

The Rapids: US EPA's Trash Free Waters Monthly Update July 2020

<https://www.epa.gov/trash-free-waters>

Introduction

Hello, everyone!

We hope you benefit from this, the second US EPA Trash Free Waters program monthly Rapids email. I really appreciated the kind emails many of you sent after receiving our first Rapids email, sent on June 1. Our intention is to send a new issue on the first Monday of every month.

I know these are challenging times for most people, so it is inspiring to see so much great work continuing despite the unique challenges we are all facing right now. The past few weeks have been filled with opportunities to engage with one another and hear from experts in the field through online webinars and virtual conferences. Among other events, I was able to attend the OECD “Reducing Marine Plastic Litter” workshop, the As You Sow “Waste and Opportunity 2020” webinar, the Beyond Plastics “Break Free from Plastic Pollution Act” webinar, and the Duke University Nichols Institute “Global Analysis of Policies to Address Oceanic Plastic Pollution” webinar. Other members of EPA’s Trash Free Waters team were able to partake in the EarthX Ocean Conference, the USAID & Ocean Conservancy “Local Solutions to the Global Challenge of Ocean Plastic Pollution” webinar, and MIT’s “Plastics and the Environment: Science Meets Public Policy” workshop. It is frankly dizzying to keep track of all that is going on around this issue area, so hopefully the Rapids will help you do just that. Please continue to share any upcoming events with Layne Marshall (marshall.layne@epa.gov) so that the Trash Free Waters team can broadcast these opportunities to all of you.

Thank you for all of your hard work to keep trash out of our waterways and our oceans!

Romell Nandi
US EPA
Trash Free Waters program lead

EPA Announcements

EPA celebrated World Oceans Day on June 8th by releasing a [video](#) which recognizes the role that Trash Free Waters plays in protecting our oceans from trash and marine litter and emphasizing the importance of continued international collaboration. TFW Program [shout-outs](#) were also shared on the EPA Instagram and re-shared on the EPA Office of Water [Twitter account](#) highlighting that the program has now supported over 200 place-based projects in the US and abroad since its inception in 2013. Another [#WorldOceansDay](#) post shared insight on a recent technical [webinar](#) hosted by EPA with Brazil’s Ministry of Environment on “Reducing Marine Litter and Protecting Ocean Resources.”

Several nations took to social media to congratulate EPA on its 50th Anniversary, mentioning marine litter as an international priority. Minister Ricardo Sallas of Brazil’s Ministry of the Environment acknowledged the Administrator’s recent visit to Brazil and the new US-Brazil bilateral agreement to collaborate on environmental issues including marine litter in an [#EPAat50](#) tweet. Minister Koizumi Shinjiro of Japan’s Ministry of the Environment recalled last year’s G20 where the US, Japan, and EU announced a collaborative effort to combat marine litter by developing innovative plastic waste reduction measures in this [video](#). Shinsuke J. Sugiyama, Japanese Ambassador to the US [reflected on his 2019 Earth Day visit](#) to Washington, D.C., where he and Administrator Wheeler took a tour of the Anacostia River via a skimmer boat used to help capture aquatic trash in the watershed.

In mid-June, EPA Administrator Andrew Wheeler traveled to the Great Lakes region where he announced the [first Great Lakes Restoration Initiative \(GLRI\) Trash Free Waters grant project](#). Harbor District, Inc. in Milwaukee, WI was selected to receive a \$492,300 grant to construct and install a trash collecting device in the Kinnikinic River with the hopes of addressing aquatic trash just 2 miles upstream from Lake Michigan. The project will capture litter from a 16,000-acre watershed and is estimated to collect an estimated 75 tons of trash annually. A second video featuring the Administrator’s visit and announcement speech can be viewed in this [EPA Instagram post](#). Read more about the project and grant via a [June 15th EPA news release](#), [Twitter](#), or [Instagram](#).

