Partnership Taking on Efforts to remove litter

The plastic bottles and snack bags and mixed woody debris form a small but dense raft of litter that bobs gently at the edge of the Anacostia River in Washington, DC.

It’s an unusually small mass of litter. Dry weather has brought temporary relief from the surge of trash that washes into the river with each rainfall.

And this particular jumble of litter is about to exit the ecosystem. It lies between the big tubular arms of a “trash trap” that catches litter in a grimy hug as it emerges from an outflow pipe at the river’s shore.

Within days, staff from Groundwork Anacostia will be on hand to extract the trash the trap collects and report the type and quantity to the District of Columbia government.

But Anacostia Riverkeeper Mike Bolinder knows more trash is on its way.

The Anacostia runs through parts of Maryland and the District that are packed with people. And every day, people drop trash. The castoffs from a society addicted to convenience are constantly building up along storm drains and parking lots throughout the Anacostia watershed until wind and rain drive them toward the river.

“Trash in the river has changed dramatically over the years,” Bolinder said. “It used to be that dumping
Trash in the Anacostia
aimed at bringing people back to the river

was the major problem. Now most of the trash we see is from snack food and fast food and oil containers. There’s a carpet of trash on the river, and most of it’s recyclable."

Trash is far from the only problem facing the Anacostia River. Pollution left from decades of industry is entrenched in the river, and toxics and sewage continue to arrive from modern sources.

But this once “forgotten river” has begun to draw a lot of attention. Trash has become a big concern for people who want to improve the Anacostia River and its neighborhoods, as well as those who want to redevelop its shores.

“To us, trash is a psychological toxin,” Bolinder said. “It’s like a broken window that drives people away from a building. But if we can tackle the trash and make a big dent, it will help bring people back to the river.”

The Anacostia Riverkeeper is part of an unusually large and energetic partnership that has taken on the challenge. Other partners include environmental and community groups like the Anacostia Watershed Society, DC Appleseed, Groundwork Anacostia, and the Earth Conservation Corps, along with local governments and business leaders.

The Alice Ferguson Foundation’s Campaign for a Trash Free Potomac—which includes a “trash treaty” signed by numerous local and regional governments—has also bolstered efforts on the Anacostia, which flows into the Potomac River just south of the U.S. Capitol.

In 2010, this partnership achieved groundbreaking news: The Anacostia became the first river in the Chesapeake region—and the second in the nation—to receive a federal order for reducing trash.

Now, the District of Columbia and two Maryland counties must prevent or remove more than 1.2 million pounds of trash from the river each year.

The annual responsibility for the three jurisdictions breaks down to approximately 243,000 pounds for the District of Columbia, 324,000 pounds for Montgomery County, and 695,000 pounds for Prince George’s County.

While the Anacostia’s anti-litter campaign was already well under way, the federal mandate has given the effort both urgency and teeth. It came in the form of a TMDL, or total maximum daily load, which the federal government uses to enforce the U.S. Clean Water Act.

If a water body consistently fails to meet water quality standards, the U.S. Environmental Protection Agency (EPA) can issue a TMDL that sets specific cleanup goals and consequences for inaction.

It’s a familiar concept in the Chesapeake Bay region. A Baywide TMDL, set in 2010, has become an important regulatory tool for cleaning up the Bay after decades of voluntary efforts failed to do the job. States and local governments are now scrambling to define and fund pollution reduction plans that will meet the required goals for nutrients and sediment.

“The principles of the trash TMDL are pretty much the same,” said Jon Capacasa, director of the EPA’s mid-Atlantic Water Protection Division. “But the main difference is the challenge of measurement.”

The trash TMDL grew from what Capacasa describes as an extraordinary partnership. The only other trash TMDL in the nation is for California’s Los Angeles River. There is no precedent in the Bay watershed and no established procedures for

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measuring the flow of trash or setting specific numeric goals to reduce it.

Before EPA could issue a TMDL, the Anacostia had to be included on the official list of waters impaired by trash. Water quality standards for most pollutants consist of a measurable numerical limit. But there is no magic number to indicate how much trash—if any—is acceptable for a given river.

In Maryland, a river is considered impaired by trash through more descriptive criteria. Evaluators must decide if the amount of trash is “unsightly,” “objectionable,” or interferes with the use of the river.

