



The Flow of... Trash Free Waters

Executives Share Innovative Ideas with EPA Administrator McCarthy

This newsletter is intended to provide the latest information to our Trash Free Waters (TFW) partners and stakeholders.

We continue to make progress reducing aquatic trash in regions where work is underway. With projects wrapping up, new efforts come online. We are even developing "Second Generation" TFW projects in key areas where energy levels are high.

The Flow is our opportunity to highlight recent successes, as well as shine a spotlight on news and other related items.

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U.S. Environmental Protection Agency (EPA) Administrator Gina McCarthy invited thought leaders from the private sector to join her on September 30th for a dialogue regarding national actions to achieve trash free waters in the U.S. Much of our TFW work to date has focused on developing localized aquatic trash prevention projects in many parts of the country. But even as we make progress at the regional level, it is clear that nationally scaled actions are necessary to achieve our TFW goals.

With Deputy Administrator Stan Meiburg moderating, the participants discussed three topic areas: (1) essential technology breakthroughs related to plastics; (2) strategies to change public behaviors with regard to



littering and trash disposal; and (3) proactive business programs to keep trash out of waterways.

Many creative ideas were shared during the two hour discussion, among them a possible "breakthrough technology" challenge, a nationwide anti-litter campaign tied to product branding, corporate partnerships to keep trash

out of selected urban watersheds, and exploration of how to better identify market value in recycled materials.

EPA will share these ideas with a broader audience and work with interested stakeholders to develop strategies for putting some of these groundbreaking proposals into practice.

How Is It Flowing?

An imperative of the TFW program is to stay up to date on the rapidly changing 'state of the science' within the global scientific community on ecosystem and human health effects of plastics in the aquatic environment.

In order to increase coordination within EPA, we brought together subject matter experts within the agency from across offices, regions, and our laboratories



to identify ongoing research in this field, as well as identify research gaps and needs. This intra-agency workgroup developed a framework that allows for an informed consideration of

EPA's future research role in this field and for engagement and coordination with other federal entities and research groups with distinct research efforts.

What is EPA's "Trash Free Waters" Program?

A strategic approach to support innovative aquatic trash prevention and reduction policies, programs and initiatives by many public, private, and nonprofit stakeholders.

Upcoming Meetings

Texas Stakeholder Meetings
Trinity Watershed
November 16-20, 2015

Plastics Regulatory Summit
Marine Debris and Diversion
Washington, DC
November 17-19, 2015

Association of National Estuary Programs Annual Conference
TFW Strategy in Puerto Rico Presentation
San Juan, Puerto Rico
December 2-4, 2015

SustPack 2016: Business Made Sustainable
TFW Program Presentation
Chicago, IL
April 11-13, 2016

EPA's Role in Achieving Trash Free Waters

EPA is developing unique and tailored regional strategies with projects to enhance federal, state, and local programs that reduce or prevent trash from entering our watersheds and ultimately our coastal ecosystems. EPA's role is to:

- Serve as catalyst/convenor of strategic and tactical planning processes;
- Identify "champions" to serve as project leads on the ground where these projects are evolving;
- Consult with and to government, businesses, non-governmental organizations (NGOs), and citizen stakeholders;
- Identify collective actions that enhance trash prevention "drivers" and remove "barriers;"

- Facilitate project implementation; and
- Measure results.

Through these and other activities, EPA hopes to achieve marked reductions in the flow of trash in our nation's waters and along our shores.

To date, we have been implementing regional strategies in the Gulf of Mexico, New York/New Jersey, Puerto Rico and are well on our way to implementing regional strategies in the Mid-Atlantic States, California and the Pacific Islands.



\$59 Million Annual Public Burden from Aquatic Trash Management in the New York Region

Municipalities in the Hudson-Raritan estuary, which encompasses New York City, spend an astounding \$59 million annually in aquatic trash management efforts, according to a report published by a team of graduate students from Columbia University in New York, under the guidance of EPA Region 2 office and the

New York State Department of Environmental Conservation. By showing the large reactive tax-payer costs involved in the pervasive aquatic trash issue, this economic study further highlights the need for programs like TFW which catalyze proactive strategies that target source reduction and systemic changes in littering behavior.

