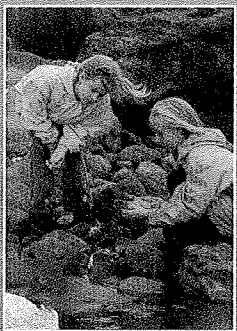


1999 International Coastal Cleanup



RESULTS

1999 International Coastal Cleanup

RESULTS

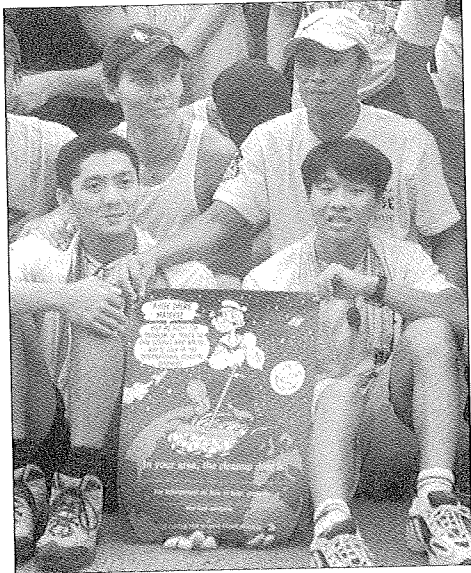
Published by
Center for Marine Conservation
Washington, D.C.

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Hong Kong

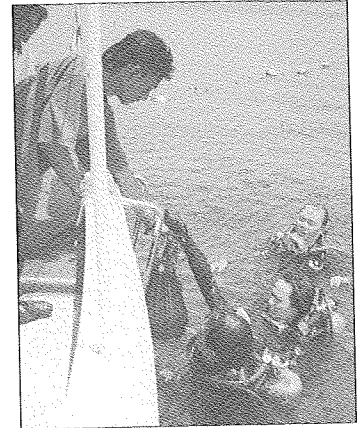


Norway

Volunteers in 77 countries participated in the 1999 International Coastal Cleanup.



Lithuania



Malaysia



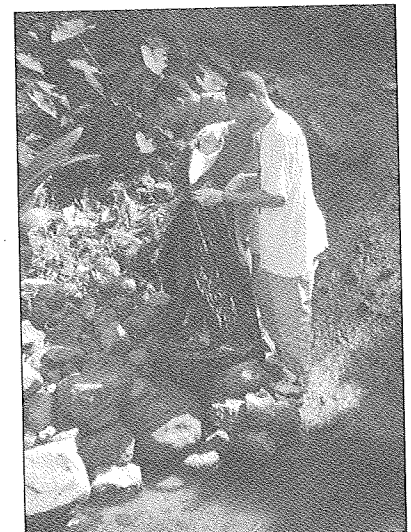
Papua New Guinea



Bahrain



Tonga



Dominica

OVERVIEW

Every year the International Coastal Cleanup brings together people of all ages, genders, ethnicities, and languages in pursuit of one common goal—cleaning the Earth's oceans and waterways of marine debris.

The mission of the International Coastal Cleanup is

- To remove debris from the shorelines, waterways, and beaches of the world's lakes, rivers, and oceans;
- To collect valuable information on the amount and types of debris;
- To educate people on the issue of marine debris; and
- To use the information collected from the Cleanup to effect positive change—on all levels, from the individual to the international—to reduce marine debris and enhance marine conservation.

It is the world's largest volunteer cleanup effort on behalf of the marine environment. But the International Coastal Cleanup is not about trash. It's about the compelling need for clean oceans and waterways.

For many of the problems plaguing our oceans there is little or no role for the average citizen, short of urging his or her leaders to enact new laws or enforce existing ones. The International Coastal Cleanup is one example of citizens taking direct, immediate action to help restore the health of the oceans. The cleanup provides immediate results; their beaches are cleaner. Further, the data they collect is essential to the creation of the broader, longer-lasting solutions that business and government can supply. The International Coastal Cleanup demonstrates that ordinary citizens can make a difference.



Wisconsin

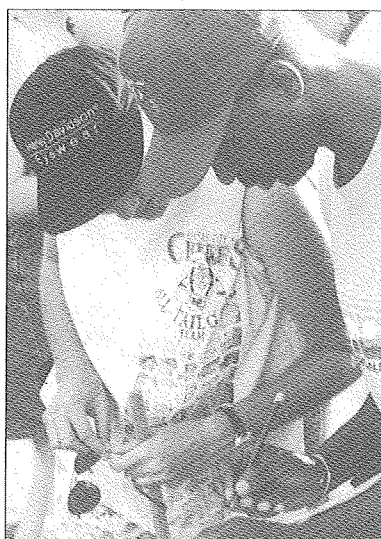


Mississippi

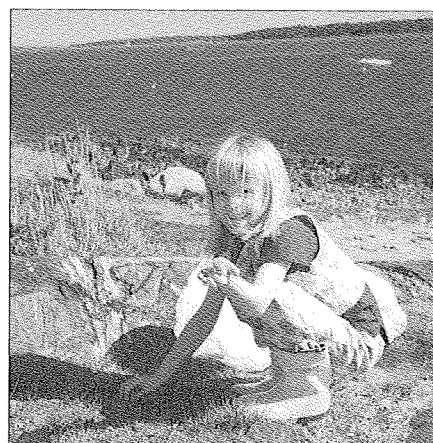
In 1999, volunteers helped clean waterways in 49 U.S. states, plus the District of Columbia, Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.



New Jersey



Guam

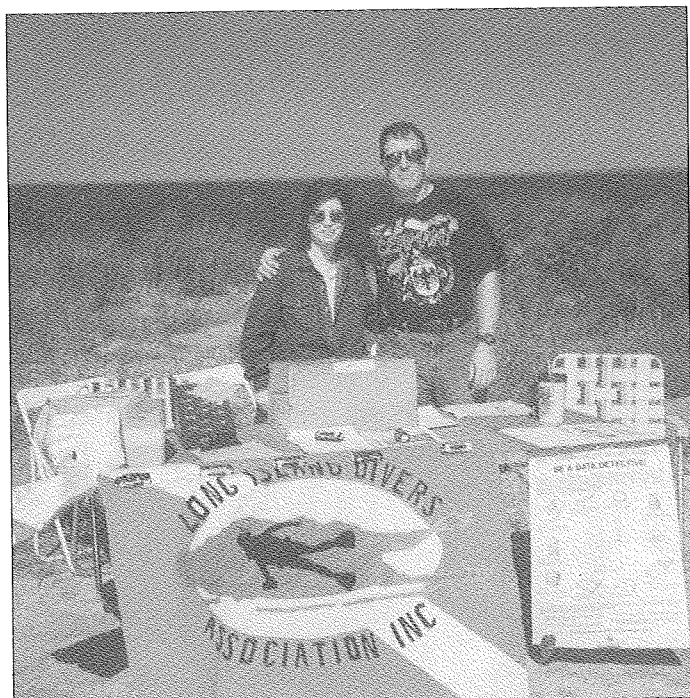


Maine

Acknowledgments

The annual Cleanup would never achieve the success it does, year after year, if not for our volunteers who show up on cleanup day ready to work. Many of these volunteers come back every year, laboring behind the scenes and on the shorelines. To you, CMC offers special thanks, and recognizes the commitments you have made. Many other volunteers are new each year. To you CMC extends a welcome, and expresses the hope that you will continue to work for clean and safe water in your communities.

Among the hardest working participants every year are the country, state, and local coordinators. For some it's part of their job in state or local government. Others take it on in addition to demanding jobs and other commitments. Many have been doing it for ten years or longer. They begin their work months in advance, and usually continue the post-cleanup tasks until the New Year. CMC owes you all a tremendous debt of gratitude. Without you the Cleanup simply **would not** happen.



New York

Dozens of Cleanup sponsors support cleanup efforts with both financial support and in-kind contributions. At the same time, hundreds of local organizations and sponsors organize and support cleanup activities in each location. Without your backing, year after year, the Cleanup would be nothing but a good idea. Thank you.

