



International
Coastal
Cleanup 2002

2002 International Coastal Cleanup

Ohio Summary Report

2002 Ohio ICC Coordinator:

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What is Marine Debris?

Scientists define marine debris as ‘any manufactured or processed solid waste material that enters the marine environment’¹ and people are the conduits. Ocean dumping is not a new phenomenon. It has been a practice for centuries. While our habits have not necessarily changed, the nature of marine debris has—dramatically. In the last three decades, organic materials (once the most common forms of debris) have yielded to synthetic elements, like plastics, as the primary substance in trash. Durable and slow to degrade, items like plastic beverage bottles, packing straps, tarps, and synthetic fishing line create a debris source with staying power. In addition, many of these items are highly buoyant, allowing them to travel in currents for thousands of miles, endangering marine ecosystems and wildlife along the way. Surprisingly, most of this debris comes from land sources, not ships. In fact, in the early 1990s, land-based activities like picnics, sports, festivals, and days at the beach were responsible for 60-80 percent of the world’s marine pollution.

*The average American disposes of
4.6 pounds of trash each day
– the highest average in the world.*

History of the Cleanup

The International Coastal Cleanup (ICC) is the oldest and largest volunteer effort on behalf of the marine environment that records and analyzes debris found during beach cleanup activities. Since the first Texas beach cleanup in 1986, The Ocean Conservancy and its global and national partners have turned the event into a worldwide effort. By 1988, with the aid of a growing number of government, corporate, and non-profit supporters, the cleanups had expanded to include all 25 U.S. coastal states and territories. The national cleanup became an international event when Canada and Mexico joined in 1989. The next year, the cleanup expanded to include Japan,

*Cumulatively, over 5.2 million volunteers
from 123 countries have participated in the
ICC since 1986.*

Laws and Legislation

International Convention for the Prevention of Pollution from Ships (MARPOL 73/78):

Provides a comprehensive approach to dealing with ocean dumping by creating international guidelines to prevent ship pollution. MARPOL (enforced by the International Maritime Organization www.imo.org) has six annexes, covering oil discharge, hazardous liquid control, hazardous material transport, sewage discharge, plastic and garbage disposal, and air pollution. As of March 2003, 113 countries have ratified Annex V controlling the disposal of plastics and garbage into the oceans.

Marine Plastic Pollution Research and Control Act (MPPRCA):

In 1987, the United States passed MPPRCA to create legal authority to implement MARPOL-Annex V in the United States. Under MPPRCA, throwing plastic trash off any vessel within the U.S. Exclusive Economic Zone (EEZ)—within 200 miles of the U.S. shoreline—is illegal. It is also illegal to throw any other garbage overboard while navigating U.S. waters (including inland waters) or within three miles of shore. The U.S. Coast Guard (www.uscg.mil) and the U.S. Department of Justice enforces MARPOL within the EEZ and will pursue any case brought to its attention.

Clean Water Act: This act established pollution discharge regulations for U.S. waters, set water quality standards, and gave the country’s Environmental Protection Agency (EPA) authority over pollution control programs.

www.epa.gov/r5water/cwa.htm

Beaches Environmental Assessment and Coastal Health Act of 2000 (B.E.A.C.H. Act):

The act amended the Clean Water Act, requiring adoption of minimum health-based water quality criteria, comprehensive water testing, and notification of the public when water contamination levels are unsafe.

www.epa.gov/waterscience/beaches/act.html

Coastal Zone Management Act (CZMA): This act works to preserve, protect, develop, restore, and enhance the United States’ coastal zone resources. www.ocrm.nos.noaa.gov/

Activities That Produce Debris

Ocean and Waterway Activities

A variety of ocean and waterway activities, such as cruise ship operations, fishing, boating, military vessels, and even offshore oil drilling, can result in marine debris.

Recreational and Shoreline Activities

Picnics, festivals, and days at the beach can produce a variety of debris. Litter washed from streets, parking lots, and storm drains also contributes to this category of debris.

Smoking-Related Activities

Littering from smoking produces cigarette filters, cigar tips, and tobacco packaging debris.



Dumping-Related Activities

Dumping items like building materials, cars and car parts, and large household items—either legally or illegally—contributes to marine debris.

Medical and Personal Hygiene

Medical and personal hygiene waste can enter the environment through improper disposal. Since it often arrives on beaches through sewer systems, its presence on shore can indicate other, unseen pollutants.

and by 1992, 33 countries participated. Since 1986, over 5.2 million volunteers have participated in the ICC, and the program has expanded to include inland and underwater sites. Today, ICC events have been conducted in 123 countries worldwide around every major body of water on the planet.

