

International Coastal Cleanup

- 2003 -

Ohio Summary Report

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The Ocean
Conservancy

Advocates for Wild, Healthy Oceans



The International Coastal Cleanup

The International Coastal Cleanup (ICC) 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.

Marine Debris: A Global Problem

Marine debris is a pervasive plague reaching across the globe. Food wrappers and containers, fishing line, plastic bags, and cigarette butts are just some of the debris items found scattered along our beaches, drastically affecting our oceans and inland waterways. Unfortunately, marine debris can be traced back to one single source—people.

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

According to scientists, marine debris is defined as any manufactured or processed solid waste material that enters the marine environment from any source. While our habits have not necessarily changed, the nature of marine debris has—dramatically. Based on past research and data, organic materials have yielded to synthetic materials, like plastics, as the primary substance in trash. Items like plastic beverage bottles, packing straps, tarps, and fishing line are slow to degrade and are highly buoyant, allowing them to travel in currents for thousands of miles, endangering marine wildlife and ecosystems along the way.

History of the International Coastal Cleanup

The International Coastal Cleanup is the world's largest one-day volunteer effort to clean up the marine environment. Since the first Texas beach cleanup in 1986, The Ocean Conservancy and its international partners have turned the event into a global effort. By 1988, the Cleanup had expanded to include 25 coastal U.S. states and territories.

Laws and Treaties Regulating Trash in the Sea

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

This law provides a comprehensive approach when 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 2004, 117 countries have ratified Annex V, which controls the disposal of plastics and garbage into the oceans.

Marine Plastic Pollution Research and Control Act (MPPRCA):

To implement Annex V of MARPOL, each individual country must develop its own national implementation legislation. The U.S. Congress created the MPPRCA to implement Annex V in the United States. Under MPPRCA, it is illegal to throw plastic trash off any vessel within the U.S. Exclusive Economic Zone (within 200 miles of the U.S. shoreline). It is also illegal to throw any other garbage overboard while navigating U.S. waters (including inland waters) or within three miles of shore.

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/region5/water/cwa.htm)

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

This 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.ocrms.nos.noaa.gov)

Activities That Produce 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.



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.



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.

In 1989, Canada and Mexico participated, making the event the International Coastal Cleanup. Just three years later, 33 countries participated; in 2003, 91 nations took part. In total, 127 countries have participated in the ICC during its 18-year history. Today, the ICC is held around every major body of water in the world.

Sources of Marine Debris

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.

The official data card used in the Cleanup allows users to record specific debris items that are indicative of the activities and sources producing the debris. Information is grouped by the behavior associated with its presence: recreational and shoreline activities, ocean and waterway activities, smoking-related activities, dumping activities, and activities resulting from improper disposal or handling of medical or personal hygiene materials. Much of the debris is deposited on land and reaches the ocean by beach-going activities, being blown into the water, or carried by creeks, rivers and storm drains to the shore. Other debris comes from water activities, including 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 provide the framework for action at all levels of government to limit marine debris and to educate the public about litter and pollution prevention.