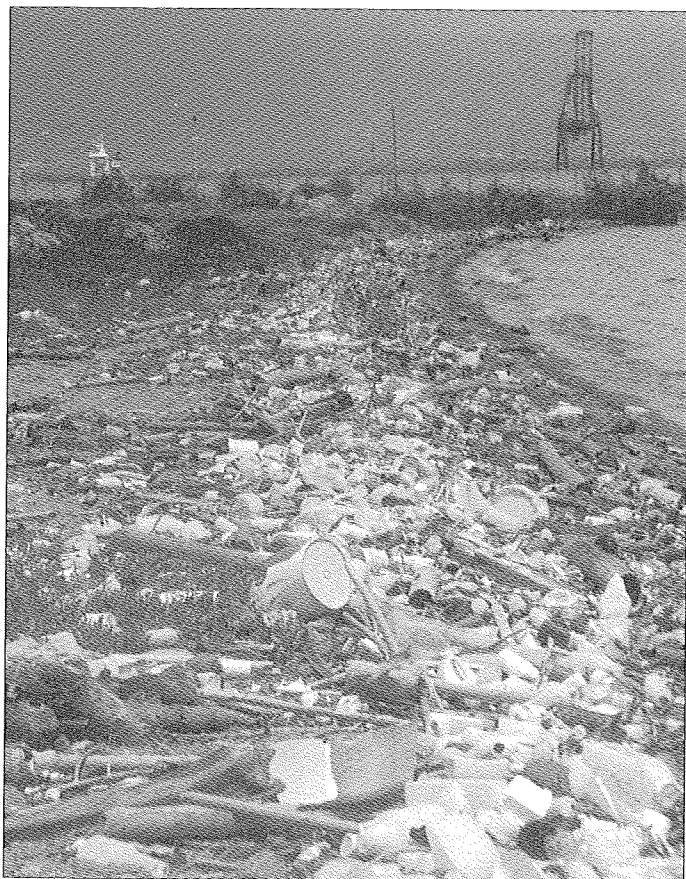
CMC cannot list every volunteer who participated in the 1999 Cleanup. We can, however, list the state and country coordinators (page 8) and the international and local sponsors (appendices 1 and 2). Please take a moment and review these names, and know that each name represents a commitment to clean oceans, and is a symbol of the good that can be accomplished when we work together for a common goal.



Alaska



Crete



every year from entanglement in fishing line, net, and other debris.

Although the seas have been a dumping ground for human-made trash for centuries, only recently has debris become such a visible problem. One reason is that the composition of many goods has changed in the last fifty years. Metal and glass objects sank onto the ocean bottom, and natural fibers disintegrated. Because more and more consumer and industrial goods are made of long-lasting, lightweight plastics, their presence on our beaches and waterways is more noticeable. And, there are simply more of us creating more trash.

The Problem of Marine Debris

Marine debris has been defined as “any manufactured or processed solid waste material that enters the marine environment from any source.” It can be as small as a bottle cap or as large as a lawn chair. It can be found in all the world’s oceans, and in waterways that lead to the ocean, such as rivers and streams and sewage pipes.

In addition to ruining the landscape, marine debris can be a human health and safety hazard. Broken glass and metal can injure beachgoers; syringes and other medical wastes can transmit disease; and rope and fishing line can wrap around boat propellers, disabling them. Rope and fishing line can also entangle divers and swimmers.

One of the most horrifying effects of marine debris is its injurious, often lethal impact on birds and marine mammals. Seabirds are known to eat everything from small pieces of foamed plastic to lighters and bottle caps. Plastic bags floating at the water’s surface are often mistaken for jellyfish by hungry sea turtles, and thousands of seals, sea turtles, whales, and birds die

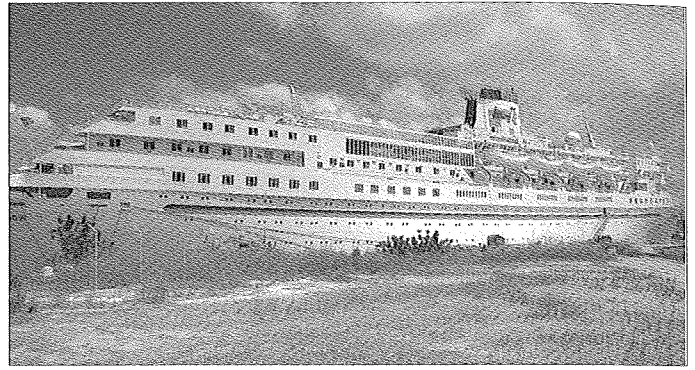
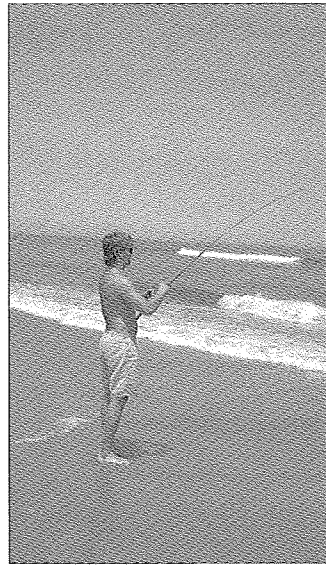
Sources of Debris

If you asked the average person where most of the debris found at the Cleanup comes from, many would probably say from various commercial industries. While it’s true that maritime industries share some of the blame, the reality is both more complex and closer to home.

Marine debris is classified as either land- or ocean-based, depending on where it enters the water.

Ocean-based sources include commercial fishing vessels; recreational boats and cruise ships; merchant, military, and research vessels; and offshore petroleum platforms and associated supply vessels.

This debris can be introduced accidentally, as when fishing line or nets, or food wrappers and beverage cans are blown off the boat or break loose. Or the debris can be introduced intentionally, as when boaters, fishers, or ships’ crew members throw their trash overboard.



Streetside litter, recreational fishing, pleasure boating, and beachgoers are some of the sources of marine debris.

Some items are clearly identified with a particular ocean activity, such as fishing line or net, bottles embossed with cruise line logos, or pipe threat protectors or other items associated with offshore oil drilling. Other materials, however, such as beverage bottles, food wrappers or containers, resemble their counterparts that were discarded on land, and are not so clearly traced.

Dumping trash at sea has been prohibited in most of the world's oceans since 1988, when Annex V of the MARPOL treaty went into effect. MARPOL is an international agreement governing shipboard disposal of hazardous substances; Annex V regulates solid waste. Since then, data from the cleanup indicates that shipborne debris is declining.

Most marine debris does not originate at sea, however. Although we call it "marine" debris, most of the debris collected at the Cleanup originates on land.

Land-based debris blows, washes, or is discharged into the water from land areas. Sources include recreational beach-goers and fishers; materials manufacturers, processors and transporters; shore-based solid waste disposal and processing facilities; sewage treatment and combined sewer overflows; inappropriate or illegal dumping; and littering.

Antiquated sewer systems, common in older cities, introduce street trash and medical or sanitary items flushed down household toilets. Although public

wastewater treatment facilities are prohibited from discharging plastics into the marine environment, during periods of heavy rain the systems can become overloaded, and water is shunted away from the treatment tanks and directly into the nearest waterway. Typical debris from these discharges includes tampon applicators, condoms, and syringes. Some stormwater systems are designed to discharge directly into waterways without undergoing any screening or treatment. Anything discarded onto a city street, sidewalk, or lawn can potentially be carried down the nearest storm drain and into a creek, river, bay, and eventually, the ocean.

Both legal and illegal waste handling practices contribute to marine debris. The inadvertent release of debris from coastal landfills and garbage boats and the illegal dumping of domestic and industrial garbage into coastal and marine waters contribute to the marine debris problem.

And common but indiscriminate litter, whether dropped by beachgoers or by people hundreds of miles away, often finds its way to the nearest beach or waterway. Every piece of litter found during the ICC has a person's face (and hand) behind it. Food wrappers, beverage cans and bottles, straws, cigarette

butts, candy wrappers—all were discarded by someone, somewhere.

Factors such as ocean current patterns, climate and tides, and proximity to urban centers, industrial and recreational areas, and shipping lanes influence the type and amount of debris that is found along our beaches and waterways—including underwater areas.

The International Coastal Cleanup

Since 1986, when the Center for Marine Conservation conducted its first cleanup along the Texas coast, the Cleanup has expanded to include lakes, rivers, and streams, as well as underwater sites around the world. Since 1986 nearly three million people in more than 100 countries have participated in the yearly event.

These volunteers do more than just collect trash. They keep track of what they find on data cards designed by the Center for Marine Conservation. These data cards list more than 80 types of debris cleanup volunteers are likely to encounter.

This data collecting is time-consuming and tedious on top of an already challenging chore, but it is an integral element of the Cleanup. The information yields a “snapshot” of specific sites and specific times. After the cleanup, the cards are returned to CMC for analysis and comparison with other sites and years. Some apparent trends may not hold up over time; other results are disturbingly consistent. In all, the data serve as signposts, pointing out progress and areas that need more work. From this analysis, conservationists, local government, and industry can create solutions to their particular debris problems.

For example, the 1998 cleanup in Barrington, Rhode Island yielded so many cigarette butts that a local high school student successfully petitioned town offi-

cials to designate a “smoker’s section” of the beach, complete with a bench, sand urn, and sign. The Rhode Island legislature has since enacted legislation enabling towns throughout the state to establish similarly equipped smoking areas on local beaches.

Data from the annual cleanups have also been used to enact international, national, and state legislation; foster public education campaigns targeting specific sources of debris, such as storm drains; change policy and procedures in certain marine industries, such as cruise lines and merchant ships; and helped local communities pinpoint their specific debris problems and create unique solutions.

Although the data have been used to reveal specific problems in specific areas, the numbers do not constitute a rigorous scientific database; too many factors vary from year to year and site to site. For example, turnout can be light or heavy, volunteers seasoned or new. Both can affect the amount or types of debris collected. Wind and water currents can shift, changing the volume and final resting place of water-borne debris. And sites cleaned year after year are generally less trash-laden than first-time cleanup locations. For these reasons, caution should be applied in comparing data from year to year and site to site.



