

# THE FLOW OF... TRASH FREE WATERS

## ISSUE 8

### INSIDE THIS ISSUE

EPA Is Increasing Its Research Focus on Microplastics ..... 1

Post-Hurricane TFW Efforts in Puerto Rico: A Long-term Journey ..... 1

Monofilament Fishing Line Collection and Recycling ..... 2

Annual Trash Summit Provides Roadmap to Scaling Up Impact ..... 3

Balloon Release Alternatives for a Joyful Send-Off! ..... 3

Trash Free Waters Workshop in Panama ..... 4

EPA Region 10 Awards Environmental Justice Small Grants to Local Communities and Tribes in Alaska and Oregon ..... 4

The Rapids: News Drops ..... 5

*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 CSRA. 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?

### EPA Is Increasing Its Research Focus on Microplastics

The global scientific community is focusing ever-greater attention on the ecological and potential human health impacts of plastic trash in water. Most of this research is addressing exposures and risks from microplastics in their many forms – particles, beads, and fibers.

The Trash Free Waters (TFW) program has been active on microplastics research since its launch in 2013. Activities to date include sampling and lab research led by several different Headquarters and Regional program offices and labs. TFW also has supported the research

community by sharing technical information, analyzing the state of the science, and convening experts to discuss data gaps and needs. Several white papers, plus our 8-part webinar series on plastics in the environment, are available on the EPA Trash Free Waters website ([www.epa.gov/trash-free-waters](http://www.epa.gov/trash-free-waters)).

In the past six months, EPA's engagement on microplastics research has increased significantly. In June 2017, the TFW team hosted a two-day Microplastics Expert Workshop, where world-renowned researchers from academia and Federal agencies identified the top data gaps and recommended priority topics for future research. A report from this workshop will be publicly available soon.

Among other things, the experts recommended that EPA and others develop consistent, high quality scientific methods to sample, extract, characterize, and quantify microplastics in the environment.

EPA's research and water programs are now developing an internal plan for increased investigative research efforts on microplastics, based in large part on the expert workshop recommendations. This strategic planning process will play out over 2018, though individual projects will be undertaken earlier in the year. For more information, contact TFW's new technical contact, Dylan Laird (ORISE Participant), at [laird.edward@epa.gov](mailto:laird.edward@epa.gov).

—Bob Benson  
TFW National Program Lead

### Post-Hurricane TFW Efforts in Puerto Rico: A Long-term Journey

In the aftermath of hurricanes Irma and Maria, Puerto Rico (PR) recognizes that its commitment to support trash prevention and reduction initiatives is stronger than ever. After hurricane Maria hit on September 20, 2017, the San Juan Bay Estuary Program (SJBEP), a key EPA TFW partner, redoubled its efforts to reestablish the ecosystem health and services of its study area. The Program has been working with its partners in cleanup activities. So far, the SJBEP has removed and properly managed a total of



Street crews clearing debris in Puerto Rico after Hurricane Maria.

1,436 cubic meters of debris, keeping it out of the sewer system and, therefore, helping prevent flooding and other public health problems. Island-wide, EPA has been working with the U.S. Army

Corps of Engineers (USACE), the government of Puerto Rico, and residents in the collection of household hazardous waste, electronics, and abandoned or "orphan" containers, which include drums, tanks,

(Continued on next page)



Courtesy of San Juan Bay Estuary Program

Volunteers clearing debris in Puerto Rico after Hurricane Maria.

containers, and cylinders that were found floating in or near water bodies. Almost 8,000 drums, propane tanks, cylinders and other containers have been collected to date,

keeping hazardous materials from reaching landfills. In addition, as of December 7, 2017, USACE contractors have removed about 701,326 cubic meters of debris out of

2.8 million they have been assigned to remove.

The series of activities that arose in immediate response to the aftermath of hurricane María aligns with the SJBEP's TFW work plan objectives of reducing the amount of debris entering the waterways of the SJBE. Recently, the SJBEP launched a new campaign across the watershed called *ABC for the Sustainability of the Estuary*: A is for Oil, (in Spanish, Aceite), B is for Bags (Bolsas), and C is for Cigarette Butts (Colillas). This campaign is encouraging the recycling of used cooking oil, use of recyclable bags, and proper disposal of cigarette butts within the SJBE system.