On June 17th, the EPA announced the nationwide expansion of an interactive mapping tool which federal, state, local and tribal emergency personnel can now use to effectively identify recycling, composting, and disposal facilities near areas affected by natural disasters and therefore help communities recover faster while also reducing the environmental impact of mismanaged waste. To access the tool, click [here](#).

Before June wrapped up, the Trash Free Waters team published the first article in a new EPA TFW Article Series, titled “Trash Free Waters on Any Timeline.” The article features background on the sources and impacts of aquatic trash and includes a list of simple actions you can take to help keep trash out of our waterways whether you have 5 seconds or 5 hours to spare. The article is posted on our website [here](#).

Funding Opportunities

The Water Research Foundation (WRF) Research Priority Program

WRF has funded 12 new Research Priority Program projects with a total funding amount of \$2,125,000. This research allocation will be significantly leveraged with partnership funding and in-kind support. Requests for Proposals (RFPs) for these projects will be released in August 2020. Please track progress [here](#).

National Estuary Program Coastal Watersheds Grant Program RFP

US EPA has created a new national competitive grants program. Restore America’s Estuaries is administering the grant program and will fund projects within specific geographic areas that support Congressionally-set priorities, including: loss of key habitats, harmful algae blooms, invasive species, flooding and coastal erosion, nutrients, and contaminants of emerging concern such as microplastics. Each award will range between \$75,000 and \$250,000. Letters of Intent are due August 7. Learn more [here](#).

SeaAhead and New England Aquarium BlueSwell Incubator Program

SeaAhead, Inc. and the New England Aquarium have announced the launch of BlueSwell, New England's first dedicated, comprehensive early-stage business incubator program for new ocean-related technologies and innovations. BlueSwell will catalyze new business creations by providing a grant of \$35,000 to founders with a new ocean-related technology or business model innovation. A tailored 20-week curriculum and in-depth mentoring program based in Boston, MA are also included. Marine pollution is one of the grant’s priority areas. Applications for the program will close on August 9th, 2020. Click [here](#) for more info.

MassDEP Reduce, Reuse, Repair Micro-Grant

Massachusetts Department of Environmental Protection is now accepting applications for the Reduce, Reuse, Repair Micro-Grants for 2020. This grant program provides small amounts of funding (up to \$5,000) for eligible for-profit and nonprofit organizations for innovative, short term waste reduction initiatives. Initiatives must focus on promoting source reduction, reuse, or repair in Massachusetts. MassDEP accepts applications on a rolling basis and evaluates them quarterly until all available funds are obligated. Click [here](#) to read the grant guidelines and apply.

National Science Foundation Proposal: Microplastics and Nanoplastics

The National Science Foundation seeks proposals that tackle some of the fundamental scientific questions underlying microplastic and nanoplastic 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 microplastics and nanoplastics, as well as solutions regarding engineering, innovation, and education around the topic. [Learn more by clicking here!](#)

NOAA Great Lakes Bay Watershed Education and Training (B-WET) 2021 Federal Funding Opportunity

The NOAA Office of National Marine Sanctuaries is seeking proposals under the Great Lakes B-WET program, a competitive grant program that supports existing, high quality environmental education programs, fosters the growth of new, innovative programs, and encourages capacity building and partnership development for environmental and place-based education programs throughout the entire Great Lakes watershed. For additional resources on developing an application and examples of previously funded projects go to the Great Lakes [B-WET website](#). Deadline for applications is August 21, 2020, 11:59 pm (EST).

Cooperative Agreement: “Building Capacity for Environmentally Sound Management of Plastic Waste in West Africa to Reduce Ocean Pollution”

This project intends to support municipalities in West Africa to improve environmentally sound management of plastic waste and encourage innovation along the plastic supply chain to reduce plastic waste leakage in to the environment and ocean pollution. Eligibility is limited to U.S. non-profit/nongovernmental organizations subject to section 501 (c) (3) of the U. S. tax code, foreign not-for-profit/nongovernmental organizations, educational institutions, and to public

international organizations. The application closes July 31st. Search Funding Opportunity Number “SFOP0007028” on [Grants.gov](https://www.grants.gov) for more info.