Canada

Most cleanup volunteers do their work on shore, but every year several thousand dedicated divers remove tons of debris from under the water’s surface. With the help of the Professional Dive Instructors Association (PADI) the number of divers and sites cleaned grows every year. The Cleanup has also expanded inland over the years. Once concentrated on the coast, cleanups now take place in lakes, creeks, streams, rivers, and canals in such landlocked locales as Arizona, New Mexico, Colorado, Missouri and North Dakota in the United States, and countries such as Switzerland, Hungary, and the Czech Republic. Because much of the debris we find at the beach actually originates farther inland, cleaning debris from inshore areas will help reduce the amount of debris that ends up on the beach or the ocean.

Coordinators

The International Coastal Cleanup would not be the successful event it is without our international, state, and local coordinators. They put in hundreds of hours every year, usually volunteer, to

create their local cleanups and ensure that the event goes smoothly, that volunteers are safe, and that they have fun and are rewarded for their efforts. In 1999 those outstanding individuals are:

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Cayman Islands

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Malta

Sarah Muscat, Marine Life Care Group

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Quintana Roo: Yael Bali, Planeta Limpio A.C.
Yucatan: Jose Ruiz Silva, Sria. de Ecologia del Gobierno del Estado de Yucatan
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Vermont

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Virginia

Katie Register, Clean Virginia Waterways

Washington

Joan Hauser-Crowe, WA State Parks

West Virginia

Emily Morgan, Center for Marine Conservation

Wisconsin

Kae DonLevy

PADI Americas

Kristin Valette

Highlights

As with all outdoor events, the weather played a major role in the 1999 Cleanup. Swells from Hurricane Dennis prevented kayakers and divers in New Brunswick, Canada from conducting their water cleanup. Undaunted, they joined the volunteers working on the beach. Typhoon York hit Hong Kong, and Hurricanes José and Lenny worked against Cleanup volunteers on Nevis by scattering debris and damaging the beaches.

Hurricanes Floyd and Irene affected cleanup plans in several U.S. states, including Florida, North Carolina, Virginia, and South Carolina. Nevertheless, Florida reported record turnout, with 37,000 volunteers, 2,000 more than in 1998. In North Carolina, several cleanups were canceled due to hurricane-related flooding and evacuations. Only 46 of the state's 100 counties were able to hold their cleanup on cleanup day, September 16. Despite the adverse conditions, 27 counties reported an increase in turnout from 1998, and 16 counties reported all-time highs for volunteers. North Carolina volunteers collected more trash per person in 1999 than in the previous nine years.

But chilly or damp weather didn't dampen the volunteers' spirits—they simply donned foul-weather gear—or improvised with trash bags—and kept right on cleaning.

The biggest reward for most cleanup volunteers is the satisfaction of a job well done for the environment. But most cleanup coordinators tried to show their appreciation to the volunteers, with everything from free t-shirts to post-cleanup barbecues and pizza parties to rewards for the most trash collected or the most unusual items found.

In Kirkfield Quarry, Canada, the Cleanup included an underwater pumpkin carving contest and treasure hunt, while at the Marina do Iate Clube do Espirito Santo in Brazil, organizers held a raffle for dive equipment at the cleanup's closing. One major sponsor, the Brita Products Company, distributed coupons to each U.S. volunteer, redeemable for a free water filtration pitcher, as a token of their appreciation for the volunteers' hard work.

In the U.S. state of Arizona, a ghost town and the Navajo Nation participated for the first time. About 50 of the 100 residents of the ghost town of Woodruff collected six tons of debris from the Little Colorado River, including six car engines and several car batteries. In Sanders, 22 Navajo residents removed several bags worth of trash from the Rio Puerco River. Both groups plan to help at the 2000 Cleanup as well.



Residents of Sanders, Arizona, participated for the first time in the 1999 Cleanup.

The New York (USA) cleanup included large numbers of schoolchildren from New York City, many of whom had never seen the ocean. Organizers pointed out the connections between street-side littering and ocean debris, and the value of recycling.

Other high points of the 1999 Cleanup:

- In Laughing Bird National Park in Belize, volunteers found no fishing line or foam food containers!
- At Trawangan Beach, Indonesia, volunteers found a golf ball, even though the nearest golf course is 12 miles from the beach. And volunteers in British Columbia, Canada, were surprised to find a coconut on their beach—demonstrating that debris does indeed travel!
- In Salina Bay, Malta, divers found a bucket containing a heavy chain and a family of four octopi. Rather than evict them, the divers left the bucket where it was.

- The “Raging Grannies” of Canada composed a song to commemorate their day’s activities, sung to the tune of Tchaikovsky’s “Waltz of the Flowers” (reprinted with permission on back cover).
- And in the Netherlands Antilles, divers were followed around the lagoon by a watchful barracuda. They noted that having such a “helper” certainly sped up their cleanup efforts!
- One young woman in Oregon, USA, found herself a fiancé. Her clever boyfriend stashed a marriage proposal in a bottle and hid it at her cleanup site. Veteran volunteers said it was the best piece of debris any of them had ever seen.
- Also in the USA, Indiana volunteers found the proverbial kitchen sink at Half Moon Beach; and at Lake Zurich, Illinois a volunteer found a promissory note for \$101,749.25.
- In Bahrain volunteers found a great deal of lumber on the beach, the result of illegal landfill practices.
- In Washington State, USA, volunteers discovered a diesel fuel spill in the Port of Bremerton marina, and contacted the Puget Sound Naval Shipyard Hazardous Response Unit to take care of the spill.
- Also in the USA, the door from a stolen car was found in Florida, with the VIN plate still attached; in Missouri, divers located a car that was declared a crime scene and roped off, terminating the cleanup in that location.
- One Norwegian volunteer noted, “there were a great many empty trash bins available at the beach. It was a pity people did not use them.”
- Finally, the plea of a fourth-grade volunteer in the Netherlands Antilles: “There was so much trash on the beach! There were many fishing nets. If you are a fisherman, you should be ashamed of yourself. I am tired of seeing trash on the beach. We are not respecting the sea.... If we, the children, can clean up, then you adults can do it too! So get up, stop drinking your beer and help clean!! People of St. Maarten: we need your help, please!!”

Unfortunately, not all of the stories bring smiles to our faces.

- At Inhaca Island at Port Torres, Mozambique, volunteers found 15 kgs of fishing line in a marine reserve—an area protected from harmful human activity.
- In Gili Air, Indonesia, a volunteer said that just three days after the cleanup the beach was dirty again.

“There were a great many empty trash bins available at the beach. It was a pity people did not use them.”



Brazil

Results

(Note: for each section, international results will be discussed first, followed by U.S. results.)

In 1999 more than **774,000 people** in 77 countries participated in the cleanup. They covered more than **11,000 miles**, and picked up almost **8.5 million pounds of debris**, which consisted of more than **7.9 million items** (figures 1 and 2).

Of those volunteers, more than **11,000** were divers, who covered **1,000 miles** of underwater landscape to retrieve more than **201,000 pounds of debris** in 66 countries.

In the United States, where the Cleanup was created in the 1980s, 49 of the 50 U.S. states participated, along with the District of Columbia, American Samoa, Commonwealth of the Northern Marianas

Islands, Guam, Puerto Rico, and the U.S. Virgin Islands.

More than **164,000 U.S. volunteers** (including **3,400** divers cleaning underwater sites) covered over **7,100 miles** of shoreline and underwater areas, removing **3.5 million pounds of debris**. In all, U.S. volunteers picked up **4,191,169 pieces of debris** (figures 3 and 4).

Around the world, the International Coastal Cleanup takes place during one three-hour period on the third Saturday of September every year. At the same time, each cleanup—local organized to suit local conditions—is an individual event. Geography, weather conditions, financial and material resources, and even public awareness of the problem—vary from one location to the next.