The PR TFW Team will be continuing its efforts to reduce the amount of trash entering the waters of Puerto Rico. New leadership was recently selected to implement the PR TFW Strategy island-wide, and a meeting has been scheduled for January with the organizations nominated to lead this effort. The recovery of the island is going to be a long-term journey.

—Evelyn Huertas  
U.S. EPA Region 2

and

Cenilda Ramirez  
TetraTech, Inc.

## Monofilament Fishing Line Collection and Recycling

The Peconic Estuary Program (PEP) in Long Island, NY has installed fishing line receptacles at various locations around the estuary to provide a place for fishermen to discard their excess fishing line and help combat marine plastic debris. PEP volunteers assembled the monofilament receptacles in December 2016 during a marine debris workshop. In August, the final two receptacles were installed. PEP staff and volunteers are responsible for collection and maintenance of the receptacles. During collection, staff measure and record the receptacle weight and percentage filled to determine the amount of fishing line in each receptacle. To date, there have been two collections, with 0.64lbs of fishing line collected. Once collected, the fishing line is sent to The Berkley Conservation Institute

Pure Fishing, Inc. for recycling into tackle boxes, spools for line, fish habitats, and other products.

“We have a large Spanish population in our watershed so it was important to us to include both an English and Spanish sticker on the receptacle explaining what it was,” noted Christie Pfoertner, PEP Outreach Coordinator. “As we started installing the receptacles, we ran into a few obstacles. In some locations, there were no structures to attach the receptacles to so we had to make our own posts. At some sites, the posts didn’t sit well in sandy sediment and they needed to be moved. When we went through our first collection, we realized that garbage was being thrown into the receptacles at some locations, so grates were placed on all the faces of the receptacles to discourage

that activity. While the process has been a learning experience, we are thrilled to see that people are using the receptacles and helping to keep our waters clean.”

A map of PEP monofilament recycling locations and partner locations is available on the PEP website ([www.peconicestuary.org/protect-the-peconic-priority-issues-in-the-peconic-estuary/#Monofilament](http://www.peconicestuary.org/protect-the-peconic-priority-issues-in-the-peconic-estuary/#Monofilament))

Another example of collecting and recycling monofilament fishing line is from Long Beach Island, NJ, where an Eagle Scout worked with several partner organizations—including his local township, Boat US Foundation, Berkley Conservation Institute, and the Alliance for a Living Ocean—to build fishing line receptacles. These receptacles are now installed at 11 sites, including beach entrances, bait and tackle shops, and marinas.

Find out more about this project on the Alliance for a Living Ocean web site ([www.livingocean.org/issues/single-use-plastics/monofilament](http://www.livingocean.org/issues/single-use-plastics/monofilament)).



Monofilament recycling station in the Peconic Estuary watershed.

Courtesy of Christie Pfoertner

## Annual Trash Summit Provides Roadmap to Scaling Up Impact

In November 2017, leaders from around the Washington DC metropolitan area gathered at the 11th Annual Trash Summit to discuss local to regional solutions for a trash free Potomac River. Organized by the Alice Ferguson Foundation ([fergusonfoundation.org](http://fergusonfoundation.org)), the Summit brought together more than 200 community members, elected officials, municipal staff, business leaders and nonprofit partners to learn what they could do to prevent trash from ending up in our waterways.

During the event, speakers, panelists and attendees explored proven waste management, litter prevention and watershed cleanup solutions that can be scaled-up across sectors and jurisdictions:

- Plastic microfibers are in our water and our air, and we release more of them each time we wash our clothes. The Rozalia Project's ([rozaliaproject.org](http://rozaliaproject.org)) Rachael Miller showcased the Cora Ball, an innovative lint-trap for the washing machine; it prevents the tiny pieces of plastic fiber that wash off clothes from going down the drain and ending up in waterways. The Cora Ball was just one example of a human-scale solution to a global problem.
- Balloons aren't just festive – they're a threat to humans and animals alike. Not only do released balloons come down to earth as litter, they kill animals and can cause dangerous power outages. Katie Register, executive director of Clean Virginia Waterways ([www.longwood.edu/cleanva](http://www.longwood.edu/cleanva)), explained how their 'Joyful Send-Off' campaign (see next story) uses proven community-based social marketing techniques to change wedding send-off behaviors and encourage green alternatives. These techniques can be adapted and applied to any type of littering behavior.
- Change starts close to home. Local officials, including District of Columbia Mayor Muriel Bowser, Montgomery



