



# THE FLOW OF... TRASH FREE WATERS

## ISSUE 14

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## HOW'S IT FLOWING?

### Trash Free Waters and COVID-19

COVID-19 has brought a number of challenges to communities across the nation, including the improper disposal of masks and gloves. Last year, EPA released a [video](#) highlighting proper disposal of Personal Protective Equipment (PPE) and the importance of recycling during these challenging times.

EPA's Trash Free Waters website has been updated with information on proper disposal tips and waste management reminders. The update includes a link to a Spanish-language [video](#) created by the San Juan Bay National Estuary Program. For more information, visit <https://www.epa.gov/trash-free-waters/what-you-can-do>.

Place-based Trash Free Waters projects in communities across the nation continue to adapt. The

Long Island Sound Study's #DontTrashLISound campaign emphasized the threat of improperly disposed of PPE on Long Island Sound wildlife. Instead of advertising large community cleanups, LISS encouraged residents to participate in solo or social distancing-friendly cleanups and watch local beach cleanups via Instagram Live. The campaign wrapped up the first week of September.

In Atlanta's Proctor Creek Watershed, project partners have developed virtual trash trap tours to replace in-person field trips. Other local stakeholders involved in the initiative have conducted virtual camps on social media to reach local students and residents.

Maryland Coastal Bays National



Photo courtesy of Casita Linda

Reusable canvas bags offered at a local restaurant as part of the MCBP source reduction campaign.

Estuary Program (MCBP) provided local restaurants with canvas bags after noticing an increase in single-use carryout food packaging littered on local streets. This effort, conducted in collaboration with the Ocean City Green Team, helps discourage the use of plastic bags for take-out food.

Kudos to all the Trash Free Waters project leaders and volunteers who have found safe ways to keep protecting our waterways!

*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.*

### Keep disposable face masks and gloves out of our waterways!

A disposable mask or glove dropped outside can wash into streams, bays, and the ocean when it rains.

Most masks and gloves contain plastic that persists in the environment for many years.



Safely dispose of used masks and gloves in your trash.



Before you dispose of masks, cut the elastic straps to prevent animal entanglement.



Don't toss masks and gloves into overflowing trash bins, where they can blow away.

Infographic on proper disposal of masks and gloves. See it at <https://www.epa.gov/trash-free-waters>.

## Trash Free St. Louis Trash Capture Project Kickoff

EPA Region 7 has awarded a project to the Wichita State University Environmental Finance Center (EFC), and its sub-awardee, the Missouri Confluence Waterkeeper (MCW), to implement the Trash Free St. Louis initiative. This pilot project was designed to reduce floating debris entering the Mississippi River from three St. Louis urban watersheds by collecting, quantifying, and characterizing trash trapped by several in-stream trash capture devices. Volunteers from the St. Louis area will clean out the trash traps each month.

The Trash Free Waters program provided \$25,000 to support the project in 2020; this was supplemented by an additional \$10,000 from EPA Region 7's Land, Chemical, and Redevelopment Division. MCW and project partners have installed trash capture devices in three sites: Deer Creek, the River Des Peres, and Mackenzie Creek. Each of these locations provides a unique opportunity to make an impact on the flow of plastic into the Mississippi River and ultimately the Gulf of Mexico. Three different types of trash capture devices have been deployed through this project: the B2B Beaver, Osprey Litter Gitter Boom, and Trash Trout. Project partners will be assessing the effectiveness of these different technologies and using the EPA's



Photo courtesy of Missouri Confluence Waterkeeper, Ashville GreenWorks, and Trash Trout

A "Trash Trout" trash trap floats on Deer Creek in Deer Creek Park in Maplewood, Missouri.

draft EPA's Escaped Trash Assessment Protocol (ETAP) to compile information on the amount and type of in-stream litter captured at each location.

This project will provide critical information to assist future efforts in identifying upstream sources of litter and developing

and implementing actions that reduce trash in waterways. The Trash Free St. Louis project is the first of its kind in Region 7 and will serve as a template that can be replicated in other communities and in launching a more comprehensive program in the future.

