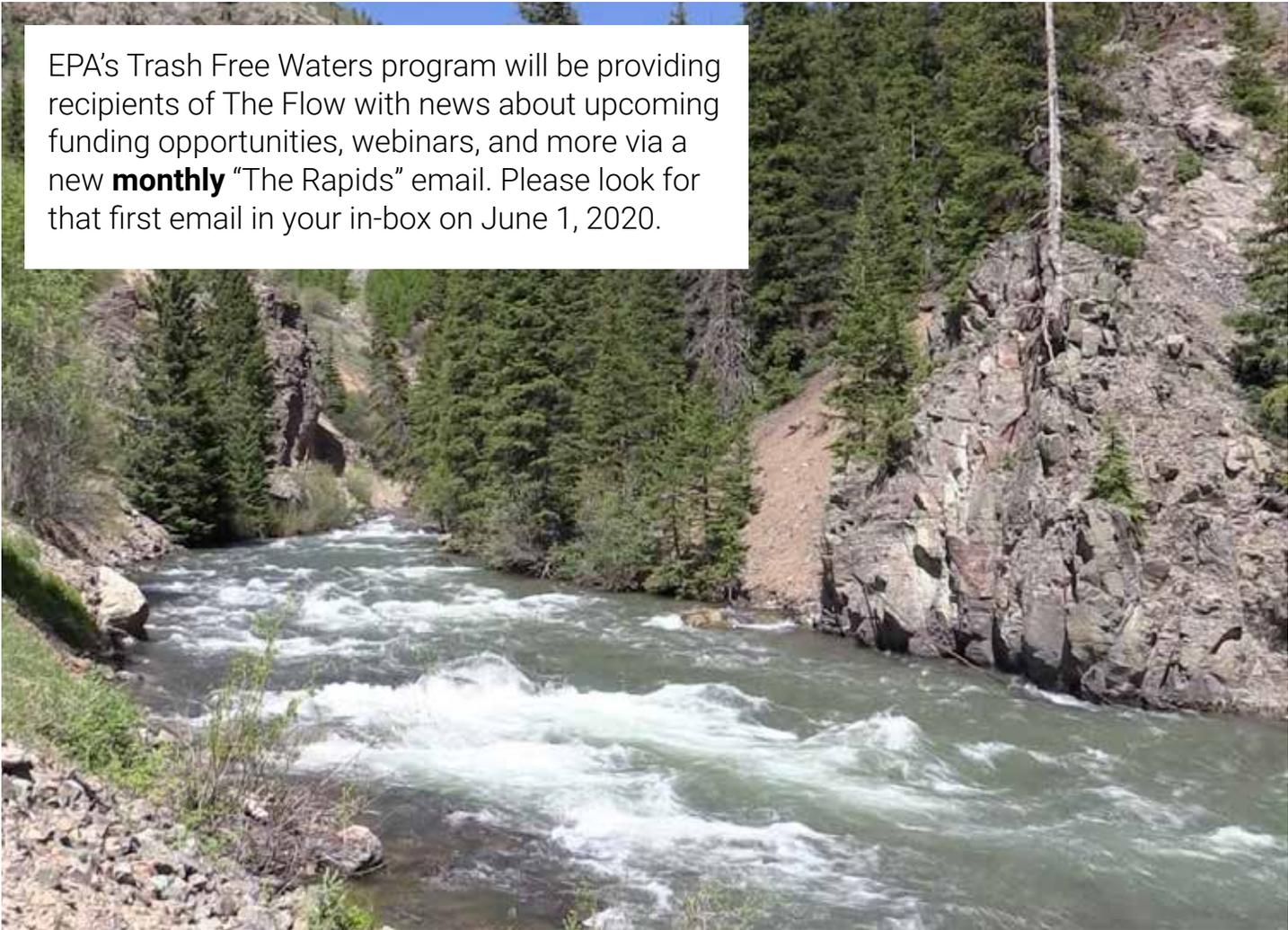
The National Science Foundation seeks proposals that tackle some of the fundamental scientific questions underlying micro- and nano-plastic characterization, behavior, and reactivity in the environment, as well as their elimination from land and water systems. NSF is considering proposals in a wide range of research having to deal with chemistry, toxicity and the geoscience, ecological and evolutionary science interactions of micro- and nano-plastics as well as solutions regarding engineering, innovation, and education around the topic. Learn more at: [https://www.nsf.gov/pubs/2020/nsf20050/nsf20050.jsp?WT.mc\\_ev=click&WT.mc\\_id=USNS-F\\_25&utm\\_medium=email&utm\\_source=GovDelivery](https://www.nsf.gov/pubs/2020/nsf20050/nsf20050.jsp?WT.mc_ev=click&WT.mc_id=USNS-F_25&utm_medium=email&utm_source=GovDelivery)

## WEBINAR

### Webinar: Plastics or Planet? Moving Beyond Plastics

June 4, 2020 at 1pm Eastern/10am Pacific/5pm UTC

Judith Enck of Beyond Plastics will explore the environmental, economic, and health implications of plastic production, use, and disposal, and will discuss the latest plastic reduction laws. The webinar is co-hosted by the EBM Tools Network and OCTO. To register, visit: [https://zoom.us/webinar/register/WN\\_-tb3QBx7TJi-9rCik7w4aJg](https://zoom.us/webinar/register/WN_-tb3QBx7TJi-9rCik7w4aJg)



EPA's Trash Free Waters program will be providing recipients of The Flow with news about upcoming funding opportunities, webinars, and more via a new **monthly** "The Rapids" email. Please look for that first email in your in-box on June 1, 2020.

### Have a TFW Story to Share?

*The Flow* is always looking for TFW articles, news and event information. Contact the editor at [mayio.alice@epa.gov](mailto:mayio.alice@epa.gov) for submission deadlines.