2003 ICC: A Global Event

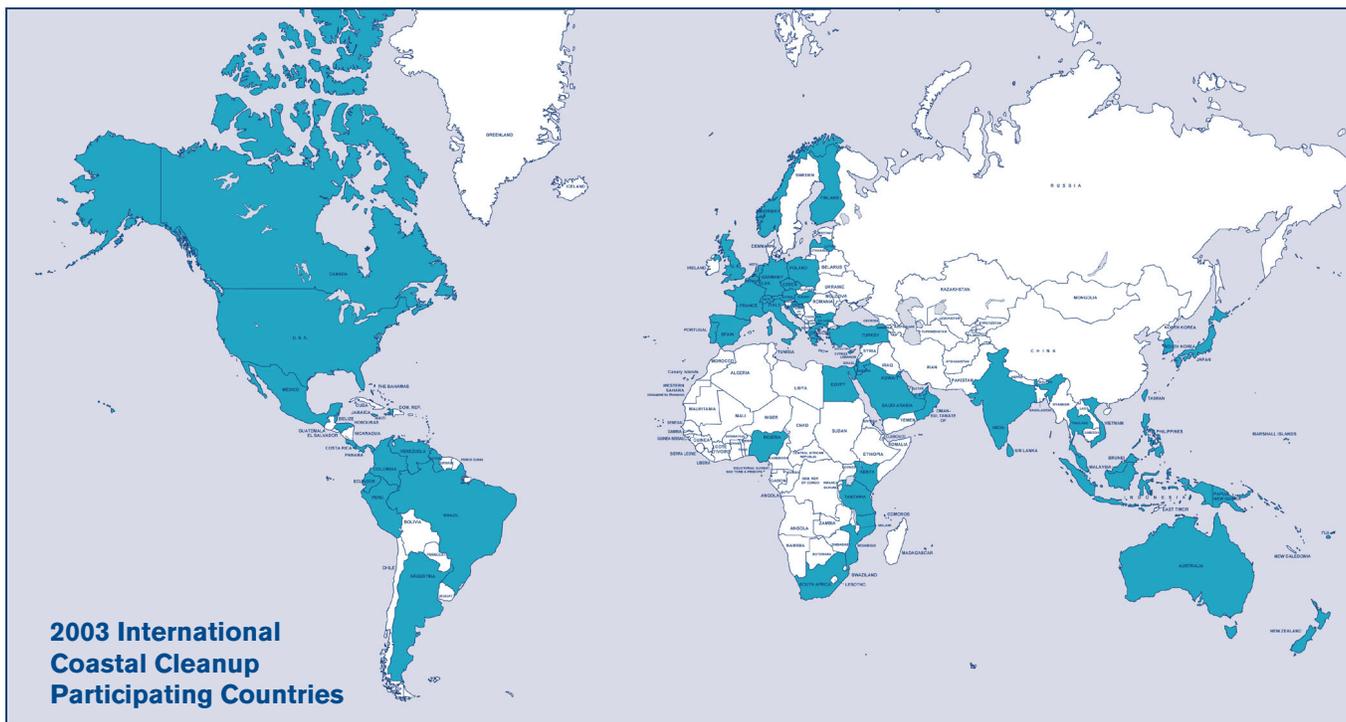
The International Coastal Cleanup was held on Saturday, September 20, 2003. More than 450,000 volunteers participated in this year's Cleanup, removing over 7.5 million pounds of debris from more than 16,000 miles of oceans and waterways. Hurricanes and typhoons could not even deter volunteers from the Cleanup. In fact, volunteers from Okinawa rescheduled their cleanups after a typhoon hit the Pacific. Volunteers in Bermuda were faced with Hurricane Fabian and still managed to have record turnouts at the Cleanup. In Maryland, North Carolina and Virginia, volunteers were able to participate in the ICC, despite Hurricane Isabel making its debut several days before the big event.



In 2003, the ICC expanded its geographic presence by including five new countries—Guadeloupe, India, Luxembourg, Marshall Islands, and Vanuatu— bringing the total number of participating countries to 91.

In the United States, more than 170,000 volunteers turned out from 48 U.S. states and territories. ICC volunteers removed more than 3.7 million pounds of debris, combing over 9,000 miles of oceans and waterways. Underwater, divers in the United States removed over 19,500 debris items from weighing an excess of 32,000 pounds.

Underwater cleanup participation also increased, as 9,629 divers from 70 countries removed over 185,000 pounds of debris from 325 miles of oceans and waterways.



2003 ICC: Ohio

In 2003, 900 volunteers participated in the 2003 ICC in Ohio. Volunteers cleaned 61 miles of oceans and waterways, picking up 31,329 debris items, weighing in at 21,108 pounds. In addition to land based cleanups in Ohio, 222 divers removed 1,987 debris items from below the waters' surface.

Marine Debris

Overall, **shoreline and recreational activities** such as picnics, festivals, and days at the beach accounted for 76 percent of the debris found in Ohio. Litter washed from streets, parking lots, and storm drains also contributed to this category of debris. Worldwide, **shoreline and recreational activities** accounted for 56 percent of all the debris collected.

Smoking-related activities, in the form of cigarette filters, cigar tips, and tobacco packaging, accounted for 17 percent of the debris found in Ohio. Globally, debris from smoking-related activities made up 34 percent of the debris collected.

Debris items from **ocean and waterway activities** related to cruise ships, commercial and recreational fishing, shipping and recreational

boating accounted for four percent of the debris found in Ohio. Worldwide ocean and waterway activities represented only six percent of the debris collected during the Cleanup.