Figure 1.
International People, Pounds, and Miles
1999 International Coastal Cleanup

Country	Land			Underwater			Totals		
	People	Pounds	Miles	People	Pounds	Miles	People	Pounds	Miles
Argentina	1,442	10,771	21.43	250	693	5.57	1,692	11,464	27.00
Aruba	120	1,875	7.39	10	50	1.89	130	1,925	9.28
Australia	4	174	1.98	13	728	4.71	17	902	6.69
Austria	30	165	NR	30	75	NR	60	240	NR
Bahamas	10	2,000	0.25	18	2,000	0.25	28	3,000	50
Bahrain	55	12,380	0.62	—	—	—	55	12,380	0.62
Barbados	160	3,450	9.00	91	1,800	1.50	251	5,250	10.50
Belgium	25	2,420	NR	25	1,100	NR	50	3,520	NR
Belize	1,139	7,592	39.39	10	100	0.25	1,149	7,692	39.64
Bermuda	463	13,900	NR	NR	NR	NR	463	13,900	NR
Brazil	2,567	47,553	75.59	136	1,683	17.50	2,703	49,236	93.09
British Virgin Islands	61	1,152	1.20	—	—	—	61	1,152	1.20
Canada	3,408	65,079	125.04	1,340	6,945	6.13	4,748	72,024	131.17
Cayman Islands	25	300	0.50	51	43	1.00	76	343	1.50
Colombia	98	1,660	5.00	180	5,330	10.00	278	6,990	15.00
Costa Rica	105	462	11.00	15	198	2.00	120	660	13.00
Cyprus	4	90	NR	13	132	1.33	17	222	1.33
Czechoslovakia Republic	14	660	1.24	4	22	0.50	18	682	1.74
Dominica	1,087	30,240	61.70	—	—	—	1,087	30,240	61.70
Dominican Republic	196	1,288	220.50	70	141	1.74	266	1,429	222.24
Ecuador	2389	1,518	18.30	—	—	—	2,389	1,518	18.30
Egypt	101	3,912	2.93	258	3,812	4.22	359	7,724	7.15
El Salvador	40	200	NR	150	600	5.00	190	800	5.00
Fiji	41	995	1.24	2	76	0.19	43	1,071	1.43
France	64	1,133	NR	64	516	NR	128	1,649	NR
French Polynesia	19	100	1.00	73	2,000	6.00	92	2,100	7.00
Germany	300	4,400	NR	284	4,378	NR	584	8,778	NR

Country	Land			Underwater			Totals		
	People	Pounds	Miles	People	Pounds	Miles	People	Pounds	Miles
Greece	758	6,642	20.08	27	2,752	0.62	785	9,394	20.70
Grenada	21	100	NR	26	80	NR	47	180	NR
Guatemala	365	10,000	4.34	35	NR	NR	400	10,000	4.34
Haiti	87	6,000	0.31	—	—	—	87	6,000	0.31
Hong Kong	439	31,123	3.50	—	—	—	439	31,123	3.50
Hungary	11	37	0.31	8	55	0.31	19	92	0.62
Iceland	42	60,000	30.00	26	30,000	4.00	68	90,000	34.00
Indonesia	223	584	3.12	39	255	1.99	262	839	5.11
Ireland	6	1,000	0.62	—	—	—	6	1,000	0.62
Israel	850	39,600	24.80	100	4,400	1.24	950	44,000	26.04
Italy	281	4,459	NR	281	2,026	NR	562	6,485	NR
Jamaica	897	18,002	13.51	50	80	0.25	947	18,082	13.76
Japan	4,948	34,264	20.08	317	7,718	0.50	5,265	41,982	20.58
Jordan	—	—	—	15	299	0.31	15	299	0.31
Kenya	5231	23,782	89.83	—	—	—	5,231	23,782	89.83
Kuwait	471	2,560	2.05	146	788	0.31	617	3,348	2.36
Lithuania	2248	8,092	12.09	—	—	—	2,248	8,092	12.09
Malaysia	15	400	0.50	65	888	0.87	80	1,288	1.37
Maldives	16	211	NR	16	211	0.00	32	422	NR
Malta	2	220	0.06	174	4,645	0.31	176	4,865	0.37
Mauritius	130	242	1.86	8	40	0.93	138	282	2.79
Mexico	1,782	61,368	72.08	95	527	12.15	1,877	61,895	84.23
Micronesia	492	8,394	12.20	72	662	0.52	564	9,056	12.72
Mozambique	15	44	0.62	10	33	0.62	25	77	1.24
Netherlands	340	4,840	NR	339	2,200	NR	679	7,040	NR
Netherlands Antilles	570	15,615	560.43	53	200	2.00	623	15,815	562.43
New Zealand	5	1,000	0.37	25	1,000	0.25	30	2,000	0.62
Norway	75	440	1.92	—	—	—	75	440	1.92
Panama	3,911	34,730	0.75	30	100	2.50	3,941	34,830	3.25
Papua New Guinea	3,290	485,283	41.23	67	1,573	6.52	3,357	486,856	47.75
Peru	8,000	20,000	310.00	50	2,000	0.74	8,050	22,000	310.74
Philippines	495,624	3,175,827	1,427.01	1,508	31,330	7.98	497,157	3,207,157	1,434.99
Poland	29	528	0.93	22	99	0.62	51	627	1.55
Portugal	6	75	NR	6	75	NR	12	150	NR
Saudi Arabia	25	576	1.09	70	1,320	0.96	95	1,896	2.05
Seychelles	5	NR	NR	50	110	0.47	55	110	0.47
South Africa	16,112	247,300	387.50	NR	NR	NR	16,112	247,300	387.50
Spain	86	1,313	NR	86	598	NR	172	1,911	NR
St. Kitts & Nevis	428	5,835	14.00	—	—	—	428	5,835	14.00
Sultanate of Oman	200	1,156	3.72	67	1,870	3.10	267	3,026	6.82
Switzerland	100	8,800	NR	156	10,094	NR	256	18,894	NR
Taiwan	6	NR	NR	251	1,009	1.73	257	1,009	1.73
Thailand	148	1,144	2.25	39	170	0.53	187	1,314	2.78
Tonga	406	22,317	10.31	NR	89	NR	406	22,406	10.31
Trinidad and Tobago	24	2,05	0.75	13	220	0.75	37	2,270	1.50
Turkey	35	1,607	3.72	7	29	0.31	42	1,636	4.03
United Arab Emirates	—	—	—	45	66	0.06	45	66	0.06
United Kingdom	2,009	32,573	91.29	94	435	15.89	2,103	33,008	107.18
United States	161,125	3,462,565	6,376.91	3,427	55,558	756.86	164,552	3,518,123	7,133.7
Venezuela	37,192	179,740	127.24	140	4,450	186.50	37,332	184,190	313.74
Total	763,073	8,237,907	10,278.68	11,142	201,476	1,082.48	774,215	8,439,383	11,361.16

Total Number of Countries: 77

NR – cleanup activity but results not reported

— no cleanup activity

Figure 2.
Total Number of Debris Items Collected
During 1999 International Coastal Cleanups

Debris Items	Total	Land	Underwater
PLASTIC:			
food bags/wrappers	643,425	628,819	14,606
salt bags	24,075	23,758	317
trash bags	145,030	142,472	2,558
other bags	169,597	166,290	3,307
plastic beverage bottles	214,573	203,446	11,127
bleach bottles	37,541	36,882	659
milk/water gallon jugs	50,008	48,708	1,300
oil/lube bottles	34,613	33,938	675
other plastic bottles	79,647	77,494	2,153
buckets	17,747	17,185	562
caps/lids	285,401	275,938	9,463
cigarette butts	1,052,373	992,754	59,619
cigarette lighters	35,673	34,651	1,022
cups/utensils	138,955	132,209	6,746
diapers	33,752	33,324	428
fishing line	51,022	48,368	2,654
fishing floats/lures	30,424	29,280	1,144
fishing nets	38,449	37,958	491
hard hats	9,244	9,179	65
light sticks	72,594	71,669	925
plastic pieces	488,947	472,500	16,447
pipe thread protectors	9,291	9,027	264
rope	126,148	124,174	1,974
long sheeting	8,779	8,538	241
short sheeting	23,632	23,213	419
six-pack holders	19,954	19,142	812
strapping bands	27,763	27,170	593
straws	209,781	203,465	6,316
syringes	10,169	8,905	1,264
tampon applicators	12,340	11,946	394
toys	44,957	44,133	824
vegetable sacks	23,004	22,686	318
write protection rings	10,221	9,952	269
other plastic	247,750	242,280	5,470
FOAMED PLASTIC:			
buoys	28,240	27,849	391
cups	97,424	93,787	3,637
egg cartons	14,017	13,809	208
fast food containers	66,423	64,685	1,738
meat trays	18,120	17,744	376
packaging material	78,930	76,784	2,146
foamed plastic pieces	400,199	393,168	7,031
plates	24,200	22,951	1,249
other foamed plastic	93,647	92,129	1,518

Debris Items	Total	Land	Underwater
GLASS:			
beverage bottles	214,061	196,191	17,870
food jars	26,367	25,060	1,307
other glass bottles/jars	45,532	43,741	1,791
fluorescent light tubes	7,900	7,726	174
light bulbs	12,868	12,656	212
glass pieces	323,526	313,301	10,225
other glass	44,465	42,059	2,406
RUBBER:			
balloons	40,674	37,526	3,148
condoms	11,442	11,136	306
gloves	20,678	20,324	354
tires	22,485	21,313	1,172
other rubber	71,429	69,618	1,811
METAL:			
bottle caps	170,387	164,025	6,362
aerosol cans	21,858	20,026	1,832
beverage cans	196,371	184,289	12,082
food cans	50,547	48,855	1,692
other cans	20,433	19,280	1,153
crab/lobster traps	17,566	17,404	162
55-gallon rusty drums	7,922	7,768	154
55-gallon new drums	1,634	1,561	73
metal pieces	171,627	168,440	3,187
pull tabs	31,056	28,748	2,308
wire	25,525	24,537	988
other metal	66,195	63,460	2,735
PAPER:			
bags	63,204	61,179	2,025
cardboard	48,997	47,653	1,344
cartons	50,511	49,250	1,261
paper cups	140,566	137,583	2,983
newspapers/magazines	50,865	49,575	1,290
paper pieces	333,810	322,807	11,003
paper plates	90,300	88,743	1,557
other paper	73,765	70,796	2,969
WOOD:			
crab/lobster traps	2,450	2,388	62
crates	3,069	2,947	122
lumber pieces	79,846	77,720	2,126
pallets	9,468	9,288	180
other wood	39,278	38,134	1,144
CLOTH:			
clothing/pieces	73,613	70,548	3,065
GRAND TOTALS	7,930,369	7,652,014	278,355