## Great Lakes Restoration Initiative (GLRI) Trash Free Waters Grants

Funding under the FY20 GLRI Trash Free Waters Grant Program provided \$2.1 million to remove trash from local marine and freshwater environments in order to ensure the Great Lakes watershed continues to provide healthy wildlife habitat, safe drinking water, and abundant recreational opportunities.

Harbor District, Inc. was the first grant awardee announced last June. This Milwaukee-based organization received \$492,300 to construct and install a trash collector on the Kinnickinnic River, south of the confluence of the Kinnickinnic and Milwaukee Rivers and two miles upstream of Lake Michigan. The project will capture trash from a 16,000-acre watershed and collect an estimated 75 tons of trash annually. Six additional projects received GLRI awards: the City of Toledo, Alliance for the Great Lakes, Belle Isle

Conservancy, Great Lakes Community Conservation Corps, Buffalo Niagara Waterkeeper, and Macatawa Area Coordinating Council. Community-based projects funded through this program will help expand volunteer beach and waterway clean ups and install additional trash capture devices within the Great Lakes watershed.

In January 2021, GLRI announced they would be seeking a second round of applications to support Trash Free Waters projects. This new \$5 million FY21 grant program, which closed on March 5, 2021, will fund the installation of a number of large-scale aquatic trash collection devices, vessels, and other technologies to remove trash from Great Lakes harbors, rivers, and waterfronts. EPA expects to notify ten finalists this summer.



## Maryland Coastal Bays' Protect Our Sand and Seas

The Trash Free Waters program provided \$25,000 in 2019 to support the Maryland Coastal Bays Program (MCBP) "Protect Our Sand and Seas" trash mitigation campaign in Ocean City, Maryland. The campaign included a source reduction initiative called the Ocean City Green Team's Cigarette Litter Prevention Program, which provided free cigarette butt receptacles, or "butt huts," to local businesses which voluntarily pledged to encourage their use. According to Ocean City Councilmember and Green Team chairman Tony Deluca, "... Not only are cigarettes the most picked up littered item on our beach in Ocean City but 32 percent of litter at storm drains is tobacco products. Litter traveling through stormwater systems ends up in local streams, rivers, bays and the ocean."

More than 400,000 cigarette butts have been recycled through the Cigarette Litter Prevention "butt hut" program. Cigarette butts are shipped to TerraCycle to be repurposed into benches. In July 2020, four benches made from recycled cigarette butts were delivered and installed in Ocean City to help create public awareness around proper disposal. Benches feature the slogan "Put your butts on these butts" and have been installed on the boardwalk



"Put Your Butts on These Butts" bench in Ocean City, MD.

and in front of a popular local waterfront dining location.

Keep America Beautiful recently awarded MCBP and the Ocean City Green Team an additional \$20,000 to help continue the program as well as add additional messaging campaigns for residents and visitors. A Litter Free OC campaign will be launched in May 2021, with messaging for newsletters, emails, banners and billboards, social media, and the Boardwalk trams. The

campaign also includes a new webpage, [www.oceancity.green](http://www.oceancity.green), which features volunteer opportunities, a calendar of upcoming cleanup events, and an anti-litter pledge. Another aspect of the campaign will include increased enforcement of littering laws in the Boardwalk area.

—Sandi Smith,  
Maryland Coastal Bays Program,  
[sandis@mdcoastalbays.org](mailto:sandis@mdcoastalbays.org)

Photo courtesy of Layne Marshall.

## Save Our Seas 2.0 Act Signed into Law

[Save Our Seas 2.0](#) was signed into law on December 18th, 2020. The Act includes a number of initiatives, programs, and studies that collectively address the marine litter issue domestically and enhance the United States' international engagement on this global problem. Among the provisions of the Act is the establishment of a new national Trash Free Waters grant program, authorized at \$10 million per year through 2025 (though there was no appropriation for this program in 2021). Local governments, Indian Tribes, and nonprofit organizations will be eligible to apply. Grant awards may support source reduction projects, anti-littering initiatives, local materials management ordinance enforcement, state/local solid waste policy implementation, trash capture, education and outreach, and monitoring or modeling reductions in trash flows resulting from the implementation of best management practices.