The Sources of Marine Debris

The International Coastal Cleanup engages people to remove trash and debris from the world's beaches and waterways, to identify the sources of debris, and to change the behaviors that cause pollution.

Determining where debris originates is no easy task, since trash and litter can travel long distances before washing up on our shorelines or sinking to the ocean bottom. One of the ICC's goals is to trace pollution to its source and work to prevent it from occurring. To this end, ICC volunteers record debris information on standardized data cards developed and provided by The Ocean Conservancy. Data compiled from beach cleanups are used to identify the activities that produce the debris.

In the early 1990s, land-based activities were responsible for 60 to 80 percent of the world's marine debris.

Information is grouped by the behavior associated with its presence: recreational and beach-going activities, smoking-related activities, ocean and waterway activities, legal or illegal dumping, and activities resulting from improper disposal or handling of medical or personal hygiene materials. Many of these activities occur on land, and debris reaches the ocean by being blown into the water, or is carried by creeks, rivers and storm drains to the shore. Other debris originates on the water, from vessels (from small sailboats to large container ships), offshore drilling rigs and platforms, and fishing piers. The result is a unique global database of information collected at every cleanup around the world. Data from the cleanup provides the framework for action at all levels of government to limit marine debris and to educate the public about litter and pollution prevention.

Results For The 2002 International Coastal Cleanup

Officially held on September 21, 2002, the 17th annual Cleanup involved more than 391,000 volunteers. Volunteers combed over 12,400 miles of shorelines and waterways. This year, the ICC expanded its geographic presence by 23 countries. One hundred countries participated in 2002, making it the most global event in the ICC's 17-year history.

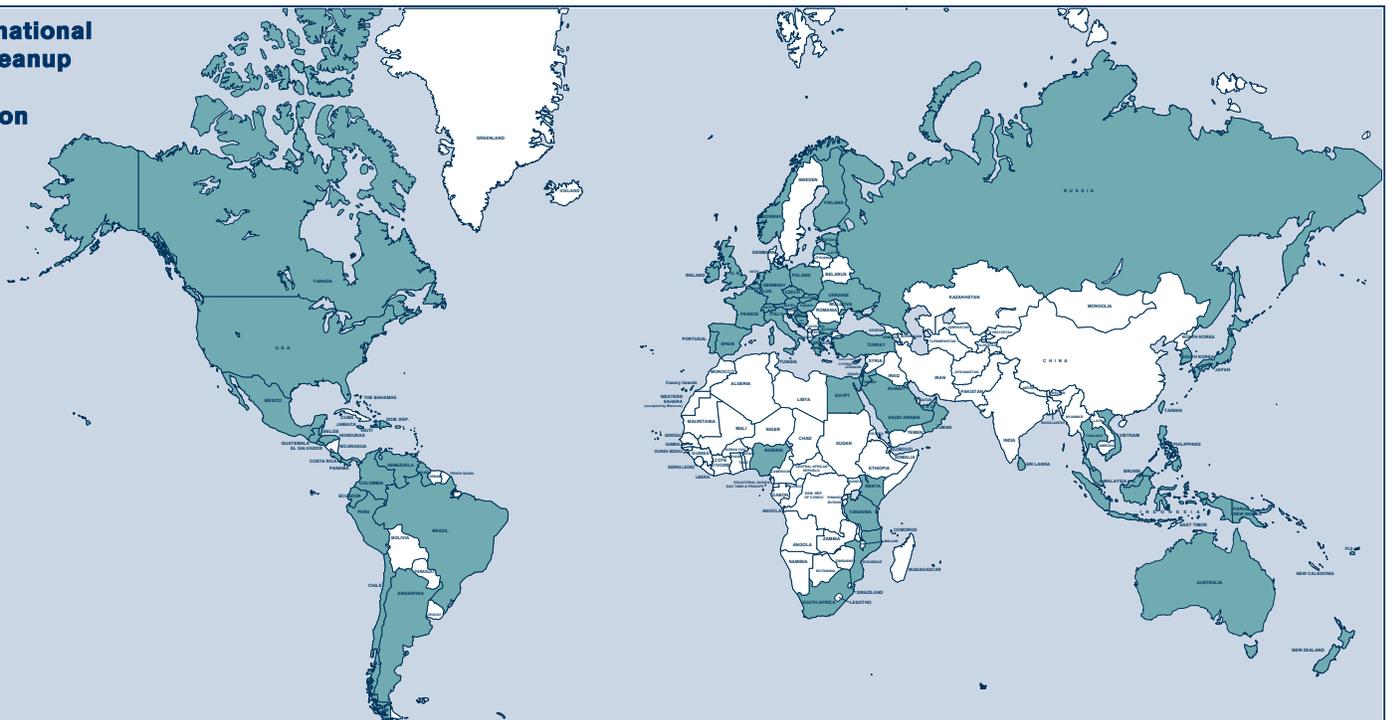
Worldwide, ICC volunteers combed 12,410 miles of coastline, which is equivalent to more than 3/4 of the Earth's circumference.