Courtesy of Bill Townsend

*At the 11th Annual Trash Summit, business leaders shared waste reduction strategies. More than 20 roundtable discussions highlighted innovative solutions that can be scaled up across sectors and jurisdictions.*

County, MD Executive Ike Leggett, and Prince George's County, MD Executive Rushern L. Baker III, each gave updates on their jurisdiction's progress since the 2016 signing of the Anacostia Accord. The unprecedented level of coordination within the Anacostia Watershed has led to very real policy initiatives, such as plastic bag fees and styrofoam bans, across these jurisdictions.

While significant challenges remain, the Trash Summit highlighted the many tools that already exist and how local, small-scale initiatives can be scaled up to become transformative regional solutions. The challenge now is to engage new audiences, reach across sectors, and deepen current partnerships to expand these solutions to regional, and eventually, national scales. The more we work together, the more progress we can make towards trash free waters.

—Laura Cattell Noll  
Alice Ferguson Foundation

## Balloon Release Alternatives for a Joyful Send-Off!

The last issue of The Flow included a story about the Mid-Atlantic Regional Planning Body (RPB) and the Trash Free Waters program's role in the RPB's Marine Debris Working Group as they intend to address balloon litter. Reducing balloon litter is the first of many key issues for achieving a Healthy Ocean Ecosystem under Action 4 of the Ocean Action Plan. Since then, the Virginia Coastal Zone Management Program and Clean Virginia Waterways have launched their Joyful Send-off social

marketing campaign ([www.JoyfulSendoff.org](http://www.JoyfulSendoff.org)) encouraging the proper use and disposal of balloons at events such as weddings. The Joyful Send-off campaign encourages people who are planning events to choose litter-free alternatives to balloon releases, such as blowing bubbles, waving ribbons, planting native trees or native seeds, or tossing flower petals. Clean Virginia Waterways' work with the Virginia Coastal Zone Management Program highlights the importance

of social marketing in conjunction with educational materials to affect change on a community level. Their NOAA-funded project began with the intention to expand the campaign regionally since balloon litter can easily travel across state lines.

Their work is also supported by a March 2016 article ([www.sciencedirect.com/science/article/pii/S0308597X15002985](http://www.sciencedirect.com/science/article/pii/S0308597X15002985)) by Ocean Conservancy and CSIRO that ranked balloons as the third most dangerous littered items because they

are so harmful to marine wildlife ("Using Expert Elicitation to Estimate the Impacts of Plastic Pollution on Marine Wildlife," *Marine Policy* 65 (2016) 107-114). While the threat of fines or community service listed in state litter laws may deter some people from releasing balloons, the Joyful Send-off campaign aims to proactively influence the event planning process and therefore reduce the need to restrict behaviors.

—Emma Maschal  
ORISE Fellow

## Trash Free Waters Workshop in Panama



Courtesy of Stephanie Adrian

Participants in the November TFW Panama workshop.

On November 14-17, EPA's Office of International and Tribal Affairs (OITA) and EPA's Puerto Rico office held a two-day Trash Free Waters stakeholder workshop in Panama, in partnership with Panama's Ministry of Environment and United Nations Environment's Regional Office for Latin America and the Caribbean (ROLAC). Over 30 stakeholders from Panama attended the workshop. They learned about EPA's Trash Free Waters approach and shared examples of projects in the U.S., Jamaica and Peru. They also learned about technologies from around the world that can be used to address marine litter. Stakeholders included ministries of environment and tourism, universities, NGOs, the Panama Canal Authority, the office of the mayor of Panama City, the United Nations Development Program and the US Embassy. By the end of the workshop, participants had developed ideas for four projects to reduce marine litter and will submit full proposals to the Ministry of Environment, UNEP and EPA for review and selection.