The Act also calls for the development of a public EPA strategy for improving post-consumer materials management and water management. Furthermore, the Agency will take the lead on several reports outlined in the Act. Among these are reports on microfiber pollution, the effects of microplastics on food and drinking water, economic incentives to spur new end-use markets for recyclable plastic, and reducing the creation of new plastic waste.



## EPA Gulf of Mexico Division Trash Free Waters Efforts

[Gulf of Mexico Division](#) (GMD) scientists estimate that over two billion pounds of waste end up in the environment annually in the five Gulf states alone. This is a problem that cannot be addressed without the help of state and local partners who are most familiar with the conditions of their aquatic resources and how to influence change in their areas.

Over the last four years, GMD has awarded \$9.42 million in trash removal and prevention grants across the five Gulf coast states. These projects fund activities related to trash removal, education and outreach, research, and prevention efforts. The first eight projects (\$1.64 million) have achieved remarkable results thus far, including the removal of over 75,000 pounds of trash from Gulf waters and watersheds.

In 2020, GMD awarded \$7.78 million for 17 new projects in the Gulf states. These innovative projects will improve water quality, protect and restore habitat, and improve community resilience through trash prevention and removal. In addition, each project involves education or outreach and partnerships for the purpose of influencing business and/or consumer practices.

In FY21, GMD plans to make further funding available to support trash free waters work in the Gulf states, as well as in upstream



Photo courtesy of Amy Newbold, EPA GMD.

*Region 4 Administrator Mary Walker observes as grant recipient Dog River Clearwater Revival and their contractor, Osprey Initiative, count and categorize trash being collected by trash traps in Mobile, Alabama.*

inland communities. The new RFA will place emphasis on projects which work to prevent trash from being produced and/or keep trash from entering Gulf of Mexico watersheds.

For more information about GMD efforts to address water quality, community resilience, habitat restoration and more, please

visit the [EPA Gulf of Mexico Division Story Map](#). This tool includes an interactive map of the 17 GMD 2020 grant awardees.

—Calista Mills,  
EPA Region 4 Gulf of Mexico Division,  
[Mills.Calista@epa.gov](mailto:Mills.Calista@epa.gov)

## Nurdle Patrol Update

The Nurdle Patrol has performed 7,584 surveys since it began in November 2018; 323 surveys took place in February 2021 alone. Over 2,700 volunteers have surveyed 3,598 different sites since the program began. In February, volunteers removed 9,517 nurdles from Gulf of Mexico-area beaches, riverbanks, and lake shorelines for a total of 1,527,584 nurdles removed to date by Nurdle Patrollers.

[Nurdle Patrol citizen science kits](#) are available for organizations that would like to incorporate nurdle surveys into their existing programs or start up their own citizen science projects. Browse all the nurdle data on the map at [www.NurdlePatrol.org](http://www.NurdlePatrol.org).