**Figure 3. U.S. People, Pounds, and Miles
1999 International Coastal Cleanup**

Cleanup Territory	Land			Underwater			Total		
	People	Pounds	Miles	People	Pounds	Miles	People	Pounds	Miles
Alabama	3,144	55,013	203.55	13	450	0.40	3,157	55,463	203.95
Alaska	269	6,684	80.75	3	65	0.13	272	6,749	80.88
American Samoa	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arizona	500	28,809	137.37	96	10,789	117.37	596	39,598	254.74
Arkansas	77	2,277	3.00	NR	NR	NR	77	2,277	3.00
California	46,070	706,958	687.75	240	4,347	28.25	46,310	711,305	716.00
Colorado	102	2,035	7.00	76	1,108	6.00	178	3,143	13.00
Com. N. Marinas Is.	67	1,060	1.50	29	500	0.50	96	1,560	2.00
Connecticut	583	6,505	23.12	15	175	0.12	598	6,680	23.24
Delaware	1,637	21,085	95.00	—	—	—	1,637	21,085	95.00
District of Columbia	75	5,900	3.50	—	—	—	75	5,900	3.50
Florida	37,451	752,065	1,826.55	76	1,715	4.00	37,527	753,780	1,830.55
Georgia	387	4,850	31.50	NR	NR	NR	387	4,850	31.50
Guam	1,465	11,334	8.50	279	2,395	3.75	1,744	13,729	12.25
Hawaii	2,603	215,780	7.50	104	818	5.95	2,707	216,598	13.45
Idaho	43	250	1.00	37	350	0.50	80	600	1.50
Illinois	1,181	5,885	46.00	225	1,904	12.25	1,406	7,789	58.25
Indiana	451	5,013	18.56	62	2,053	2.56	513	7,066	21.12
Kansas	96	300	0.75	—	—	—	96	300	0.75
Kentucky	25	250	0.25	15	100	0.50	40	350	0.75
Louisiana	2,452	184,800	96.00	—	—	—	2,452	184,800	96.00
Maine	1,679	13,770	242.15	188	1,155	25.50	1,867	14,925	267.65
Maryland	460	11,260	50.00	—	—	—	460	11,260	50.00
Massachusetts	4,004	67,267	165.00	—	—	—	4,004	67,267	165.00
Michigan	885	5,185	109.25	97	1,525	4.75	982	6,710	114.00
Minnesota	458	2,932	55.00	NR	NR	NR	458	2,932	55.00
Mississippi	2,569	1,500	76.80	NR	NR	NR	2,569	1,500	76.80
Missouri	520	NR	38.00	20	NR	1.00	540	NR	39.00
Montana	4	NR	NR	44	660	4.00	48	660	4.00
Nebraska	194	9,360	51.00	5	1,000	0.25	199	10,360	51.25
Nevada	181	1,030	2.00	71	527	2.00	252	1,557	4.00
New Hampshire	1,118	11,162	32.00	22	1,000	2.25	1,140	12,162	34.25
New Jersey	2,861	27,211	29.23	168	2,535	1.78	3,029	29,746	31.01
New Mexico	199	3,605	32.60	43	292	0.80	242	3,897	33.40
New York	9,232	260,659	278.68	226	7,436	109.38	9,458	268,095	388.06
North Carolina	8,166	337,718	872.15	—	—	—	8,166	337,718	872.15
North Dakota	20	300	20.00	4	20	1.00	24	320	21.00
Ohio	547	18,897	27.25	NR	NR	NR	547	18,897	27.25
Oklahoma	20	200	5.00	39	950	2.00	59	1,150	7.00
Oregon	5,288	42,723	214.00	—	—	—	5,288	42,723	214.00
Pennsylvania	266	2,430	13.00	4	60	1.00	270	2,490	14.00
Puerto Rico	3,297	40,000	30.00	—	—	—	3,297	40,000	30.00
Rhode Island	1,650	6,500	125.00	40	100	2.00	1,690	6,600	127.00
South Carolina	1,991	15,605	105.78	34	720	1.50	2,025	16,325	107.28
South Dakota	37	1,290	2.75	44	920	3.50	81	2,210	6.25
Tennessee	36	390	2.25	25	150	2.25	61	540	4.50
Texas	12,264	418,869	203.10	901	4,823	2.60	13,165	423,692	205.70
U.S. Virgin Islands	375	6,281	3.77	53	3,000	400.50	428	9,281	404.27
Utah	3	17	0.50	20	325	0.50	23	342	1.00
Vermont	NR	NR	NR	22	400	2.50	22	400	2.50
Virginia	2,807	115,511	225.25	NR	NR	NR	2,807	115,511	225.25
Washington	1,105	21,870	81.00	18	420	0.13	1,123	22,290	81.13
West Virginia	17	320	1.25	14	300	1.50	31	620	2.75
Wisconsin	192	1,800	3.75	43	171	1.64	235	1,971	5.39
Wyoming	2	50	0.25	12	300	0.25	14	350	0.50
TOTAL	161,125	3,462,565	6,376.91	3,427	55,558	756.86	164,552	3,518,123	7,133.77

NR - cleanup activity but results not reported

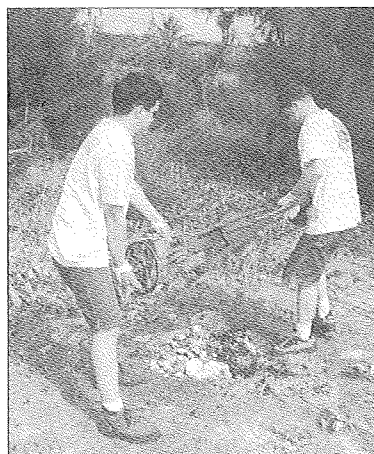
— no cleanup activity

peculiar listing
from data cards

One-Stop Shopping

One of the more interesting features at each Cleanup is the variety of items that volunteers find at the beach. Every year, Cleanup coordinators submit a list of the most unusual items found at their cleanups. While some of the items are amusing, others are sobering and almost frightening. And all of these items were either carelessly or purposefully discarded at the beach, on a boat, or on the street. The following is just a handful of 1999's more unusual finds:

- **Let's Talk Auto Shop:** 1953 DeSoto, 1988 Cadillac, Corvair, truck, Yamaha motorcycle. In addition, volunteers found enough batteries, engines, and other parts to repair and maintain hundreds of vehicles.
- **Multi-media Superstore:** VCR and videotapes, TVs, cellular phones, computers and computer accessories, pagers, clock radios, a walkie-talkie, and to power them all, an assortment of batteries.
- **We're Missing the Point:** a "Keep Your Beach Clean" bag, an "Adopt a Beach" cleanup bag, an ICC poster and last year's cleanup bag, a letter about litter on the beach, and an empty recycling container.
- **The Great Outdoors:** bicycles, lawnmowers, lawn chairs, wetsuits and various pieces of dive gear.
- **Home Matters:** air conditioners and components, beds, bed parts and bedding, brooms, cabinets, candles, Christmas decorations, carpet remnants, coffee pots, a complete dining room table, a dishwasher, door knobs, fences, fire extinguishers, freezer, garage door, garbage disposals, garden hoses, grills, coat hangers, irons, a kitchen sink, ladders, lamps, light bulbs, microwaves, mops, an outhouse, oven, portable toilets, rakes, rat traps, refrigerators and parts, satellite TV dish, shelving, shovels, sofas, stoves, suitcases, tables, tiles, toi-



Guam

lets and parts, water heaters, windows and window treatments, and wreaths.