National Science Foundation “Critical Aspects of Sustainability” Rolling Application

Economic development and human progress have led to a proliferation of manufactured chemicals and materials made from limited resources found in nature. Long-term sustainability requires consideration of the availability of specific natural resources, energy, and water usage. NSF continues to welcome proposals that address plastics waste accumulation through innovative materials approaches and environmentally benign polymeric materials having properties exceeding those of current commercial plastics. Search Funding Opportunity Number “PD-19-9102” on [Grants.gov](https://www.grants.gov) for more info.

USAID Pollution Prevention & Mitigation Broad Agency Announcement

USAID continues to seek opportunities to co-create, co-design, co-invest, and collaborate in the research, development, piloting, and scaling of innovative interventions for effectively mitigating air, water, and soil pollution, including ocean plastic pollution, electronic and other forms of solid waste in low and middle-income countries. USAID invites organizations, companies, academic and research institutions, and investors to propose innovative approaches for preventing and mitigating pollution in countries to promote healthier populations, cleaner environments, and inclusive, sustainable economic growth. Search Funding Opportunity Number “BAA-OAA-E3-POLLUTION-2020” on [Grants.gov](https://www.grants.gov) for more info.

Save the Dates/Calendar

Month-long: Plastic Free July

Be on the lookout for a myriad of *Plastic Free July* opportunities to engage in your community or via your online social networks! You can follow the movement on [Twitter](https://twitter.com/PlasticFreeJuly), [Instagram](https://www.instagram.com/plasticfreejuly), or [Facebook](https://www.facebook.com/plasticfreejuly). Remember to use #PlasticFreeJuly when you take part in this global challenge to reduce your consumption of single-use plastics.

July 1-3rd: VII International Symposium on Marine Sciences (Virtual)

The ISMS is considered “the most important event for Marine Sciences in the Spanish world,” which covers a range of issues facing our oceans. The symposium features keynote speaker Imogen Napper, a National Geographic Sky Ocean Research Scholar who has played a critical role in microplastics research and policy. ISMS 2020 will also serve as an umbrella event for additional topic-focused activities, including the XX Iberian Seminar on Marine Chemistry (SIQUIMAR 2020) and workshops on Marine Litter (BAMAR 2020) and Marine Reserves (REMAR), all of which are open to international participation. Register [here](#).

July 6-10th: Global Coral Reef Week Virtual Conference

Over 85 research talks and workshops will be featured on a publicly accessible Global Coral Reef Week YouTube channel. During a 2-week conference window from July 1st to July 14th, conference participants can watch the videos of researchers and practitioners, ask them questions and connect with them virtually. Participation is free! View the program schedule [here](#).

July 9th (1pm EDT): EPA Trash Free Waters Webinar: “The Current State and Uncertain Future of Local Policies on Single-Use Plastics in the US”

Please join us on for an in-depth discussion on state and local policies designed to reduce single-use plastic waste in the U.S. In this webinar, we will explore recent developments in the creation and implementation of state and local plastic policies across the country. We will also discuss the challenges for reducing plastic waste at the state and local level, including the ways in which public health concerns may factor into decision-making around single-use plastics. In a casual conversational format, our panel of speakers from state and local governments, the NGO community, and elsewhere will provide insights based on their diverse experiences working to craft and implement these policies. You can register [here](#) or simply click on this [link](#) on July 9 at 1PM ET or call US (Toll):1-913-227-1201 or US (Toll Free):1-866-705-2554 Participant Code:426588. Participation is limited. If the ceiling is it, please check the Trash Free Waters website for the taped version.

July 9th (2pm EDT): Gulf of Mexico Alliance (GOMA) Data & Management All Team Action Plan IV Workshop #2

This is the second of two Team virtual workshops to develop the Governor’s Action Plan IV, Data and Monitoring team goal(s) and Focus Areas. The virtual workshops are designed to elicit input and feedback as we review the GOMA AP4 Survey results and develop our Focus Areas for our next Action Plan. Learn more [here](#).