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



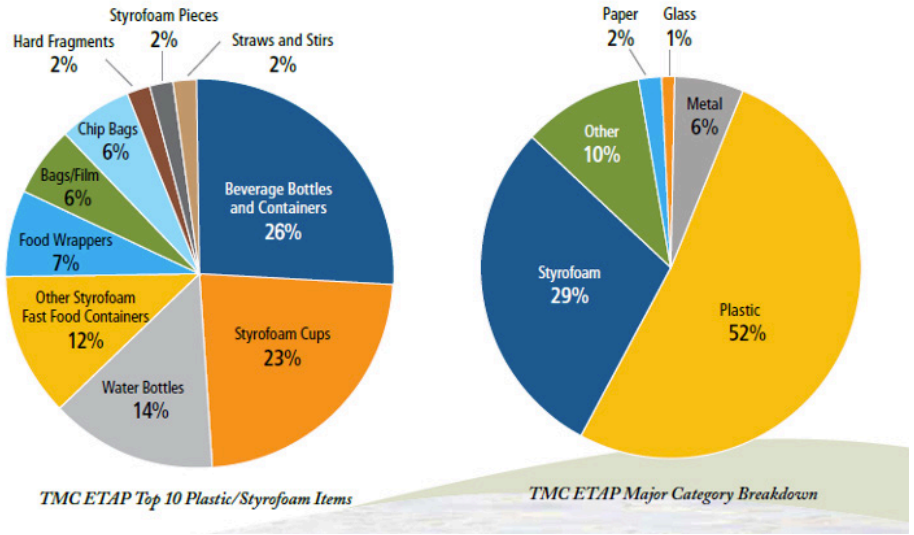
Photo credit: Jace Tunnell



## Ditch the Disposables Campaign in Alabama’s Three Mile Creek Watershed

The Mobile Bay National Estuary Program (MBNEP) has been using EPA’s draft Escaped Trash Assessment Protocol (ETAP) to characterize trash collected through the Three Mile Creek Trash Abatement Initiative since its start in 2018. One of the Program’s goals was to improve the quality of local waterways by addressing trash problems at sources identified using ETAP data. Data indicated Styrofoam and single-use plastics accounted for over 80% of litter trapped by Litter Gitter in-stream trash-capture devices in the watershed (see figure). In an effort to reduce sources, MBNEP developed a “Ditch the Disposables” campaign. Partnering with a popular restaurant in a low-income, primarily minority community in Prichard, Alabama, a week-long campaign was used to gauge customer preferences and tolerances related to biodegradable packaging.

After providing a week’s supply of paper food packaging products for use during the campaign, MBNEP surveyed 279 restaurant customers to determine their willingness to absorb small cost increases for more



ETAP data item type visualizations for the Three Mile Creek watershed.

eco-friendly packaging. They found 83% of patrons were willing to incur price increases ranging from five to 35 cents to switch from typical Styrofoam to more sustainable packaging.

The restaurant owner expressed interest in switching to alternative food packaging if

an affordable option exists. MBNEP hopes to continue the campaign at another local restaurant to expand the survey sample size and inform future source reduction steps.

—Amy Newbold,  
EPA Region 4 Gulf of Mexico Division,  
[Newbold.Amy@epa.gov](mailto:Newbold.Amy@epa.gov)

## Prevent Balloon Litter Website

The Mid-Atlantic Regional Council on the Ocean’s (MARCO) Marine Debris Workgroup has created a website on preventing intentional balloon litter. The Work Group addresses marine debris by collaborating across multiple levels of government, looping in the private sector, and listening to concerned citizens. Researchers have identified balloon litter as one of the five deadliest kinds of debris for marine wildlife.

Intentional balloon releases are often included in weddings, sporting events, graduations, retail events, memorials, and funerals. In 2016-2017, volunteers participating in the International Coastal Cleanup reported finding more than 14,700 littered balloons in New York, New Jersey, Delaware, Maryland, and Virginia. Balloon litter

has a negative impact on marine and land-based wildlife due to entanglement and ingestion.

The “Prevent Balloon Litter” website offers inspirational litter-free ideas to commemorate important life events. Fun ideas include blowing bubbles, making paper airplanes or pinwheels, handing out native seeds to plant, creating a large banner, dedicating a bird bath or bench, and more. The website also offers resources such as educational activities, video content, and research publications on the issue. A short animated [video](#), recently released by the Virginia Coastal Zone Management Program and Clean Virginia Waterways of Longwood University, is included on the website. To explore more of the campaign and sign the



Blowing bubbles as an alternative to releasing balloons.

pledge to never release balloons, visit <https://www.preventballoonlitter.org/>.

## Trash Free Waters Project Announcements

### Curbside Disposal Campaign

In July 2020, the Washington, D.C. Mayor's Office of the Clean City, Department of Public Works, and Department of Energy and the Environment agreed to collaborate with EPA's Trash Free Waters program on a Curbside Disposal Education Pilot campaign. Because the litter released into the environment from improper curbside disposal is typically unintentional, there is a great potential for influencing behavior change to reduce this source of pollution.

