

# STORIES FROM THE CT CLEANUP

"For the past eight years I have been leading cleanups at Rocky Neck State Park and have been shocked to see what is hiding between rocks and under the sand. My biggest concern is the lack of knowledge around pollution. The abundance of disposable masks during the height of the pandemic introduced a new trash type and hazard to the environment. Not everyone knows how important it is to break off the ear loops before disposing them. Something that seems so simple wasn't getting done and if those masks ended up in our waters, they would both pollute our waters and put animals at risk of suffocation."  
- Michiela Messner, East Lyme



"Many people are surprised to learn that cigarette butts are composed mainly of plastic, specifically, cellulose acetate. Because plastics don't decompose, improperly discarded cigarette butts stick around for a very long time, creating visible pollution and contributing to leaching of harmful chemicals into our ground and water."  
- Annalisa Paltauf, Hamden



"Having grown up on the Sound, I know how much cleaner it now is. Now, one of my biggest concerns is the sheer volume of microplastics, and the production of new plastics hasn't seemed to slow. But hosting these cleanups and bringing people together, especially young people, is moving in the right direction to address the problem. I enjoy seeing how enthusiastic our younger generation is about making a difference. It reminds us older folks who we are trying to leave a better place for."  
- George Smith, East Haven

"Last year was my 17th year hosting cleanups in West Haven with support from Save the Sound. I was inspired to lead these cleanups after seeing so much trash on the beach, finding it unacceptable, and therefore wanting to do something about it. As a scientist, I appreciate the data collection aspect of the Ocean Conservancy's effort, as well. Sometimes trying to address the issue of litter can be very discouraging given the widespread disregard and lack of concern, but despair is not an option. These events bring me hope and offer one tangible solution."  
- Robert Marra, West Haven



"When patrolling the Sound, the most common plastic types I see are balloons and plastic bottles. Research shows a significant amount of microplastics in Long Island Sound as well. These are not visible and difficult to track down, making them one of my biggest pollution concerns. These microplastics are frequently ingested by smaller organisms and have the ability to bioaccumulate in animals higher up the food chain. It is the Soundkeeper's mission to protect and restore the public right to fishable, swimmable water in the Long Island Sound by tracking pollution sources and finding methods to remediate them."  
- Emma DeLoughry, Bridgeport

"Trash on land becomes trash in the ocean. Trash thrown out the window ends up on the street then washes down a storm drain into a stream. When trash heats up, it releases all kinds of toxins that wash over fish affecting their ability to spawn and avoid predators. Plastic is everywhere. We always find plastic bags or bottles in old lobster pots we retrieve. A shell fisherman from the Western Sound estimates he has pulled up thousands of pounds of plastic over the years. We cannot settle for a polluted existence and we have the strategies to fix it if the will is there. People from all walks of life deserve clean water and clean fish."  
- Bill Lucey, New Haven



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# YOU can help keep trash out of our waters!

## Use your voting power to stop trash in its tracks:

Support local restrictions on Styrofoam, plastic straws, balloons, and other types of plastic, and **vote for officials at every level of government who will take action.**

## Reduce single-use plastics in your own life:

Use reusable bags and bottles, share or thrift items instead of purchasing new, and ask your favorite restaurants to use biodegradable packaging. These actions are small but mighty and **your example makes a difference.**

## Join the Connecticut Cleanup:

Participate in cleanups from August to October, plan your own as a Cleanup Captain, or help sponsor the program and get a special corporate cleanup for your team organized by Save the Sound. **To learn more and commit to a cleaner Connecticut,** get in touch with Save the Sound's cleanup coordinator Annalisa Paltauf at [apaltauf@savethesound.org](mailto:apaltauf@savethesound.org)



# CONNECTICUT CLEANUP REPORT 2023

## 20 Years of Cleaning Up Connecticut

Since 2002, Save the Sound has hosted the Connecticut Cleanup as part of the Ocean Conservancy's International Coastal Cleanup. We support up to 75 cleanups annually across the state, working with local volunteer Cleanup Captains to host events at parks, beaches, and rivers. Each year, more than 2,000 volunteers pick up several tons of trash, tracking each piece so we can understand trends in marine debris and contribute to the global effort of stopping it at its source. This summary of six years of that data highlights the most common types of plastic on the ground and in the Sound.