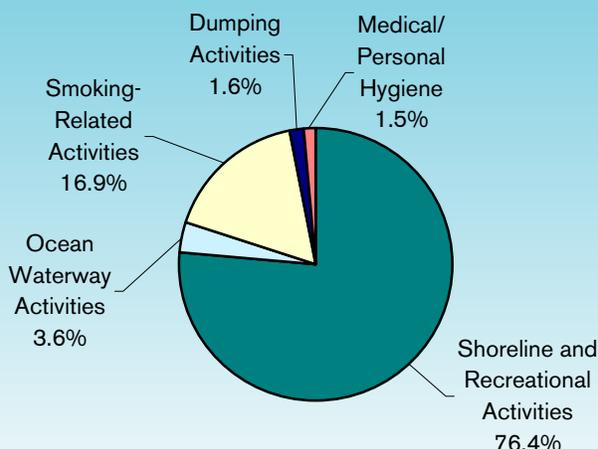
In Ohio, food wrappers, cigarettes, and beverage cans accounted for over one quarter of all the debris items collected.

The “Top Ten” list represents the 10 most abundant items found during the Cleanup and provides a quick guide to the most common forms of marine debris. In 2003, the “Top Ten” list made up 85 percent of all the debris found in Ohio. Of those 10, the top three items – food wrappers, cigarettes, and beverage cans – account for over one quarter of all debris. Food wrappers, the number one item in Ohio, comprised nearly one quarter of the 31,329 debris items. Please refer to Appendix A for a complete listing of debris items found in Ohio and Appendix B for separate listing of results from Land or Underwater Cleanups.

As the data shows, the highest number of items found during the 2003 ICC consisted of packaging waste from consumable goods such as, cigarettes, fast food, and beverage products. The packaging waste was improperly discarded after the products were used or consumed. Promoting

2003 ICC Results - Ohio

Sources of Debris



“Top Ten” Debris Items

Debris Items	Amount	Percent of Total
1. Food Wrappers and Containers	4,896	15.6%
2. Beverage Cans	4,124	13.2%
3. Cigarettes/Cigarette Filters	3,496	11.2%
4. Caps/Lids	3,181	10.2%
5. Beverage Bottles (Glass)	2,530	8.1%
6. Beverage Bottles (Plastic) 2 liters or less	2,309	7.4%
7. Cups/Plates/Forks/ Knives/Spoons	2,101	6.7%
8. Straws/Stirrers	1,754	5.6%
9. Bags	1,289	4.1%
10. Cigar Tips	1,045	3.3%
Totals:	26,725	85.4%

public awareness of waste handling problems is vital to educate the public. We must also provide them with the knowledge and tools to encourage behavioral changes designed to reduce debris.

Dangers of Marine Debris

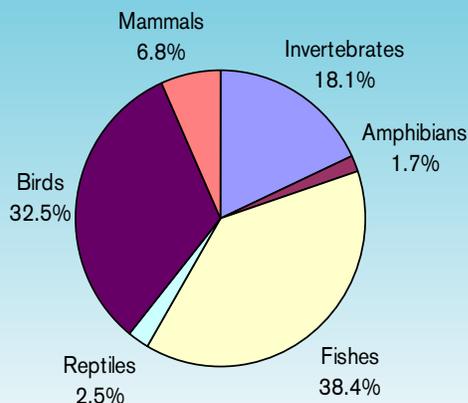
Each year, volunteers find animals entangled in a variety of marine debris. The consequences are often deadly for the animals. Debris entanglement can cause lethal cuts, hampered mobility, suffocation, and drowning. Debris ingestion—usually caused when animals mistake trash for food or are indiscriminant eaters—can lead to strangulation and starvation.

In the 2003 ICC, volunteers discovered 237 entangled items worldwide. Unfortunately, monofilament fishing line was the primary culprit for the third year, representing more than 41 percent of total entanglements. Fishing nets were the next “most dangerous” items, causing over 18 percent of animal entanglements. Other entangling debris included six-pack holders and balloon ribbon. While compromising seven percent of all debris found in Ohio, these debris items are substantially more dangerous to ocean creatures.

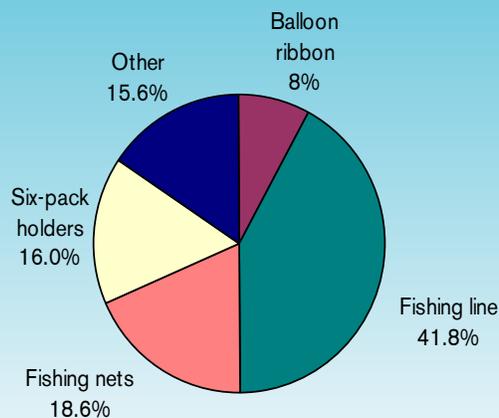
2003 ICC - Ohio Dangerous Debris Items	
Bags	1,289
Balloons	213
Crab/Lobster/Fish Traps	0
Fishing Line	82
Fishing Nets	4
Plastic Sheeting/Tarps	263
Rope	104
Six-Pack Holders	70
Strapping Bands	104
Syringes	17
Total	2,146