OITA is contributing financially toward a community-based project to be completed by the end of September 2018. This effort was launched at the Our Ocean Conference in Chile in 2015 under a new partnership with UN Environment and Peace Corps. This work helps fulfill a US obligation toward reducing marine litter in the Wider Caribbean Region under the Land Based Sources Protocol of the Cartagena Convention.

—Stephanie Adrian  
U.S. EPA Office of  
International and  
Tribal Affairs

## EPA Region 10 Awards Environmental Justice Small Grants to Local Communities and Tribes in Alaska and Oregon

On October 20, 2017, EPA awarded Environmental Justice Small Grants to the Sitka Tribe in Alaska, Three Degrees Warmer in Anchorage, Alaska, and Trash for Peace in Portland, Oregon. EPA's Environmental Justice Small Grants program provides funding for non-profit and tribal organizations to partner with stakeholders in industry, government, and academia.

The \$30,000 Environmental Justice Small Grant awarded to the Sitka Tribe in Alaska (STA) supports the project "Microplastics in Tribal Subsistence Foods in Southeast Alaska," which includes a focus on fish- and shellfish-related issues. Project partners include University of Alaska, Mount Edgecumbe High School, Southeast Alaska Watershed Coalition, and the Sitka Conservation Society. The body of research about microplastics in the ocean and their effect on marine and terrestrial animals has increased substantially in the past ten years. Over the course of one year, STA will collect water and subsistence food samples from four locations within STA's traditional territory to test for the presence of microplastics

and associated toxins. Local students will assist in sampling local food and water, and samples will be analyzed by the University of Alaska. Results will be compared to commercially purchased foods and safety standards. STA will share these results with the public so people can make informed decisions about harvesting traditional foods. Proposed outputs include 72 subsistence food samples, 18 commercial food samples, and 12 water samples collected and tested. For more information, contact [McCauley.Margaret@epa.gov](mailto:McCauley.Margaret@epa.gov) or [Harris.Sydney@epa.gov](mailto:Harris.Sydney@epa.gov) at EPA Region 10.

*EPA's Environmental Justice Small Grants Program is designed to help communities understand and address exposure to multiple environmental harms and risks, and funds projects up to \$30,000 a year. To learn more about the program, please visit The Environmental Justice Small Grants Program web site (<https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program>).*

### Don't you think it's time we all have an honest trash talk?

*Ocean Today*, in partnership with the NOAA Marine Debris Program, has developed TRASH TALK, a fast-paced and engaging 15-minute special video feature on marine debris. It was specially designed to be part of World Ocean Day festivities and beyond. To download, visit Ocean Today's web site ([oceantoday.noaa.gov/trashtalk\\_specialfeature](http://oceantoday.noaa.gov/trashtalk_specialfeature)) or The Trash Talk web site ([marinedebris.noaa.gov/discover-issue/trash-talk](http://marinedebris.noaa.gov/discover-issue/trash-talk))

## The Rapids: News Drops

### NEWS / EVENTS

#### And the Winner is....

As we reported in August's The Flow, in summer 2017 the EPA Urban Waters team was nominated for a Service to America Medals Award, known as the "Oscars" of government service. Surabhi Shah and the Urban Waters Team were nominated for their work to create public-private partnerships to clean up and revitalize urban waterways and surrounding lands, spurring economic development and reversing decades of neglect. We are very pleased to announce that the Urban Waters team won in the People's Choice category! Out of 430 nominees and after several rounds of voting, the Urban Waters Team was chosen by popular vote for making "the most admirable contribution to the American people." Because of the close linkage between the Urban Waters program and the Trash Free Waters program, we feel this can only lead to more visibility for our joint efforts and more opportunities to make a difference for clean waters.