In the United States, 167,340 volunteers turned out from 50 US states and territories, a 17 percent increase in participation from last year. Crews in the US traversed more than 8,700 miles of coastline and waterways, collecting more than 4.2 million pieces of debris, which weighed almost 3.7 million pounds from approximately 2,700 different sites around the country.

One of the obstacles faced in the fight against debris is the "out of sight, out of mind" rationale. When trash is dumped into the water, it is often forgotten once it sinks out of sight. However, as Cleanup volunteers can attest, underwater debris does not simply disappear. Teams of divers and underwater supporters gathered to scour for debris under the water's surface. As a result, underwater cleanups attracted 9,261 divers in 69 countries throughout the world. Together these volunteers cleaned 283 miles of habitat, removing 47,512 pieces of debris, weighing over 231,000 pounds.

ICC volunteers collected 8.22 million pounds of trash; the same weight as 205 full garbage trucks or 37 blue whales, the Earth's largest living creature.

2002 International Coastal Cleanup Country Participation



2002 Results - Ohio

In Ohio, 533 volunteers participated in the 2002 ICC. Volunteers cleaned 40 miles of shoreline and waterways, picking up 28,895 pieces of debris, weighing in at 10,435 pounds.

Marine Debris Data

Volunteers removed 10,435 pounds of debris from the beaches and waterways in Ohio. Overall, shoreline and recreational activities like sports, picnics, games, and going to the beach caused 67 percent of the debris found in Ohio during the 2002 ICC. Litter washed from streets and parking lots into storm drains also falls under these activities. Shoreline and recreational activities accounted for 58 percent of all the debris found worldwide.

Debris from cigarettes, cigars, and their wrappers made up 24 percent of the items collected in Ohio. Worldwide, smoking-related activities accounted for 40 percent of all the debris collected, with over 1.6 million cigarettes removed from our beaches and waterways.

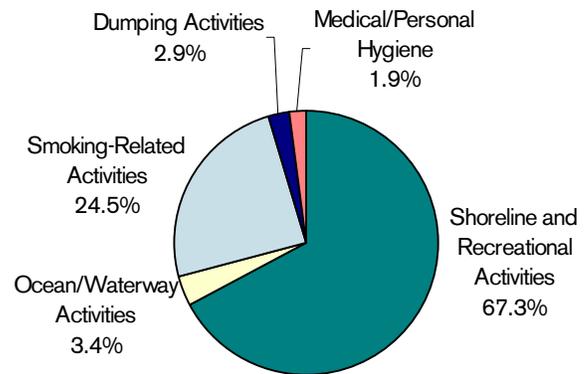
Items from ocean/waterway activities, such as fishing line, fish traps, nets, and lures, are the most common types of entangling debris and don't always make it to land. Instead, they can remain in the water, where they pose a continual threat to wildlife and humans. Items from this source made up three percent of the debris found in Ohio.

In Ohio, cigarettes, caps and lids, and beverage cans accounted for over one quarter of all the debris items collected.

Reporting the most frequently found items has been a mainstay since the ICC's beginning. The "Top Ten" list represents the 10 most abundant items found during the Cleanup. In addition to being the 10 most frequently found items, in 2002 the Top Ten also comprised 80 percent of all the collected debris in Ohio. Of those 10, the top three items – cigarettes, caps and lids, and beverage cans – account for over one quarter of all debris. Cigarettes received the dubious honor

2002 ICC Results - Ohio -

Sources and Activities of Marine Debris



"Top Ten" Debris Items

Debris Items	Amount	Percent of Total
1. Cigarettes/Cigarette Filters	4,209	14.6%
2. Caps, Lids	3,016	10.4%
3. Beverage Cans	2,742	9.5%
4. Food Wrappers/Containers	2,636	9.1%
5. Cigar Tips	2,126	7.4%
6. Beverage Bottles (Glass)	1,823	6.3%
7. Beverage Bottles (Plastic) 2 liters or less	1,798	6.2%
8. Cups, Plates, Forks, Knives, Spoons	1,730	6.0%
9. Straws, Stirrers	1,698	5.9%
10. Bags	1,449	5.0%
Totals:	23,227	80.4%

of being the most commonly found debris item, comprising seven percent of the 29 thousand debris items collected in the Cleanup. Please refer to the Appendix A for a complete listing of debris items found in Ohio.