July 13 -15th: 2020 ESRI User Conference

The world’s largest virtual GIS event. Participate in sessions and view presentations that offer geospatial solutions, browse the online Map Gallery, watch the Plenary Session, and much more. Register and view the agenda [here](#).

July 16th (1pm EDT): GreenBiz Webcast Conversation with Paul Polman

In this intimate, one-on-one conversation with GreenBiz Executive Editor Joel Makower, Paul Polman, one of the most influential business voices in sustainability, will discuss the future of business in the post-pandemic era. During his 10-year reign as CEO of Unilever (following 27 years at Procter & Gamble), he led the company's Sustainable Living Plan. Since leaving Unilever, he formed Imagine, whose goal is to help companies meet the UN Global Goals for Sustainable Development. Click [here](#) to register.

July 28th (2pm EDT): Investigate Your Ocean Neighborhood with OceanReports

OceanReports is a publicly available web-based application that allows users to select an Area-of-Interest (AOI) anywhere in the US Exclusive Economic Zone and instantly obtain over 70 unique infographics with analyses of the location. Info provided includes everything from the area's natural resources and oceanographic and biophysical conditions to its contribution to the local ocean economy. This tool can also be used to identify known wrecks and obstructions (marine debris) as well as wastewater outfalls within your selected coastal watershed. This webinar will help explain how to use the tool and include a Q&A portion. Explore the tool by clicking [here](#). Register for the informational webinar [here](#).

Save the dates for future months...

August 4-6th: Association of Clean Water Administrators 2020 Annual Meeting

[More information can be found here](#)

August 24-27th: 6th International Marine Conservation Congress (IMCC6)

An event for scientists, practitioners, educators, policy-makers, artists, and journalists to network and learn from one another about marine conservation, using science to inform policy and management to catalyze change. Register and explore plenary sessions and speakers [here](#):

August 25-27th: Circularity 20 Conference

Circularity 20 is the largest circular economy conference in the US. Building on the success of last year's sold-out launch event, Circularity 20 will bring together more than 1,000 thought leaders and practitioners across industries and functions and empower participants to turn circular economy concepts into profitable opportunities. Read more about the conference [here](#).

September 14-17th: Waste Expo

The largest waste and recycling event in North America, featuring 20+ virtual sessions about solid waste management. Agenda forthcoming [here](#).

September 29-October 1st: The National & Coastal Estuarine Conference

Restore America's Estuaries (RAE) expects this summit to be a highly interactive, state of the art, virtual opportunity to network with colleagues, share lessons learned, and hear from experts on the latest in coastal restoration and management. More than 300 proposals for panels, presentations, and posters have been submitted and nearly 30 sponsors already committed to the Summit. They will continue to accept poster proposals until July 17th. Read more about the Summit [here](#).

The Our Ocean conference in Palau has been postponed to December 7-8th 2020.

Keep apprised of news by clicking [here](#).

The Microplastics Breakdown

The section below only includes a selection of notable, recent microplastics study summaries. If you would like to receive the complete Microplastics Breakdown, please contact Bathersfield.Nizanna@epa.gov

BIG NEWS!

On June 16, the California State Water Board adopted an official definition of "microplastics" in drinking water. Read more about this [here](#).

[MICROPLASTICS SOURCES, TRANSPORT AND FATE](#)

Plastic rain in protected areas of the United States

Janice Brahney, Margaret Hallerud, Eric Heim, Maura Hahnenberger, Suja Sukumaran

Authors used high-resolution spatial and temporal data to test whether plastics deposited in wet versus dry conditions have distinct atmospheric life histories in the Western United States. Urban centers and re-suspension from soils or water were found to be the main sources for wet-deposited plastics. Plastics deposited under dry conditions were found to be smaller in size, and the rates of deposition were related to indices that suggest longer-range or global transport. Read the full abstract [here](#).