#### Regional and State Action Planning: Washington and Oregon

Region 10 participated in Washington State's NOAA-led Marine Debris Action Planning workshop in Ocean Shores, Washington from December 5th – 6th. This event was the first of two workshops in NOAA's Marine Debris Action Planning process, which supports states in the creation of comprehensive Marine Debris Action Plans by convening stakeholders from state and local government, NGOs and advocacy groups, academia, and any other organizations or individuals working on marine debris prevention, education, research or removal. Participants define statewide goals, strategies and actions for addressing marine debris, and commit to supporting one another and regularly checking in on progress. Taylor Biaggi of Region 10's Puget Sound Program highlighted potential integration opportunities between the Region's Trash Free Waters program and the Puget Sound Partnership by encouraging participants to submit Near Term Action proposals for the Puget Sound 2018-2022 Action Agenda relating to marine debris priorities.

In 2016, EPA Region 10 participated in the Marine Debris Action Planning process for Oregon, with input from the Sustainable Materials Management, Ocean Dumping, Stormwater and Trash Free Waters programs.

#### The 6th International Marine Debris Conference (6IMDC)

The 6th International Marine Debris Conference (6IMDC) will be held in San Diego, California, on March 12-16, 2018. The Honolulu Strategy was created at the 5th International Marine Debris Conference in 2011, so the 6IMDC will keep building on the progress that has been made in the last seven years. The conference will include over 75 sessions relating to Prevention; Monitoring & Citizen Science; Research and Microplastics/ Microfibers; Private Sector Collaboration, Technology & Innovation; Education & Communication; Implementing Effective Law, Regulations & Policy; Removal; Single-use Product Policies; Derelict Fishing Gear; and Innovative International Case Studies. It will also include multiple presentations by EPA Trash Free Waters

team members and our partners. For more information, visit the Marine Debris Conference web site ([internationalmarine.debrisconference.org](http://internationalmarine.debrisconference.org)).

#### Marine Debris Monitoring Toolkit for Educators

In late August, the National Oceanic and Atmospheric Administration (NOAA) announced the release of its Marine Debris Kit for Educators, created through a collaborative effort between the Marine Debris Program (MDP) and the Office of National Marine Sanctuaries. This Toolkit translates the MDP's Marine Debris Monitoring and Assessment Project, a robust citizen science initiative, for classroom use. The Toolkit is designed to assist teachers in educating their students about marine debris and involving them in marine debris research and outreach. Using the Toolkit, students conduct marine debris surveys, enter data into a national database, analyze data, and become involved in marine debris stewardship within their communities.

The Marine Debris Monitoring Toolkit for Educators is available for free download on the NOAA Marine Debris Program website: <https://marinedebris.noaa.gov/curricula/marine-debris-monitoring-toolkit-educators>

#### Trash Bash® in the Galveston Bay Watershed

Saturday, March 24th is the 25th anniversary of the River, Lakes, Bays 'N Bayous Trash Bash®—Texas' largest single-day waterway cleanup. Volunteers will gather at multiple locations in the Galveston Bay watershed to clean trash and debris from miles of shoreline, enjoy lunch, get a free t-shirt, win prizes, and learn more about protecting water quality—all in an exciting morning of environmental stewardship. Since the event's inception, nearly 106,000 volunteers have cleaned up almost 2,200 tons of trash, 16 tons of recyclable materials, and 10,709 tires. To volunteer and promote a healthy Galveston Bay watershed, visit The River, Lakes, Bays 'N Bayous Trash Bash® web site ([www.TrashBash.org](http://www.TrashBash.org)).

### FUNDING OPPORTUNITIES

#### Five Star and Urban Waters Restoration Grant Program: 2018 Request for Proposals

*Deadline: January 31, 2018*

The National Fish and Wildlife Foundation and the Wildlife Habitat Council, in cooperation with the U.S. EPA, USDA Forest Service, US Fish and Wildlife Service, FedEx, and Southern Company are soliciting applications for the 2018 Five Star and Urban Waters Restoration program. Approximately \$2 million in grants will be awarded nationwide. Projects include a variety of ecological improvements with targeted community outreach, education, and stewardship, including such things as habitat restoration, wildlife conservation, tree canopy enhancement, water quality monitoring, and stormwater management. Projects should increase access to the benefits of nature, reduce the impacts of environmental hazards, and engage local communities – particularly underserved communities – in project planning, outreach, and implementation. Trash prevention project proposals are highly encouraged and suggested within the RFP. For more information, please visit: [www.nfwf.org/fivestar/Pages/2018rfp.aspx](http://www.nfwf.org/fivestar/Pages/2018rfp.aspx).