On one hand, this was good news. Making the case for the Anacostia wouldn’t be hard. On the other hand, no one had ever documented the problem in a structured way.

“We don’t typically monitor for trash, so these groups collected the data,” said Richard Eskin of the Maryland Department of the Environment. “They brought pictures and trash counts from multiple places and times. They presented data that was pretty much unequivocal.”

The next challenge was to define the goal.

“It was controversial,” Eskin said. “I was not willing to say that zero trash in the water is our goal. That’s an impossible standard to meet. We could spend millions on the cleanup but if one guy dropped a gum wrapper in a stream, it would be impaired again.”

Maryland, the District of Columbia, and EPA agreed to base the goal on the amount of trash that typically enters the Anacostia and its feeder streams over the course of year. An intense monitoring program trapped, weighed and sorted trash at 18 outfall pipes and scores of streamside locations representing a wide range of land use types.

The average annual trash load weighed approximately 600 tons, or 1.2 million pounds. The terms of the TMDL require removing or preventing every ounce.

As long as that number is achieved, the TMDL goal is met—even if someone drops an extra gum wrapper. That would make the river significantly better, but not actually trash-free. Officials acknowledge that their surveys likely missed some sources of trash. In addition, the Anacostia contains a legacy of refuse that has built up for many years, and which remains in the river or on its banks.

“I think the number could be three, four or five times that amount,” said James Foster, president of the Anacostia Watershed Society. “But it gets a number out there.”

Because of the TMDL, the counties and district must include trash reduction plans in the terms of their federal stormwater permit, which are usually renewed every five years. The plans vary by jurisdiction and are still taking shape. They include everything from street sweeping and trash traps to carefully planned public awareness campaigns and special enforcement periods for littering and illegal dumping.

The District of Columbia will also be making large-scale improvements to its combined sewage and stormwater system that aims to capture and retain 98% of the overflows that would otherwise enter the Anacostia River—and a large amount of trash will be captured with it.

“It’s perhaps the best trash reduction strategy we have going,” said EPA’s Capacasa.

This January, a 5-cent bag fee went into effect for most retail stores in Montgomery County, designed to dramatically reduce the number of plastic bags that end up in their portion of the Anacostia River. The fee was modeled after a similar program in the District of Columbia, which was in place before the TMDL was approved.

Ansu John of the Montgomery County Department of Environmental Protection said that the bag fee makes good fiscal sense, because it reduces litter at its source instead of relying on taxpayer dollars for the cleanup. But she credits the TMDL for making it happen.

“We were already signed onto the regional trash treaty, but the TMDL comes with a regulatory arm that pushed us to maximize our resources and the tools we could leverage to meet the goal. It forces the issue,” John said.
Dennis Chestnut directs Groundwork Anacostia, a community organization based in neighborhoods that border the river. Groundwork cleans and maintains three trash traps for the District of Columbia, visiting each site at least once a week, and more often if it rains.

The trap that they began managing in 2011 has collected 9,600 pounds of trash and debris already.

“The TMDL is one tool among many but it is a very important one,” Chestnut said. “Without it, a lot of things would probably stay on the back burner.”

The TMDL has also created an opportunity for Chestnut's staff to learn more about permits and regulations, and the ways in which they can help the local community. As they learn, they talk about it with area residents.

“Everybody has a piece of it, and that’s the message that needs to move forward,” Chestnut said.

Matthew Robinson, an environmental scientist with the District of Columbia, is proud of the ways in which the District is combatting trash in the river but said ongoing outreach is critical. While the bag fee has almost eliminated the presence of plastic bags in the water and paid for the installation of three highly effective trash traps, trash of all sorts continues to flow downstream.

“We are taking a multifaceted approach, because you have to get the source—people,” Robinson said.

Clean water advocates are now working with the Maryland Department of the Environment to ask EPA for a second trash TMDL in the Chesapeake watershed, this time for the Baltimore Harbor.

“A TMDL is a Clean Water Act tool that people should consider when they have a persistent water pollution problem and other tools haven't made headway,” Capacasa said. “In the case of the Anacostia, trash was a major concern, and DC and Maryland have responded.”

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