The full report titled, *Quantifying the Costs of Managing Marine Debris*, can be obtained from the Columbia University website or by accessing:

http://mpaenvironment.ei.columbia.edu/files/2015/06/Quantifying-the-Costs-of-Managing-Marine-Debris_FINAL.pdf

TFW in the Lower Mid-Atlantic: Affecting Behavior Change in Baltimore

The City of Baltimore is amidst the development of an implementation plan for the Total Maximum Daily Load developed for aquatic trash in Baltimore Harbor. Central to the implementation plan is an integrated social marketing campaign designed to change littering behaviors in the region. Coincidentally, an anti-litter campaign was being developed on a separate track by the City of Baltimore's Sustainability Commission. The primary, shared interest among the NGO, local agency, and federal agency communities

is a Baltimore-specific public outreach campaign designed to reduce the volumes of aquatic trash in the region. The TFW program convened a Webinar in late Spring where stakeholders learned of the successes realized by the "Don't Mess with Texas" program and "The Recycle Guys" in the Carolinas. Stakeholders learned the importance of preliminary research, focus groups, and branded messaging to build a new mindset when trying to affect behavior change.

TFW has convened a cross-cutting group to develop and

implement this outreach and education plan. Trash Free Maryland is championing the project and truly moving the issue forward.

Integrated social marketing campaigns based on community research have proven to be effective strategies for bringing multiple aspects of an issue together and creating meaningful behavior change. Similarly, TFW and Trash Free Maryland will continue to evolve a social marketing campaign in the months ahead.

TFW Attracts Interest from Canadian and Mexican Governments

TFW caught the interest of ministers at the Commission on Environmental Cooperation (CEC) during their session hosted by the U.S. EPA Administrator Gina McCarthy hosted Leona Aglukkaq, Canada's Minister for the Environment, and Rodolfo Lacy Tamayo, Mexico's Secretary for Environment and Natural Resources at the 22nd Regular Session of the Council for the CEC July 14 and 15 in Boston, Massachusetts.

The CEC is an organization created by the U.S., Canada environmental concerns in North America and is

currently chaired by the U.S. During their conversation that focused on strategic outlooks on climate change issues, EPA's TFW program caught the interest of the other ministers on the

Council. They discussed ways to build on its success and expand it to other cities in North America.

<https://blog.epa.gov/blog/2015/07/public-health-north-america/>



Recently Held Meetings

Kickoff for Galveston TFW: 2nd Generation Project
Galveston, TX
September 16, 2015

Texas TFW: Concept Design Discussion
Dallas, TX
September 18, 2015

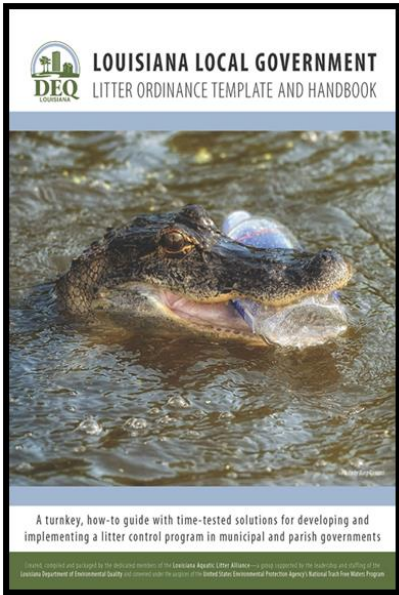
TFW: Executive Dialogue
Washington, DC
September 30, 2015

Our Oceans Conference
Valparaíso, Chile
October 5-6, 2015

NY/NJ TFW Partnership Meeting
New York City, New York
October 21, 2015

U.S. Coral Reef Task Force Meeting
Microplastics and Corals Presentation
Puerto Rico
October 24-31

Puerto Rico TFW Stakeholder meeting
Puerto Rico
October 26, 2015



New Handbook to Help Cities and Towns Address Aquatic Trash Through Effective and Enforceable Trash Ordinances

Under the auspices of EPA's TFW program, and developed in collaboration with the Louisiana Department of Environmental Quality (LDEQ) and representatives from local and state groups, the handbook serves as a "start to finish" tool that details how to establish a litter abatement program, what the template for a model litter ordinance looks like, and how to enforce and adjudicate violations. This product was developed in response to stakeholder concerns of the overwhelming problem of litter present in their communities, as well as in and along the bayous and coastal waters of Louisiana.

This handbook was endorsed as one of the priority activities for the TFW Gulf of Mexico Regional Strategy and Projects.

On July 30 and 31 representatives from LDEQ and the stakeholder group debuted the handbook at the Louisiana Municipal Association Annual Convention in the Cajun Dome in Lafayette. There they had an opportunity to explain the handbook and how communities can use it to implement litter-control strategies.