### DC Stormwater Grants

*Deadline: January 26, 2018*

The goals of proposed projects should be to protect and enhance, directly or indirectly, the District's water bodies or watersheds. Projects should raise awareness and lead to behavior change around watershed and stormwater-related issues, through education, installation and maintenance of runoff-reducing green infrastructure, art installations, or another means. Another goal is to create new community partners and strengthen existing relationships. Projects should be inspired and supported by the target community. The District Department of Energy and Environment will award multiple grants of up to \$20,000. For more information, please visit: <https://doee.dc.gov/release/community-stormwater-solutions-notice-funding-availability>.

### US Forest Service Citizen Science Grants

*Deadline: January 31, 2018*

The new CitSci Fund addresses the USFS priority of promoting shared stewardship by increasing partnerships and volunteerism. Each project can be funded up to \$25,000 and will have one US Forest Service Project Lead and one Partner Project Lead. Consider applying if you are interested in engaging volunteers to collect data and promote stewardship on National Forest Service lands. For more information, please visit: <https://www.fs.fed.us/working-with-us/citizen-science/competitive-funding-program>.

### EPA Environmental Justice Collaborative Problem-Solving Grants

*Deadline: February 16, 2018*

Ten awards will be made (one award per region) in amounts of up to \$120,000 per award for a two-year project period. Cooperative agreements will be awarded to local community-based organizations, tribes, and tribal organizations seeking to address environmental and public health concerns in local underserved communities through collaboration with other stakeholders, such as local businesses and industry, local government, medical providers, and academia. For more information, please visit: <https://www.epa.gov/environmental-justice/environmental-justice-collaborative-problem-solving-cooperative-agreement-0#tab-2>.

### Cigarette Litter Prevention Program Grants

Each year, Keep America Beautiful awards Cigarette Litter Prevention Program grants to its affiliates, local governments, business improvement districts, downtown associations, parks and recreation areas, and other organizations dedicated to eradicating litter and beautifying their communities. The application period opens January 3, 2018. For more information, please visit: <https://www.kab.org/cigarette-litter-prevention/grant-information>.

### Water Finance Clearinghouse

Database of funding opportunities and resources available for a variety of water projects. Filters can be applied for scope and sector in order to effectively search for appropriate funding opportunities. The Clearinghouse provides communities with a searchable database with more than \$10 billion in water funding sources and over 550 resources to support local water infrastructure projects. It consolidates and expands upon existing EPA-supported databases to create a one-stop-shop for all community water finance needs. You can access the Clearinghouse here: <https://ofmpub.epa.gov/apex/wfc/f?p=165:1>

### CONTESTS

#### California Coastal Art and Poetry Contest

*Deadline: January 31, 2018*

All California residents in kindergarten through grade 12 are invited to participate. Entries must have a California coastal or California marine theme. Poems and artwork must be student's original work. Students may have their work featured in California Coastal Commission materials and webpages. For more information, please visit: <https://www.coastal.ca.gov/publiced/poster/poster.html>.

#### Bow Seat 2018 Ocean Awareness Student Contest

*Deadline: June 18, 2018*

Middle and high school students from around the world are invited to create works of art, poetry, prose, or film that speak to this year's theme – Ocean Pollution: Challenges & Solutions. Students need an adult sponsor to submit to the Contest, and the Contest is completely free to enter. Students can earn awards up to \$1,500 in each category, and Bow Seat also grants Sponsor Recognition awards of \$750 for outstanding teachers, parents, and mentors who help a student submit to the Contest. For more information, please visit: <http://fromthebowseat.org/contest.php>.

#### Bow Seat 2018 Marine Debris Creative Advocacy Competition

*Deadline: June 18, 2018*

This competition challenges middle and high school students from the US to implement real-world advocacy projects in their schools and communities, with the goals of educating the public about marine debris, inspiring people to change their behavior, and engaging them in activities that reduce or prevent marine debris. Students need an adult sponsor to participate in the competition, and the competition is free to enter. Students can earn awards up to \$5,000. For more information, please visit: <http://fromthebowseat.org/advocacy-competition.php>.

### 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.