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## What Do Our Data Say?

Over the last six years, our volunteers have picked up **over half a million pieces of trash** in Connecticut!

Our data indicate which types of trash have been the most common across time. Each year, our volunteers pick up an average of 20,000 cigarette butts, 13,000 food wrappers, and 9,000 small pieces of plastic. These three kinds of trash continue to be the most common, each presenting unique hazards to the environment. Cigarette butts are harmful as they contain plastic and toxic chemicals that leach into our soils and waters. Food wrappers and small pieces of plastic choke local wildlife and pose a risk to our own health as they break up into smaller pieces of plastic that can end up in the seafood we consume.

## The Plastic Pollution Problem

Plastic pollution is ubiquitous and stems from our excessive consumption of single-use plastic products and a lack of industry accountability. Styrofoam is particularly dangerous as it is light, allowing it to travel great distances on wind and water, and is easily broken down into smaller pieces. It is also an incredibly common material with no second use and takes up as much as 30% of space in landfills.<sup>1</sup> At each event, we can expect our volunteers to pick up at least 11 food containers, 11 cups or plates, and nearly 30 small pieces of Styrofoam. **Advocating for greener take-away containers and less packaging materials could help lower these numbers.**

Plastic straws pose similar risks. The average useful life of a plastic straw is 30 minutes—but they take 200–500 years to break down. The National Park Service estimates that Americans throw away 500 million single-use plastic straws every day.<sup>2</sup> Straws suffocate and injure marine wildlife. As they break up, they become microplastics, which accumulate in the food chain and end up in the animals we eat and the water we drink. Many restaurants and shops are now switching to plant-based straws, utensils, and plates to tackle this issue.

Balloons also show up as consistent marine debris, at around 400 pieces each year. Balloons are the most common type of trash found floating in open waters by our Soundkeeper team. Made either from Mylar or rubber, they leach chemicals and present hazards to the health of local flora and fauna.

**Replacing balloon releases with eco-friendly celebration products and rituals keeps trash from entering the Sound and encourages environmental stewardship.**



## What Does the Research Say?

### The Dangers of Plastic

Since the introduction of plastic in the 1950s, only 9% of the 5,800 million tons of plastic produced that is no longer in use has been recycled, while 79% has ended up in landfills or as litter in the environment.<sup>3</sup> **Currently, plastics make up 60-80% of the world's marine debris** with more than 8 million tons of plastic ending up in the oceans every year; 92.4% of this plastic exists as microplastic particles.<sup>4</sup>



### Microplastics



### A Threat Too Large to Ignore

Macroplastics, those larger than 5mm, hurt marine life through ingestion and entanglement. As of 2014, more than 600 marine species were confirmed to be affected by marine debris.<sup>5</sup> Sound species likely affected by macroplastic ingestion and entanglement include seabirds, sea turtles, and harbor seals. Plastics are prevalent in osprey nests located in highly developed areas and can be consumed by young hatchlings and lead to entanglement.<sup>6</sup> Researchers found that herring gulls in the Gulf of Maine had a 63% incidence of plastic ingestion, and great black-backed gulls had a 23.1% incidence.<sup>7</sup> In the Northeast Atlantic, debris items were found in the gastrointestinal tracts of 83% of loggerhead sea turtles studied.<sup>8</sup>

### Small Plastics, Big Problem

Macroplastics never fully break down, but fragment into smaller pieces called microplastics which can stay in the environment for hundreds of years. Microplastic pollution in Long Island Sound negatively impacts water quality, marine life, and human health through leaching, absorption of persistent organic pollutants (POPs), and bioaccumulation. Plastic products contain additives such as pigments, plasticizers, heat and UV stabilizers, and flame retardants that can leach into surrounding waterways once the degradation process begins.<sup>9</sup> Not only do these additives adversely affect water quality, they also harm marine life—particularly filter feeders—by disrupting endocrine and reproductive function. Microplastics absorb toxic chemicals in the water.