This project involved the design and dissemination of stickers to selected D.C. neighborhoods to inform residents about proper curbside disposal to prevent unintentional trash leakage. Stickers were distributed in November 2020 by D.C. staff and volunteers with a flyer encouraging residents to place the sticker on the lid of their trash bin. Sticker messaging featured four recommended actions and the slogan "Cleaner communities and waterways start here" (see figure). The sticker also directed residents to the D.C. Mayor's Office of the Clean City [website](#) which provides more detail on how to prevent household trash from becoming litter. Various D.C. government offices also shared the campaign recommendations via social media to help spread the word to citizens residing outside of the selected pilot neighborhoods.

D.C. staff conducted 11 weeks of baseline observational litter surveying and an additional 11 weeks of post-implementation surveying along representative routes in each pilot neighborhood (with some streets and alleyways included in a control group). Focus group discussions with D.C. residents and neighborhood leaders will be held over the coming weeks for further citizen insight on perception of litter in the community and effectiveness of the campaign. TFW anticipates compiling a short report summarizing data findings and recommendations/lessons learned for other communities that may be interested in adopting a similar campaign in the future. If the project proves to be successful, D.C. has expressed interest in expanding the campaign throughout the city.



Curbside Disposal Education Pilot bin sticker.

### Trash Free Mystic

The Region 1 Trash Free Waters team will be partnering with representatives from the Mystic River Watershed Association (MyRWA), the Mystic River Urban Waters Federal Partnership, local municipalities, NGOs, and other watershed groups to facilitate a remote stakeholder engagement initiative. This initiative complements a new

five-year effort, launched by MyRWA in spring 2020, to reduce trash inputs into the Mystic River Watershed by 50% by increasing research and outreach and mobilizing large scale interventions on a watershed level. Introductory scoping conversations with several local municipalities have already been convened.

The first of three informational discussion sessions is scheduled for April and will feature speakers with insight on non-structural and structural controls to address trash, such as trash capture, stormwater management and policy. The second session will provide participants with context and case study examples of interventions like source reduction campaigns and street sweeping. After learning from the perspectives provided in the first two meetings, stakeholders will use the final session to brainstorm potential barriers and solutions to trash pollution. Ultimately, project partners will develop two to three priority trash mitigation projects or shared strategies to tackle the issue in the Mystic River watershed.

## Recommended Reading

### PEW Charitable Trusts Report on Breaking the Plastic Wave

In July 2020, the Pew Charitable Trusts released a landmark report, "Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution." This global analysis uses first-of-its kind modeling to show that existing solutions and technologies can cut annual flows of plastic into the ocean by about 80% in the next 20 years. No single solution can achieve this goal; rather, an urgent, immediate global strategy must be pursued by governments and industry leaders, upstream and downstream, requiring innovation and different implementation priorities in different geographies, to avoid catastrophic consequences for the world's oceans. The report models six scenarios for tackling ocean pollution, from business-as-usual to a system change scenario. Read the report [here](#).

### "Waste in Our Waters" Toolkit

In 2020, the River Network released "Waste in our Waters: A Community Toolkit for Aquatic Litter Removal." The [toolkit](#) outlines what to consider when exploring how to strategically address litter in your community. It also provides an in-depth comparison of various in-stream litter capture devices;

this can be used to help stakeholders determine which device will work best in their community and waterway given their unique site characteristics, potential trash loads, budget requirements, and maintenance abilities. The EPA's forthcoming Escaped Trash Assessment Protocol (ETAP) is also referenced in the document. This toolkit is an essential resource for both community advocates and experts alike.

**New Research on U.S. Contributions to the Marine Litter Problem**

A recent study published in [Science](#) provides an updated estimate on U.S. plastic waste generation and loadings to coastal ecosystems. Authors found that in 2016, the U.S. generated the largest amount of plastic waste of any country in the world, totaling 42 million metric tons. According to their research, the amount of plastic waste generated in the U.S. estimated to enter the coastal environment in 2016 was up to five times larger than that estimated in a 2010 [study](#), "rendering the United States' contribution among the highest in the world."