“EPA has identified trash in waters as a major water quality issue nationwide,” said Bill Honker, water quality protection division director for EPA Region 6. “This approach

will allow communities to address the problem with local action. We applaud LDEQ and the citizen groups that worked on this model.”

“Working with the citizens and the groups that are on the ground fighting the battle of excessive litter has been the driving force for creating this template,” said Gwen Berthelot, manager of DEQ’s Nonpoint Source Pollution Group. “Their hard work and dedication has produced a tool that will help reduce litter in Louisiana and our waters.”

To access the Handbook, go to EPA's website at:
<http://water.epa.gov/type/oceb/marinedebris/>.

TFW Implementation in Puerto Rico: Taking Action

Under the TFW Puerto Rico Strategy, the San Juan Bay Estuary Program (SJBE) has begun the second phase of their TFW public service campaign for newspapers. SJBE received commitments from *El Nuevo Día* newspaper to place four TFW ads (including their smart phone app version). It also received commitments from *Noticel*, and other media outlets.

SJBEP expects to receive over \$100,000 in free ad placements. The first of the ads was run on August 8th. In addition to the newspaper ads, SJBEP is producing full-color posters to place in schools and restaurants.

On August 15, SJBP transformed an abandoned and vandalized building in Santurce, PR into an open-air classroom to convey the TFW messages. SJBP is

using the same messages that are circulating in the public service campaign and in the Program's TFW exhibit, emphasizing stormwater pollution prevention. These outreach efforts serve as an underlying element of each of the selected projects for the Puerto Rico TFW Strategy, some of which are already being implemented.

Internationally Recognized Environmental Art Sculpture Comes to Atlanta's Centennial Olympic Park

Thanks to our EPA Region 4 (Atlanta, Georgia) colleagues, the TFW program participated in a traveling art exhibit to raise awareness of how trash travels from our streets and urban areas to nearby waterways. The exhibit started in Atlanta with a press event (May 7) at which EPA's Mark Nuhfer highlighted the TFW program. This was followed up with a grand

opening to the public (May 8).

Accompanying the sculpture are signs that speak to the causes, impacts, and potential preventative solutions to the aquatic trash issue. EPA has a sign alongside the display and will accompany the sculpture as it travels.

The monumental sculpture, named "Current Collections," is made of reclaimed and

recycled coastal debris and spans 40 feet in diameter at the base, reaching 38 feet into the air. The sculpture is built with a multi-colored translucent plastic skin that shimmers and shifts in outdoor light. "Current Collections" is intended to represent the kind of rotating water vortex where trash is frequently found in streams, rivers, lakes and the ocean.



*Calling all...
CHAMPIONS!*

We've found that a critical component for progress is having an impassioned leader to drive TFW projects from development through implementation. If someone you know has a great concept for reducing volumes of aquatic trash in large aquatic ecosystems, have them contact a member of the TFW team!

Aquatic Trash Prevention Great Practices Compendium: Mid-Atlantic States

In November, EPA will release its first edition of a great practices compendium which highlights efforts underway in the Mid-Atlantic region that have demonstrated results in managing aquatic trash. The nine practices selected from across the region demonstrate measurable

progress toward reducing and preventing trash from entering waterways and shows a return on investment from such efforts.

This compendium serves as a single reference point for practices that showed real results, enabling civic leaders and others to make informed

decisions about their future trash prevention program investments based on the experiences of others.

To access the compendium, go to EPA's website at: <http://water.epa.gov/type/oceb/marinedebris/>.

“The toolkit enabled three of our campuses to identify sources of plastic waste, research solutions, and make concrete change. We saw significant reductions in disposable plastics throughout all three campuses, and hope this toolkit will inspire change across the UC system.”

~ Matt St. Clair, Director of Sustainability for the UC Office of the President

“Preventing plastics and other types of trash from becoming marine debris is so important. This cool toolkit shows us how to take action in the fight to create trash free streams, lakes and oceans.”

~ Jared Blumenfeld, EPA’s Regional Administrator for the Pacific Southwest

Marine Debris & Plastic Source Reduction Toolkit for Colleges & Universities

EPA, the Product Stewardship Institute (PSI), and the University of California have launched a new Marine Debris Campus Toolkit designed to help college campuses and other institutions cut their plastic waste to help reduce marine debris and coastal pollution. The toolkit, funded by an EPA grant, resulted from a successful two-year pilot project by PSI at three coastal University of California campuses: UC Santa Barbara, UC San Diego, and UC San Francisco.