- **The Medicine Chest:** blood and IV bags, cast, catheters, inhalers, insulin bottles, oxygen masks, a respirator and masks, specimen cup, syringes, a tracheotomy tube, urine samples, and a walker.
- **Just Say "No":** cocaine and cocaine paraphernalia, heroin container, marijuana and paraphernalia, narcotics, rolling papers, and a vial of "crystal meth."
- **Excuse Me for Getting Personal:** artificial breast, bra (purple), brace, condoms, deodorant, diapers, diaphragms, false teeth, lipstick, an orthodontic device, pregnancy test kits, razors, retainers, sanitary napkins, tampons and applicators, toothbrushes, toothpaste, and assorted wigs.
- **Firing Line:** bullets, a gun, gun holster, shell casings, knives, an M-10 bayonet, rifle barrel, spear gun, and tear gas shell.
- **Disposable Income:** 1.5 carat diamond ring, 14k gold ring, 1815 coin, airline ticket, check for \$23, personal checkbook, company checkbook, silver and amber necklace, graduation ring, and a promissory note for \$101,769.25

These items underscore a serious global attitude problem. We are a throwaway society. The term "post-consumer waste" can be applied to just about anything that money can buy. This onslaught of debris is costly, wasteful, and harmful to us and to our environment. More than that, it is an indictment of our culture and citizenry. We can do better.

Figure 4.
Total Number of Debris Items Collected During
1999 United States Coastal Cleanups

Debris Items	Total	Land	Underwater
PLASTIC:			
food bags/wrappers	227,434	219,040	8,394
salt bags	3,014	2,940	74
trash bags	47,426	46,107	1,319
other bags	60,636	58,815	1,821
plastic beverage bottles	121,304	117,115	4,189
bleach bottles	13,977	13,720	257
milk/water gallon jugs	17,586	17,147	439
oil/lube bottles	11,806	11,540	266
other plastic bottles	37,592	36,435	1,157
buckets	8,413	8,132	281
caps/lids	207,451	199,406	8,045
cigarette butts	812,153	757,538	54,615
cigarette lighters	17,635	17,006	629
cups/utensils	74,907	71,776	3,131
diapers	6,646	6,419	227
fishing line	26,962	25,334	1,628
fishing floats/lures	13,535	12,640	895
fishing nets	7,191	7,024	167
hard hats	1,023	1,010	13
light sticks	9,883	9,656	227
plastic pieces	271,859	257,269	14,590
pipe thread protectors	4,167	4,024	143
rope	59,642	58,860	782
long sheeting	3,568	3,434	134
short sheeting	6,673	6,483	190
six-pack holders	14,004	13,347	657
strapping bands	16,104	15,706	398
straws	130,375	125,332	5,043
syringes	3,135	2,944	191
tampon applicators	8,545	8,191	354
toys	18,639	18,090	549
vegetable sacks	6,283	6,132	151
write protection rings	6,821	6,565	256
other plastic	91,611	87,990	3,621
FOAMED PLASTIC:			
buoys	13,609	13,384	225
cups	84,652	81,809	2,843
egg cartons	3,503	3,413	90
fast food containers	26,880	25,762	1,118
meat trays	8,688	8,469	219
packaging material	48,329	47,174	1,155
foamed plastic pieces	214,960	209,470	5,490
plates	17,997	16,995	1,002
other foamed plastic	42,506	41,313	1,193

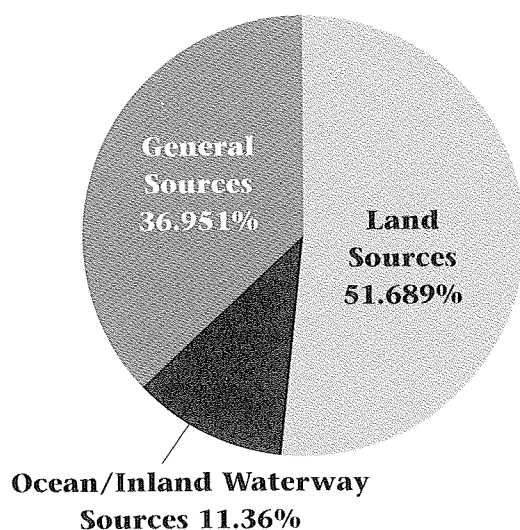
Debris Items	Total	Land	Underwater
GLASS:			
beverage bottles	140,085	133,574	6,511
food jars	10,897	10,399	498
other glass bottles/jars	19,698	18,834	864
fluorescent light tubes	1,792	1,774	18
light bulbs	4,894	4,808	86
glass pieces	159,875	152,334	7,541
other glass	20,731	19,213	1,518
RUBBER:			
balloons	32,028	29,024	3,004
condoms	5,844	5,640	204
gloves	14,069	13,820	249
tires	9,172	8,723	449
other rubber	31,089	30,091	998
METAL:			
bottle caps	101,006	96,428	4,578
aerosol cans	9,640	9,098	542
beverage cans	146,467	138,714	7,753
food cans	12,449	11,673	776
other cans	7,507	7,086	421
crab/lobster traps	2,719	2,658	61
55-gallon rusty drums	2,481	2,413	68
55-gallon new drums	395	389	6
metal pieces	38,197	36,112	2,085
pull tabs	22,085	20,462	1,623
wire	14,338	13,741	597
other metal	39,222	37,417	1,805
PAPER:			
bags	33,117	31,632	1,485
cardboard	24,846	23,854	992
cartons	18,293	17,495	798
paper cups	34,958	33,427	1,531
newspapers/magazines	22,075	21,254	821
paper pieces	182,993	173,845	9,148
paper plates	13,363	12,300	1,063
other paper	45,133	42,401	2,732
WOOD:			
crab/lobster Traps	1,752	1,722	30
crates	1,790	1,741	49
lumber pieces	60,754	59,290	1,464
pallets	4,195	4,103	92
other wood	27,157	26,304	853
CLOTH:			
clothing/pieces	44,939	43,100	1,839
GRAND TOTALS	4,191,169	3,997,849	193,320

Sources of Debris

What We Found

Just over half of the debris collected (51.7%) was attributed to land-based sources, such as beachgoers, storm or sewer drains, or illegal dumping. Only 11.4% could be attributed to ocean-based activities, such as fishing, boating, or oil/gas drilling. And a large percentage of the debris (36.9%) could not be directly attributed to either source, and is likely a combination of the two sources (figure 5). The chart shows the total for both land and underwater cleanups. Interestingly, the underwater cleanups showed more land-based debris (63.6%) and less water-based debris (6.8%) than the land-only cleanups. (Land-only and underwater-only charts appear in Appendix 3.)

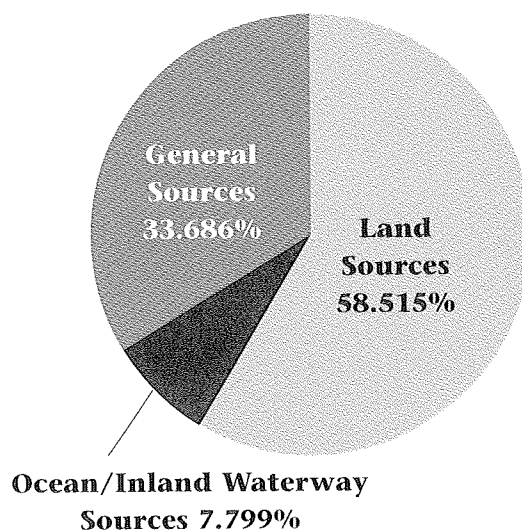
Figure 5. Percent Debris Source International



In the United States the breakdown is similar. More than half of the debris collected (58.5%) was attributed to land-based sources. Only 7.8% could be attributed to ocean-based activities, while 33.7%, could not be directly attributed to either source, and is again a likely combination of the two sources (figure 6). The U.S. underwater-only breakdown shows a slightly higher percentage of land-based debris (64.1%) than the shore-based cleanups (58.2%).

But these differences are too small to be significant. The real story is that, in both land and underwater cleanups, most the trash is land-based, and consists of the same items in about the same proportions.

Figure 6. Percent Debris Source United States



The percentages have been fairly stable over the years, but as noted earlier, the percentage of debris that can be attributed to ocean sources has shown an apparent decrease in recent years. This change may be due to the implementation 12 years ago of Annex V of the MARPOL Treaty (see above); it is also a result of the massive public education efforts that have taken place over the last decade. Several industries, including plastics manufacturers, cargo shipping lines, and cruise lines, have altered company processes and policies, and undertaken employee training programs to reduce their contributions to the marine debris problem.

What it Means

The 1999 data shows that the major cause of marine debris is the improper disposal of common, everyday trash. Despite anti-littering laws in many countries we still prefer the street to the waste can. Improved waste collection and treatment facilities will help, especially in coastal areas, as will continued progress in recycling. Not only do more municipalities need to implement recycling programs and facilities, but new markets must be found for recycled goods, and more types of materials need to be recyclable.

In the United States, the plastics and beverage industry have done a good job in recycling PET and HDPE plastic (coded 1 or 2 on consumer goods such as milk jugs and soft drink bottles), but there are seven different types of plastic, and more should be able to be recycled.

The Dirty Dozen

What We Found

The 12 leading types of debris are remarkably consistent from year to year. These 12 items account for about two-thirds of all debris collected every year.

The 1999 Cleanup was no exception, with Dirty

Dozen items making up 58.15% of all debris found (64.8% in the U.S.) Each of the items in the Dirty Dozen is a consumer good, tossed or dropped from someone's hand—not one is a direct contribution from industry.