**Recent EPA Publications on Preventing and Reducing Marine Litter**

EPA released the [U.S. Federal Strategy for Addressing the Global Issue of Marine Litter](#) last fall in collaboration with NOAA and other federal partners. The strategy highlights the federal government's four pillars for tackling the issue of marine litter: (1) building capacity, (2) incentivizing the global recycling market, (3) promoting research and development, (4) promoting marine litter removal.

EPA also published a [Solid Waste Management Guide for Developing Countries](#) to share best practices with local decision makers in developing countries to improve their solid waste collection infrastructure.

**TFW Educational Article Series**

The Trash Free Waters program, in collaboration with the National Environmental Education Foundation, launched an article series featuring useful trash prevention information. The first three articles are published on the TFW website.

The first article, "[Trash Free Waters On Any Timeline](#)," is an introductory resource that highlights the problems associated with escaped trash and steps the average citizen can take to help address the problem.

The second article in the series provides an overview of the problem of microfibers – tiny plastic fragments shed from clothes – and what's being done to address the problem, including what you can do (see infographic). Read the full article on our website [here](#).

The third article describes some of the innovative products and models that are being developed to reduce waste from plastic packaging. The article examines bio-based plastic materials, non-plastic packaging alternatives, and new reuse models. Read it [here](#).

**TFW Webinar Series**

Check out the [Trash Free Waters Webinar Library](#) for access to any webinars you may have missed over the past few months. In November, we hosted a webinar on "Experiences and Lessons Learned from Trash Capture Projects;" three expert speakers shared their knowledge and insight on trash capture planning, siting, installation, and maintenance. On March 11 we hosted the fifth webinar in the TFW series, "Reuse Models as Part of the Solution to the Plastic Pollution Crisis." This webinar explores three very different types of reuse and refill models, explaining how they work and the stories behind them.

**WANT TO REDUCE MICROFIBERS?**

**6** Simple tips to help reduce microfiber pollution:

**Wash clothing less often.**  
This is perhaps the simplest and most effective method for reducing microfiber pollution.



**Only wash full loads of laundry.**  
This results in less friction between clothes and reduces shedding of synthetic fibers.



**Use microfiber-catching devices when you do the laundry.**  
Several technologies are available for purchase, including special wash bags and laundry balls designed to trap microfibers.



**Wash laundry with cold water for a shorter period of time.**  
Studies have found that switching to a colder and shorter cycle can dramatically reduce microfiber shedding.



**Install an external microfiber filter on your washing machine and dispose of captured microfibers in the trash.**  
There are several commercially available external lint filters to choose from.



**Use a front-loading washer, if possible.**  
Top-load washing machines tend to produce more microfibers than front-loading machines.



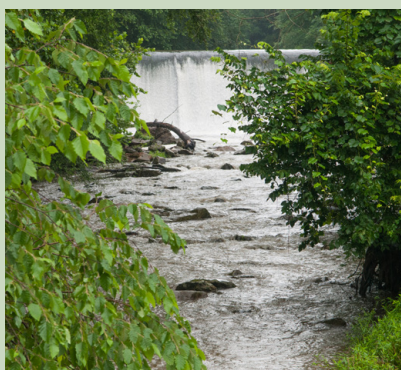
For more information, visit [neefusa.org](http://neefusa.org)



*Infographic with tips on reducing microfiber pollution from the TFW article "What You Should Know About Microfiber Pollution."*

**The Rapids**

The TFW team distributed the inaugural issue of the Trash Free Waters Rapids in June 2020. This monthly information blast is published on the first Monday of each month and provides helpful information on funding opportunities, upcoming webinars, a summary of recent microplastics research, and more. This information will therefore no longer be included in the Flow newsletter. If you aren't currently receiving the Rapids and would like to, please sign up [here](#).



USEPA photo by Eric Vance.