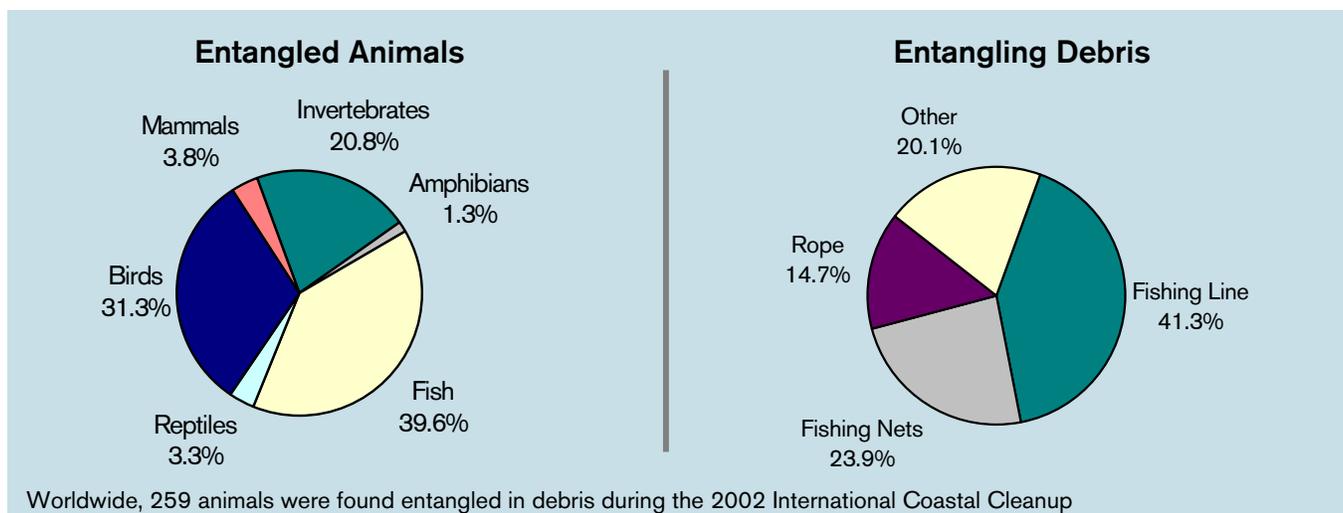
Most of the items found during the ICC are packaging waste from consumable goods – from cigarettes to prepackaged food and beverage products – that are discarded after the product is used or consumed. Unfortunately, the long reign of many of these items at the top of the list indicates that many people appear content to maintain their current behavior and assume that their individual impact on the problem is minimal. Beach cleanups aren't truly effective tools against pollution prevention if they don't go hand-in-hand with public education. We must recognize that marine debris ultimately comes from people, not places.



Globally, an estimated one million birds and 100,000 marine mammals and sea turtles die each year from entanglement in, or ingestion of, marine debris.²

Dangers of Debris

In addition to being an eyesore, debris also poses a real danger to both marine wildlife and people. For cleanup volunteers, animal entanglement is the most common evidence of these dangers. Each year they find marine animals caught in variety of debris. Afflictions from debris entanglement can include lethal cuts, hampered mobility, suffocation, and drowning. Marine wildlife can also fall victim to trash that people cannot see – ingested debris. Many animals, like seabirds, are indiscriminant eaters and unintentionally ingest debris. Others confuse trash (like plastic bags) with food. In many cases, debris ingestion can lead to starvation and even death.



While the number of Top Ten items can be staggering, other types of debris pose a more immediate risk to marine wildlife. While compromising eight percent of all debris found in Ohio, items like fishing line, plastic bags, balloons, rope, plastic tarps, and six-pack holders are infinitely more dangerous to ocean creatures. In the 2002 ICC, volunteers discovered 259 entangled animals worldwide. Unfortunately, fishing line and fishing nets entangled the most animals for the second year, representing 64 percent of total entanglements (see figure on page 6). Other entangling debris included balloon ribbon, fish and lobster traps, six-pack rings, and plastic bags.