During the two-year pilot project, all three UC campuses dramatically reduced their plastics use. UC Santa Barbara saw a 97

percent decline in plastic bag use by campus food services through an agreement with their local Subway store to eliminate unnecessary packaging. By promoting campus hydration stations, the campus also eliminated over 60,000 single-use plastic water bottles. UC San Diego cut over 1 million plastic bags each year by working with their campus Subway store to eliminate plastic bags and straw sleeves. UC San Francisco’s Parnassus and Mission Bay campuses retrofitted over 50 water fountains with gooseneck spouts to fill reusable water bottles more easily, cutting campus purchasing of single-use plastic water bottles by 50 percent, saving \$27,500 annually.

The Campus Toolkit is a detailed “how to” guide for reducing

plastic waste on college campuses and other institutions.

“Packaging makes up a large portion of marine debris and contributes to the huge gyres of trash that exist in our oceans, harming both marine life and human health,” said Scott Cassel, Chief Executive Officer at PSI. “The adoption of this toolkit by other universities could have a major impact on reducing marine debris in coastal watersheds, which would convey immense promise in the movement to rid our waterways of excess plastic.”

To access the Campus Toolkit, go to EPA’s website at: www.epa.gov/region9/marine-debris/

TFW in Texas

The Trinity River is a significant watershed in the state of Texas - it is an integral part of Texas’ culture and history, a source of water for consumption and for agriculture and a place where its citizens recreate. It also accumulates and transports aquatic trash along its course from North Central Texas down through rural areas of Texas and into Houston and Galveston on the way

to the Gulf of Mexico. Reducing and preventing trash along this major watershed could have a dramatic effect on Texas’ coastal communities, the Gulf of Mexico, and the oceans.

In addition to the conventional “Adopt-a-Highway” program, Texas has numerous other “Adopt-a-Spot” programs that are likely under-subscribed including “Adopt-a-Stream,” “Adopt-a-Trail,” “Adopt a-Community” and “Adopt-a-Neighborhood” (Resilience Teams) and more. This

project will have four phases implemented along the Trinity River to pilot successes:

1. GIS mapping of all adopt-a-spots
2. Identify and overlay litter and aquatic trash hotspots;
3. Leverage the messaging and outreach of the “Don’t Mess with Texas” experts;
4. Evaluate and assess the expectations for how Adopt-a-Spots are maintained.

All four phases are expected to be completed by late 2016.

PONO "Keeping it Clean" a Real Winner!

Trash and litter collection is a large expense for the Port of New Orleans (Port). Personnel spend thousands of hours each year collecting abandoned trash along internal roadways and at remote areas of port property. Beginning in December, 2014, the Port launched an inclusive and transparent stakeholder outreach and education process to address litter and debris on port property and in adjacent waterways. This four month pilot project was part of EPA's TFW program and provided for a unique opportunity to use a collaborative stakeholder process to engage in a joint fact-finding and strategy development process. New initiatives and projects

launched directly resulting from the TFW stakeholder process include "Keep it Clean" campaign, additional truck route receptacle(s), regional ByYOU Drainscapes program, enhanced network of partners for waste reduction and clean up, potential for innovative waste reduction and recycling strategies, and ongoing work on floatable pollution prevention and mitigation technologies. This stakeholder process and resulting initiatives are excellent examples of low to no-cost solutions to litter and aquatic trash, and should help the Port avoid labor costs for regular litter pickup, estimated to be at least \$30,000 annually.

In turn, the Port received an award for its efforts! The Port's "PONO Trash Free Waters Project: A Collaborative Stakeholder Process" won the 2015 American Association of Port Authorities Environmental Award for Stakeholder Awareness, Education and Involvement. **AND** the Port was recently recognized as a certified Green Port by Green Marine, a voluntary certification program created for the maritime industry. This designation provides environmental standards for ports, operators, terminals, shipyards, shipping companies, and other maritime related businesses. The Port will use the designation as a benchmark for improving operations.



Grants Awarded to Projects with Aquatic Trash Component

The National Fish and Wildlife Foundation (NFWF) announced that 64 community-led wetland, stream and coastal restoration projects across the nation have been awarded more than \$2.3 million in grants. In addition, the grantees have committed an additional \$4.8 million in local project support, creating a total investment of more than \$7 million in projects that will restore wildlife habitat and urban waters. They will engage thousands of volunteers, students and local residents in community-based environmental stewardship projects.