Once ingested by small organisms, microplastics and those absorbed toxins can bioaccumulate up the food chain, eventually affecting human health through seafood consumption. Mussels, oysters, and clams—all farmed commercially in the Sound—have accumulated toxic chemicals in their tissues.<sup>10</sup> Research on how microplastics impact our own well-being is in its infancy, but the UN Environmental Program has identified plastic pollution as an emerging issue that may affect human health.<sup>11</sup>

## Plastic Occurrence and Remediation in Long Island Sound

Along with the Connecticut Cleanup hosted by Save the Sound, there are many other efforts to document and remediate plastic pollution in the region, including The Littoral Society's New York cleanups and the Connecticut River Conservancy's "Source to Sea" cleanups. These cleanup efforts are crucial to reducing plastic pollution.

**The EPA's Long Island Sound Study aims to decrease the amount of marine debris collected by 70% by 2035.**<sup>12</sup>



<sup>1</sup> "What Are the Different Types of Plastic?" Quality Logo Products, Quality Logo Products, Inc., (<https://www.qualitylogoproducts.com/promo-university/different-types-of-plastic.htm>)  
<sup>2</sup> Cummings, Bill. "Plastic Tide Threatens Long Island Sound." CT Post, 3 Aug. 2018, (<https://www.ctpost.com/local/article/Plastic-tide-threatens-Long-Island-Sound-13130947.php>)  
<sup>3</sup> Geyer, Roland, et al. "Production, Use, and Fate of All Plastics Ever Made." Science Advances, vol. 3, no. 7, July 2017, p. e1700782. DOI.org (Crossref), doi:10.1126/sciadv.1700782.  
<sup>4</sup> Eriksen, Marcus, et al. "Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea." PLoS ONE, edited by Hans G. Dam, vol. 9, no. 12, Dec. 2014. DOI.org (Crossref), doi:10.1371/journal.pone.0111913.  
<sup>5</sup> National Oceanic and Atmospheric Administration Marine Debris Program.  
<sup>6</sup> 2014 Report on the Occurrence and Health Effects of Anthropogenic Debris Ingested by Marine Organisms. Silver Spring, MD.  
<sup>7</sup> Wurst, Ben, and Clark, Kathleen (2020). 2020 New Jersey Osprey Project Report. Conserve Wildlife Foundation and NJ Division of Fish and Wildlife.  
<sup>8</sup> Caldwell, A., Seavey, J., & Craig, E. (2020). Foraging strategy impacts plastic ingestion risk in seabirds. Limnology and Oceanography Letters, 5(1), 163-168.  
<sup>9</sup> Pham, C. K., Rodríguez, Y., Dauphin, A., Carrico, R., Frias, J. P., Vandepierre, F., ... & Bjørndal, K. A. (2017).  
Plastic ingestion in oceanic-stage loggerhead sea turtles (Caretta caretta) off the North Atlantic subtropical gyre. Marine Pollution Bulletin, 121(1-2), 222-229.  
<sup>10</sup> Simke, Ariella. "There Is Plastic in Your Fish." Forbes, Forbes Magazine, 10 Dec. 2021, (<https://www.forbes.com/sites/ariellasimke/2020/01/21/there-is-plastic-in-your-fish/?sh=2313b8b7071>)  
<sup>11</sup> Dorrico, McKinley. "An Investigation on Plastic Pollution in New Haven Harbor." University of New Haven.  
<sup>12</sup> Blettler MCM, et al. Plastic pollution in freshwater ecosystems: macro-, meso-, and microplastic debris in a floodplain lake. Environ Monit Assess. 2017 Oct 23;189(11):581. doi: 10.1007/s10661-017-6305-8. PMID: 29063206.  
<sup>13</sup> "Marine Debris." Long Island Sound Study, Long Island Sound Study, 29 Apr. 2022, (<https://longislandsoundstudy.net/ecosystem-target-indicators/marine-debris/>)