Floating microplastics in a coastal embayment: A multifaceted issue

João P.G.L. Frias, Olga Lyashevskaya, Haleigh Joyce, Elena Pagter, Róisín Nash

This study was conducted in Galway Bay on the west coast of Ireland. A total of 1182 floating microplastic particles were retrieved from a total surface seawater volume of 2039.86 m³. The authors concluded that the results did not show an obvious pattern of microplastic density distribution based solely of wind speed and direction. Other factors such as currents, were found to play a significant role in their distribution. The authors recommended that research also follow a more holistic approach where data from several environmental variables (wind speed, direction, precipitation, current speed, current direction, etc.) are also collected. Read the full abstract [here](#).

Polymers and Microplastics: Implications on Our Environment and Sustainability

Vinod P. Sharma

This article provides an overview of the impacts associated with the current prevalent use of plastics ranging from packaging to biomedical products, along with the lack of adequate waste management practices, and casual community behavior toward their proper disposal. This article discusses the global efforts geared towards the minimization of adverse effects, and the search for environment-friendly products and sustainable approaches. Read the full abstract [here](#).

HUMAN EXPOSURE TO MICROPLASTICS AND POTENTIAL IMPACTS

Analytical method development and occurrence of microplastics from daily food containers

Jasmine Qiu Rong Chan

The authors in this report explored the optimization of analytical equipment to detect microplastics of smaller micron size. The occurrence of microplastics from takeout food containers were investigated using the optimized analytical methods. The results demonstrated the potential of microplastics leaching from a polystyrene clam shell container into the container's contents when subjected to scraping with utensils or high temperatures, which the authors concluded suggests a possible substantial source for human microplastic exposure. Read the full abstract [here](#).

Understanding and Improving Microplastics Removal During Water Treatment: Impact of Coagulation and Flocculation

Mathieu Lapointe, Jeffrey Farner, Laura Maria Hernandez, and Nathalie Tufenkji

This study found that weathering processes that changed the surface chemistry and roughness of microplastics affected its affinity for coagulants and flocculants; coagulant efficiency was found to be increased when the plastic surface was weathered. Pristine microplastics were found to be the most resistant to coagulation and flocculation, with 82% removal observed even under enhanced coagulation conditions. Read the full abstract [here](#).

Global trends and prospects in microplastics research: A bibliometric analysis

Zhang Ying, Shengyan Puab, LvXuea Gao, Yac Long Gede

The authors reviewed papers published on microplastics that were available on the Web of Science Core Collection scientific database from its inception (1986) to September 21, 2019. The study shows that the number of papers on microplastics has increased significantly since 2011. Most of the researchers in the field come mostly from Western Europe, mainly in the UK, Netherlands and Belgium. Results indicate that much of the research has focused on marine ecosystems. The study identifies some topics for future research, e.g., potential effects on the human respiratory system and gastrointestinal tract. Read the full abstract [here](#).

Microplastics in aquatic ecosystem: Sources, trophic transfer and implications

Vivek Singh Bisht and Deepti Negi

This article discusses issues related to microplastics entering the food web either directly by ingestion or indirectly by aquatic organisms. It also describes the fact that contaminated fish, when consumed by humans, results in trophic transfer of microplastics to humans which can cause adverse health effects. Additionally,

this article identifies microplastics act as a potential vector of several contaminants, harmful additives, heavy metals, chemicals and pathogens. Read the full abstract [here](#).

[ANALYTICAL/ DETECTION METHODS](#)

Quantification of microplastics: Which parameters are essential for a reliable inter-study comparison?

T.Metz, M.Koch, P.Lenz

This study proposes a guideline for consistent quantification of microplastic distributions. It contains specific recommendations on how to quantify common microplastic particle parameters, such as size or shape. These recommendations are based on how reliably a parameter can be measured and its importance for inter-study comparability. In this way geometric and statistical means can be used to quantitatively compare different studies. Read the full abstract [here](#).

If you'd like to see your posting in this email, please email Marshall.Layne@epa.gov with any suggestions!