2002 ICC - Ohio Dangerous Debris Items	
Bags	1,449
Balloons	259
Crab/Lobster/Fish Traps	0
Fishing Line	69
Fishing Nets	10
Plastic Sheeting/Tarps	272
Rope	74
Six-Pack Holders	88
Strapping Bands	51
Syringes	22
Total	2,294



Humans face dangers, too. In addition to the obvious dangers sharps like syringes and broken glass pose to people, there are other, unseen threats as well. Medical and personal hygiene debris often enters the waste stream through sewer systems, which can indicate the presence of invisible pollutants such as fecal bacteria. These pathogens can sicken people exposed to the contaminated water. In fact, there were 13,410 beach closings and advisories due to unsafe water issued across the United States in 2001.³

The ICC provides us with a snapshot of the dangers animals face from debris. However, the number of entangled animals reported during the ICC only represents one day's worth of information. According to the UK-based research group Sea Life Surveys, scientists estimate that more than one million birds and 100,000 marine mammals and sea turtles die each year from ingestion of and entanglement in marine debris.² Unfortunately, that number is just an estimate; we will never know how many untold numbers of animals are affected by marine debris every year.



What You Can Do to Reduce Debris:

In its *Consumer Handbook for Reducing Solid Waste*, EPA offers 12 tips for reducing solid waste.

Reduce

- Reduce the amount of unnecessary packaging.
- Adopt practices that reduce waste toxicity.

Reuse

- Consider reusable products.
- Maintain and repair durable products.
- Reuse bags, containers, and other items.
- Borrow, rent, or share items used infrequently.
- Sell or donate goods instead of throwing them out.

Recycle

- Choose recyclable products and containers and recycle them.
- Select products made from recycled materials.
- Compost yard trimmings and some food scraps.

Respond

- Educate others on source reduction and recycling practices. Make your preferences known to manufacturers, merchants, and community leaders.
- Be creative – find new ways to reduce waste quantity and toxicity.

Conclusion

Marine debris is one of the most solvable pollution issues society faces, which makes it one of the most hopeful – and yet frustrating – problems on the planet. Continued education on the detrimental effects of marine debris is necessary to help change the behaviors and alter the activities causing this plague. The Ocean Conservancy continues to share the lessons learned from the Cleanup to educate and enlighten the public, stakeholders, and policymakers. The 2002 Ohio Summary Report is just one building block in its efforts to try and create long-lasting solutions to the problem of marine debris.

For more information contact on marine debris and the International Coastal Cleanup:

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¹ Coe, James M. & Rogers, Donald B., ed. *Marine Debris: Sources, Impacts and Solutions*. Springer-Verlag : New York, 1997.

² Sea Life Surveys, "Minke Whale Photo-Identification," sealifesurveys.co.uk/research.cfm.

³ *Testing the Waters XII: A Guide to Water Quality at Vacation Beaches*. By Mark Dorfman. National Resource Defense Council. July 2002.

Individual debris items collected during the 2002 ICC in Ohio

Debris Items	Total
Shoreline and Recreational Activities	
Bags	1,449
Balloons	259
Beverage Bottles (Glass)	1,823
Beverage Bottles (Plastic) 2 liters or less	1,798
Beverage Cans	2,742
Caps, Lids	3,016
Clothing, Shoes	473
Cups, Plates, Forks, Knives, Spoons	1,730
Food Wrappers/Containers	2,636
Pull Tabs	274
Shotgun Shells/Wadding	1,057
Six-Pack Holders	88
Straws, Stirrers	1,698
Toys	421
Ocean/Waterway Activities	
Bait Containers/Packaging	184
Bleach/Cleaner Bottles	93
Buoys/Floats	31
Crab/Lobster/Fish Traps	0
Crates	12
Fishing Line	69
Fishing Lures/Light Sticks	111
Fishing Nets	10
Light Bulbs/Tubes	20
Oil/Lube Bottles	58
Pallets	9
Plastic Sheeting/Tarps	272
Rope	74
Strapping Bands	51
Smoking-Related Activities	
Cigar Tips	2,126
Cigarette Lighters	185
Cigarettes/Cigarette Filters	4,209
Tobacco Packaging/Wrappers	547
Dumping Activities	
55-Gallon Drums	32
Appliances (refrigerators, washers, etc.)	41
Batteries	29
Building Materials	469
Cars/Car Parts	159
Tires	99
Medical/Personal Hygiene	
Condoms	51
Diapers	60
Syringes	22
Tampons/Tampon Applicators	408
Totals	28,895