The 1999 lists are as follows:

1999 ICC INTERNATIONAL DIRTY DOZEN*		
Debris Item	Total number reported	Percentage of total collected
1. cigarette butts	1,052,373	13.27%
2. food bags/wrappers (plastic)	643,425	8.11%
3. plastic pieces	488,947	6.17%
4. foamed plastic pieces	400,199	5.05%
5. paper pieces	333,810	4.21%
6. glass pieces	323,526	4.08%
7. caps, lids (plastic)	285,401	3.60%
8. other plastic items	247,750	3.12%
9. beverage bottles (plastic)	214,573	2.71%
10. beverage bottles (glass)	214,061	2.70%
11. straws	209,781	2.65%
12. beverage cans	196,371	2.48%
Dirty Dozen Totals	4,610,217	58.15%
13. other metal pieces	171,627	2.16%
14. bottle caps (metal)	170,387	2.15%
15. other plastic bags	169,597	2.14%
16. trash bags (plastic)	145,030	1.83%
17. cups (paper)	140,566	1.77%
18. cups, utensils (plastic)	138,955	1.75%
19. rope	126,148	1.59%
20. cups (foamed plastic)	97,424	1.23%
Top 20 Totals	5,769,951	72.77%

1999 ICC U.S. DIRTY DOZEN

Debris Items	Total number reported	Percentage of total collected
1. cigarette butts	812,153	19.38%
2. plastic pieces	271,859	6.49%
3. food bags/wrappers (plastic)	227,434	5.43%
4. foamed plastic pieces	214,960	5.13%
5. caps, lids (plastic)	207,451	4.95%
6. paper pieces	182,993	4.37%
7. glass pieces	159,875	3.81%
8. beverage cans	146,467	3.49%
9. beverage bottles (glass)	140,085	3.34%
10. straws	130,375	3.11%
11. beverage bottles (plastic)	121,304	2.89%
12. bottle caps (metal)	101,006	2.41%
Dirty Dozen Totals	2,715,962	64.80%
13. other plastic items	91,611	2.19%
14. cups (foamed plastic)	84,652	2.02%
15. cups, utensils (plastic)	74,907	1.79%
16. lumber pieces	60,754	1.45%
17. other plastic bags	60,636	1.45%
18. rope	59,642	1.42%
19. packaging material (foamed plastic)	48,329	1.15%
20. trash bags (plastic)	47,426	1.13%
Top 20 Totals	3,243,919	77.40%

At the top of the lists, as they have been since 1990, are cigarette butts. Many smokers are unaware that cigarette butts do not decompose, but can persist in the environment for up to seven years after they were discarded. Cigarette filters are not made of degradable, natural fibers, but manufactured polymers.

What it Means

The 1999 percentage of cigarette butts to total debris collected (13.27%) is a decline from recent years (15.5% in 1998; 19.1% in 1997). This may be due to increased anti-littering campaigns in many countries coupled with the placement of more cigarette receptacles in urban and coastal areas. It could also be a reflection

of the fact that more beaches are being cleaned on a regular basis, and previous years' data may have included trash that had been on the beach for several years.



The U.S. percentage of cigarette butts to total debris (19.38%) is lower than the 1998 and 1997 figures of 23.27% and 22.5%, but it is higher than in 1996, 1995, and 1994 (13.14%, 14.72%, and 18.58%, respectively). It is significantly higher than the worldwide figure, which may be explained by the

larger quantities of other types of debris in other countries, which would lower the impact of cigarette butts.

Cleanup volunteers are noting a disturbing new trend with smoking-related debris. More and more are reporting plastic cigar tips, no doubt a carryover of the habit of dropping cigarette butts on the ground, thinking they will disappear. But plastic cigar tips will likely persist in the environment even longer than cigarette butts, due to their size and composition.

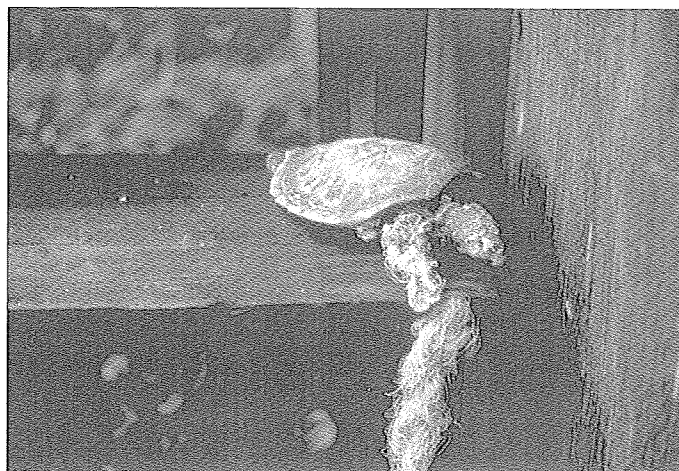
Since 1990 the following nine items have appeared consistently in the Dirty Dozen: cigarette butts, plastic pieces, foamed plastic pieces, paper pieces, plastic caps and lids, glass pieces, glass beverage bottles, plastic straws, and beverage cans. Most of these items are the disposable packaging and packaging remnants.

Clearly, the major contributors to marine debris are not industries such as commercial fishers or cargo ships or oil rigs. They are you and I, our neighbors and friends, our families.

In many countries, especially in the developing world, reducing marine debris depends on improved municipal and rural trash collection and disposal. Many countries also do not have adequate waste management laws or policies. Island nations, especially those popular with tourists, have the double burden of managing their citizens' waste as well as visitors'—not to mention trash that washes ashore from neighboring countries. Clearly, the solution will require regional and international cooperation, and financial and technical assistance where necessary.

Most communities in the United States have adequate household and street-side waste collection facilities. And many communities have serviceable to state-of-the-art recycling programs. In the U.S. at least, the key to reducing the Dirty Dozen lies less with improved waste treatment than it does with improved waste handling by consumers. Picnickers and beachgoers must be more diligent in disposing of their trash properly. Pedestrians and drivers must be more careful about tossing their food wrappers, empty soda and water bottles, and candy and cigarette wrappers onto the street or out the car window.

If we can stop the improper disposal of the 12 most commonly found debris items—the Dirty Dozen—the world's beaches and waterways would be up to 60% cleaner. And our volunteers wouldn't have had to lift a finger.



The Dangers of Debris

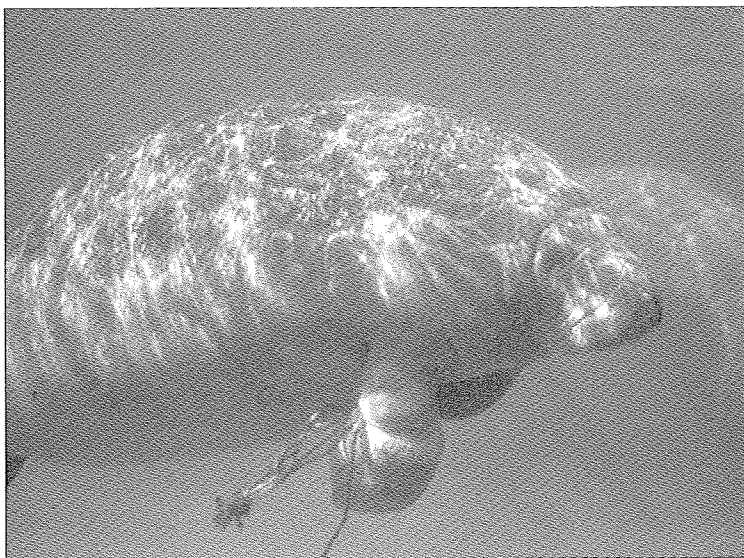
As noted above, the impact of marine debris on marine wildlife is its most visible and heartbreaking.

Every year cleanup volunteers report finding dead animals snarled in fishing gear and other debris. Equally grim are the debris-related mutilations, as when a strong loop of metal or plastic gets caught around a young animal's limb or neck. As the animal grows, the foreign material gouges the flesh, slowly causing mutilation, amputation, or strangulation.

Ingestion of debris—swallowing debris in the mistaken belief it is food—is another serious problem for marine wildlife. According to the 1998 U.S. Marine Mammal Commission report, at least 111 of the world's 312 species of seabirds have been reported to swallow floating pieces of plastic, and six of the world's seven species of sea turtles mistake water-borne plastic, especially plastic bags and balloons, for food. Such encounters are often fatal. Foreign objects in the stomach and digestive tract can lead to false feelings of satiation, and the animal will stop eating and starve itself to death; debris can also tear stomach walls and intestines, or block digestion altogether.