Of the animal entanglements reported during the 2003 ICC, marine mammal entanglements made up less than seven percent of the total entanglements, while fish and invertebrates accounted for more than half of all recorded entangled animals. While one could reasonably expect that animals that spend most of their lives underwater would be at the greatest risk for entanglement, seabirds are also victims of debris. ICC volunteers found 77 entangled birds, almost 33 percent of the total entangled wildlife.

Entangled Animals



Debris Items Found Entangling Animals



Worldwide, 237 animals were found entangled in debris during the 2003 International Coastal Cleanup.

Unfortunately, the annual number of animals entangled, injured, and killed by marine debris is unknown. The animal entanglements recorded during the ICC suggest that the numbers are extremely high. According to the UK-based research group Sea Life Surveys, scientists estimate that globally, more than one million birds and 100,000 marine mammals and sea turtles die each year from entanglement in, or ingestion of, plastics.¹ We will never know exactly how many animals are affected by marine debris each year but we do know that through ICC cleanup efforts wildlife entanglement risks are reduced.

Marine debris is harmful to humans, too. In addition to the obvious dangers caused by syringes, broken glass, and similar debris, 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 pollution and pathogens. Bacteria can sicken people exposed to the contaminated water. In fact, there were at least 12,184 beach closings and advisories due to unsafe water issued across the United States in 2002.²

¹ Sea Life Surveys, "Minke Whale-Photo Identification," www.sealifesurveys.co.uk/research.cfm

² *Testing the Waters 2003: A Guide to Water Quality at Vacation Beaches*. By Mark Dorfman. National Resource Defense Council. August 2003.

³ www.epa.gov/epaoswer/osw/specials/funfacts

What You Can Do to Reduce Debris

The U.S. Environmental Protection Agency (EPA) is challenging all citizens to conserve our natural resources and save energy. It offers the following tips to get you started.³

Reduce Your Packaging

Buy bulk or concentrated products when you can.

Reduce Toxicity or Learn How

Recycle your batteries or use batteries with reduced mercury.

Select Reusable Products

Sturdy, washable utensils, tableware, cloth napkins, and dishcloths can be used many times.

Use Durable Products

Choose furniture, sports equipment, toys, and tools that will stand the test of time.

Reuse Products

Reuse newspaper, boxes, shipping "peanuts," and bubble wrap to ship packages.

Recycle Automotive Products

Take car batteries, antifreeze, and motor oil to participating recycling centers.

Buy Products Made from Recycled Material

Many bottles, cans, cereal boxes, containers, and cartons are made from recycled material.

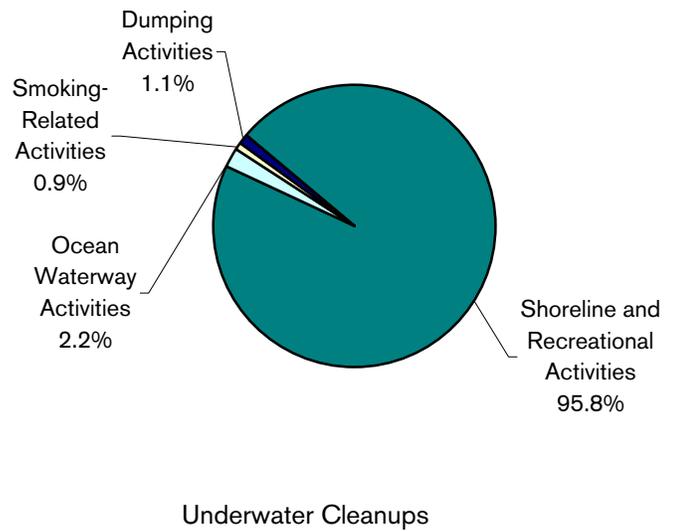
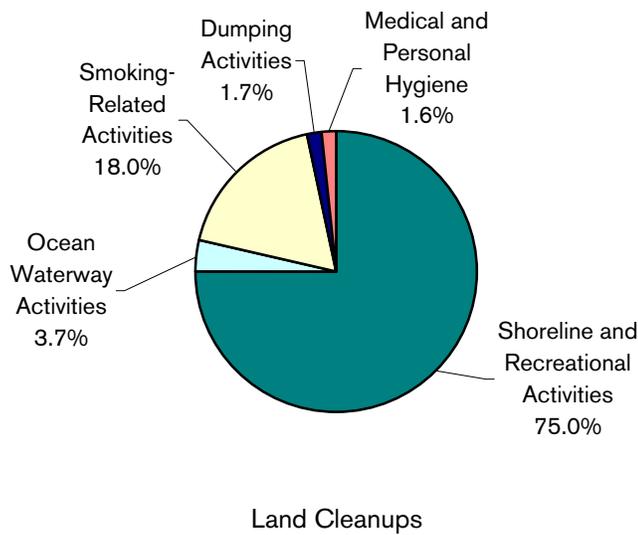
Compost or Learn How