These grants are awarded

through the Five Star and Urban Waters Restoration Program. Major funding for the 2015 Five Star and Urban Waters program is provided by EPA, the U.S. Forest Service, the U.S. Fish and Wildlife Service, FedEx, Southern Company, Bank of America and PG&E.

Consideration for funding is based upon the educational and training opportunities for youth and the community at large as well as the ecological and other cultural and economic benefits to the community. These projects must also involve a high degree of partnership between local government agencies, elected officials, community

groups, businesses, schools and environmental organizations for improving local water quality and restoring important fish and wildlife habitats." Grants can be awarded to projects that implement strategies to prevent and reduce the amount of trash entering rivers and other aquatic ecosystems. Of the grants awarded, five were given to projects that included elements to reduce/prevent aquatic trash.

Announcement of the Grant awards can be found at: http://www.nfwf.org/whoweare/mediacenter/pr/Pages/five-star_pr_15-0722.aspx

Aquatic trash-related projects awarded NFWF grants included:

- *Clean Your Streams: Restoring Clean Streams in Toledo (Ohio)*
- *Project Underway: Green Infrastructure, Local Jobs, and Community Stewardship for a Healthier Jamaica Bay Watershed (New York)*
- *Chesapeake Trash Trawl (District of Columbia, Maryland)*
- *Sustainable Collierville Project (Tennessee)*
- *Hispanic Environmental Awareness and Action at Masonville Cove Urban Wildlife Refuge Partnership (Maryland)*

The Rapids: News Drops

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OUR OCEAN II CONFERENCE

EPA's Principal Deputy Assistant Administrator Jane Nishida joined Secretary Kerry and other distinguished experts at the Our Ocean 2015 Conference in Valparaiso, Chile the week of October 5. This conference brought together different government, policy, science, and advocacy leaders to raise awareness of the many problems affecting the global marine environment, including marine pollution, ocean acidification, sustainable fisheries, marine protected areas, and issues affecting local communities. Governments, international organizations, and NGOs committed to take actions that will address marine problems. Marine litter, in particular plastics, is a growing global problem. Ms. Nishida announced a new joint partnership between EPA, the United Nations Environment Program's Caribbean Environment Program and the Peace Corps to expand EPA's Trash Free Waters strategy to the wider Caribbean region to help reduce land-based sources of marine debris. Jamaica and Panama will be the first countries to pilot a Trash Free Waters program. Follow Ms. Nishida's blog at: <https://blog.epa.gov/blog/2015/10/our-ocean-2015/>

GRANT OPPORTUNITY

EPA's Urban Waters Small Grants Program Request for Proposals is OPEN!

Under this announcement, EPA is soliciting proposals from eligible applicants for projects that will advance EPA's water quality and environmental justice goals. Proposed projects will address urban runoff pollution through diverse partnerships that produce multiple community benefits, with emphasis on underserved communities. Grants can be awarded to projects that implement strategies to prevent and reduce the amount of trash entering rivers and other aquatic ecosystems. Note that proposed project activities must take place entirely within one of the Eligible Geographic Areas, as illustrated on the interactive map provided on the Urban Waters Small Grants mapping website at epa.gov/urbanwaters/urban-waters-small-grants-mapping. For information on submitting a proposal: epa.gov/urbanwaters/urban-waters-small-grants.

Environmental Solutions for Communities Grant Program 2016 Request for Proposals.

December 10th Deadline. Wells Fargo and the National Fish and Wildlife Foundation (NFWF) seek to promote sustainable communities through Environmental Solutions for Communities by supporting highly-visible projects that link economic development and community well-being to the stewardship and health of the environment (which can include conserving water resources, improving local water quality, restoring and managing ecosystems that are important to community livelihoods, and encouraging broad-based citizen and targeted youth participation in project implementation. Approximately \$2,460,000 is available nationwide for 2016 projects. For further details go to: <http://www.nfwf.org/environmentalsolutions/Pages/2016RFP.aspx>.

TRAINING

UNEP's first Massive Open Online Course on Marine Litter is open for enrollment.

This course is prepared in collaboration with the Open Universiteit in the Netherlands to provide free access to lectures and case studies on marine litter to audiences around the world, aiming to increase awareness of and stimulate creative solutions to marine litter problems. With two learning options, all registrants can get access to the two-week Leadership Track and then continue to an eight-week Expert Track if they wish to learn more. At the end of the course, participants will receive certificates upon completion of each of the tracks. If you wish to enroll, please click <https://www.marinelittermooc.org/learn/massive-open-online-course-mooc-on-marine-litter-october-2015>. For further inquiries, please send an email to gpml@unep.org.