Food scraps and yard waste can become natural soil conditioners.

Individual debris items collected during the 2003 ICC in Ohio

Debris Items	Land	Underwater	Total
Shoreline and Recreational Activities			
Bags	1,289	0	1,289
Balloons	213	0	213
Beverage Bottles (Glass)	2,015	515	2,530
Beverage Bottles (Plastic) 2 liters or less	2,287	22	2,309
Beverage Cans	3,300	824	4,124
Caps/Lids	3,142	39	3,181
Clothing/Shoes	298	53	351
Cups/Plates/Forks/ Knives/Spoons	1,686	415	2,101
Food Wrappers and Containers	4,881	15	4,896
Pull Tabs	197	1	198
Shotgun Shells/Wadding	530	1	531
Six-Pack Holders	69	1	70
Straws/Stirrers	1,752	2	1,754
Toys	352	18	370
Ocean and Waterway Activities			
Bait Containers/Packaging	223	1	224
Bleach/Cleaner Bottles	72	0	72
Buoys/Floats	25	2	27
Crab/Lobster/Fish Traps	0	0	0
Crates	17	0	17
Fishing Line	79	3	82
Fishing Lures/Light Sticks	56	0	56
Fishing Nets	3	1	4
Light Bulbs/Tubes	26	3	29
Oil/Lube Bottles	130	0	130
Pallets	23	3	26
Plastic Sheeting/Tarps	260	3	263
Rope	81	23	104
Strapping Bands	100	4	104
Smoking-Related Activities			
Cigar Tips	1,044	1	1,045
Cigarette Lighters	351	13	364
Cigarettes/Cigarette Filters	3,495	1	3,496
Tobacco Packaging/Wrappers	377	2	379
Dumping Activities			
55-Gallon Drums	9	1	10
Appliances (refrigerators, washers, etc.)	12	0	12
Batteries	50	8	58
Building Materials	236	7	243
Cars/Car Parts	113	2	115
Tires	68	3	71
Medical and Personal Hygiene			
Condoms	80	0	80
Diapers	46	0	46
Syringes	17	0	17
Tampons/Tampon Applicators	338	0	338
Totals	29,342	1,987	31,329

Ohio 2003 ICC - Sources of Marine Debris - Land and Underwater Cleanups



Ohio 2003 ICC “Top Ten” Debris Items – Land and Underwater Cleanups

Land Cleanups Only

Debris Items	Amount	Percent of Total
1. Food Wrappers and Containers	4,881	16.6%
2. Cigarettes/Cigarette Filters	3,495	11.9%
3. Beverage Cans	3,300	11.3%
4. Caps/Lids	3,142	10.7%
5. Beverage Bottles (Plastic) 2 liters or less	2,287	7.8%
6. Beverage Bottles (Glass)	2,015	6.9%
7. Straws/Stirrers	1,752	6.0%
8. Cups/Plates/Forks/ Knives/Spoons	1,686	5.8%
9. Bags	1,289	4.4%
10. Cigar Tips	1,044	3.6%
Totals:	24,891	85.0%

Underwater Cleanups Only

Debris Items	Amount	Percent of Total
1. Beverage Cans	824	41.5%
2. Beverage Bottles (Glass)	515	25.9%
3. Cups/Plates/Forks/ Knives/Spoons	415	20.9%
4. Clothing/Shoes	53	2.7%
5. Caps/Lids	39	2.0%
6. Rope	23	1.2%
7. Beverage Bottles (Plastic) 2 liters or less	22	1.1%
8. Toys	18	0.9%
9. Food Wrappers and Containers	15	0.8%
10. Cigarette Lighters	13	0.7%
Totals:	1,937	97.7%