What We Found

In 1999, Cleanup volunteers found 324 entangled animals, 284 in the United States (figures 7 and 8). For convenience in analyzing the numbers, we often refer to "this year's entanglements" compared to "last year's" or "previous years." It is important to remember, however, especially where the animals entanglements are concerned, that the Cleanup takes place in just a few hours, one day out of the year, and does



plastic bags, and 40,674 balloons. They found 488,947 plastic pieces (as from lighters, cups, plates, utensils, toys), 400,199 foamed plastic pieces (as from cups, plates, fast food trays and containers, coolers), 323,526 glass pieces (as from bottles and jars), 170,387 bottle caps, 31,056 pull tabs, and 171,627 metal pieces (remnants of cans, sheet metal, trays, buckets). Any one of these items could have ended up in a seabird or sea turtle's stomach. These and the larger items found at the Cleanup could also have been swallowed by dolphins or even whales. The 40,000 balloons pose a special problem. Research at the University of Miami (USA) suggests that sea turtles may actively seek out pieces of latex balloon, perhaps confusing them with jellyfish.

not cover every coastline, lakeshore, or river bank. In 1999, Cleanup volunteers found 324 entangled animals **in just one day in selected locations**. It is simply impossible to calculate the number of animals hurt or killed by marine debris every year around the world. It is safe to say, however, that the number reported is but a small fraction of the actual incidents.

Of the 324 reported cases, fishing line was responsible for 120, or 37%. The U.S. percentage is similar, with 110 of the 284 incidents, or 38%, attributed to fishing line. Worldwide and in the United States the 1999 percentage is consistent with previous years', in which fishing line accounted for more than a third of all entanglements reported. Fishing line is designed to resist an animal's thrashings, which has unfortunate consequences for entangled animals.

Fishing net and lost fish traps also entangle and trap animals. The phenomenon is so common that the term "ghost fishing" was coined to describe the effect of fishing gear lost at sea that continues to catch fish and other marine life for years, catch that will never be retrieved. Ghost fishing contributes to the problem of declining fish populations and other marine wildlife around the world.

Cleanup volunteers also found 1,052,373 cigarette butts, 643,425 food or storage bags, 169,597 "other"

What It Means

In 1999 volunteers collected nearly 90,000 pieces of fishing line and net (34,000 in the United States). They also collected over 30,000 fishing floats and lures (13,000 U.S.). Much of this debris could be eliminated if fishers understood the effect their equipment has on the marine environment. Fishing line, traps, and nets accounted for 51% (48% U.S.) of the entanglements documented in the 1999 Cleanup.

Although fishing gear is not the only item that can entangle and kill animals, reducing the amount of lost and unwanted nets, traps, and fishing line will prevent almost half of the animal entanglements reported at the cleanup each year.



As noted above, the smaller, non-descript, and often untraceable bits of debris are no less hazardous for their size or "ordinary-ness." Preventing the discard of plastic bags, balloons, and small pieces of trash is just as important as preventing the disposal of fishing nets and oil

drums. Indeed, preventing the small debris may do more to prevent wildlife deaths than just about anything else we do.

The 1999 figure of 324 entangled animals is the highest number recorded since the Cleanup began. In 1998 152 entangled animals were found; in 1997 the figure was 312; in 1996 it was 220.

Figure 7.
Total Debris Involved in Animal Entanglements (International)
1999 International Coastal Cleanup

Debris Form	Invertebrates	Fish	Amphibians	Birds	Reptiles	Mammals	Total
balloon (inc. ribbon & string)		4		4			8
fishing line (inc. hooks & lures)	15	48	1	48	4	4	120
Bottles		1					1
crab\lobster traps	1	1					2
fishing nets\rope	24	10		12			46
plastic bags	5	12		3	3	2	25
plastic sheetings	4	1		2			7
nylon rope	7	15		17	3	12	54
six-pack holders	1	10		7			18
strapping bands				1			1
ribbon\string	2	6		11		1	20
wire		1	1	6			8
miscellaneous		12			1	1	14
TOTAL	59	121	2	111	11	20	324

Figure 8.
Total Debris Involved in Animal Entanglements (U.S. only)
1999 International Coastal Cleanup

Debris Form	Invertebrates	Fish	Amphibians	Birds	Reptiles	Mammals	Total
balloon (inc. ribbon & string)		3		4			7
fishing line with hook/lure	10	47	1	48	3	1	110
crab/lobster traps	1	1					2
fishing nets/rope	11	4		8			23
plastic bags	5	12		3	3	2	25
plastic sheetings	3	1		2	3	2	6
rope	6	15		17	3	12	53
six-pack holders	1	9		6			16
strapping bands				1			1
ribbon\string	2	6		11		1	20
wire		1	1	6			8
miscellaneous		12				1	13
TOTAL	39	111	2	106	9	17	284

BEYOND THE CLEANUP

Every aspect of the International Coastal Cleanup is geared toward one broad goal: Improving the quality of the world's water. Reducing, and one day eliminating, marine debris is one means of reaching that goal.

Americans have been cleaning their beaches and waterways at the Cleanup every year since 1986. In that time they have removed nearly 32 millions pounds of trash and either recycled it or disposed of it properly.

Next year, and the year after that, no doubt, Cleanup volunteers will again spend a Saturday morning picking up another 3 or 4 million pounds of trash. Clearly, the International Coastal Cleanup is helping to beautify our recreation areas, and eliminate potentially deadly hazards to marine life.

But, effective as it is, the Cleanup is not the solution to marine debris. The solution lies in preventing trash from becoming litter and marine debris. The solution is public education—people need to understand the long-term effects of their careless (or sometimes deliberate) treatment of their trash. The solution is improved solid waste management—antiquated sewer and storm drains cannot handle the volume of water and trash they receive every day, and more of our public areas need safe, convenient, trash receptacles. The solution is an expanded recycling indus-

try—the more of our everyday items that can be easily recycled in the household trash or at the marina or fishing pier, the lower the potential that these items will end up as debris and possibly harming a marine animal or another person.

The improvements that have been made in combating marine debris are well documented. The maritime industries have made improvements in their waste handling facilities and procedures. More and more citizens are demanding more and better waste receptacles and public beaches and parks. But as the Cleanup data loudly demonstrates, much, much more needs to be done.

The Center for Marine Conservation conducts a number of programs designed to take the lessons of the Cleanup and create long-lasting solutions to the problem of marine debris.

The following activities are direct outgrowths of the International Coastal Cleanup, and each tackles marine debris from a slightly different angle. Collectively, they educate neighborhoods about watershed drainage patterns; create conditions that yield reliable monitoring data; and involve communities in developing and refining their own solutions.

Storm Drain Stenciling

Managed by CMC and funded by the U.S. Environmental Protection Agency, *Million Points of Blight* is an education campaign designed to alert the general public about nonpoint source pollution and the direct connection between land activities, storm drains, and local water quality. Many people don't realize that the storm drains in their neighborhoods are direct links to nearby bodies of water, and that stormwater runoff containing street litter, household and automotive chemicals, and other pollutants rarely receives the benefit of treatment before it discharges into streams and rivers, and ultimately, the ocean. Million Points of Blight volunteers stencil storm drains with clean water messages such as "Don't Dump! Protect Your Water."

CMC sends interested groups a storm drain stenciling kit complete with a fact sheet about nonpoint source



People need to understand the long-term effects of their careless (or sometimes deliberate) treatment of trash.



Participants in CMC's campaign have stenciled more than 330,000 storm drains.

pollution, its impacts, and what citizens can do to prevent it. The kit also contains instructions for managing a stenciling project and a data card for recording the number of storm drains stenciled and the types of pollutants found around each. To date, participants in CMC's campaign have stenciled more than 330,000 storm drains.

Scientifically Rigorous Data Collection

Data from the International Coastal Cleanup have been used to inform legislative hearings, shape U.S. government programs and research, support public education campaigns, and ultimately spur changes in federal and state law and industry practice. These statistics, however, lack the degree of rigor that comes only from controlled conditions—conditions that are impossible to enforce at once-a-year events at varying sites, with varying participants.

CMC's National Marine Debris Monitoring Program (NMDMP), supported by the U.S. Environmental Protection Agency, answers the need for scientifically sound data. Once a month for five years, specially trained volunteers collect and record debris at 180

sites along the coast. At the conclusion of the five-year study, CMC will conduct statistical analyses to determine whether marine debris is significantly diminishing in response to current laws and education efforts. The results of the study will also be used to help identify the major sources of the debris.

Local Solutions

Using data from the Cleanup, CMC is helping coastal communities around the country develop specific strategies to help keep their waste out of the water. With support from the American Plastics Council, Coca-Cola, Brunswick, Philip Morris, and Royal Caribbean Cruises, CMC's Model Communities program operates on the principle that a problem that originates at the local level must be solved at the local level. Model Communities projects currently focus on four types of activities: recreational boating, fishing, shoreside commercial activities, and littering.

Recreational Boating and Marina Operations

Through its "Good Mate" boating program, CMC is developing educational and training materials for marina staff and recreational boaters to increase awareness of the potential impacts of everyday boating activities. Good Mate was developed and tested in collaboration with the Pinellas County Departments of Solid Waste and Environmental Management in Florida. It has since been expanded into the Caribbean—with projects in Puerto Rico, the U.S. Virgin Islands, and Bermuda.

Recreational and Commercial Fishers

CMC partnered with the University of Hawaii Sea Grant to develop its "Marine Bounty" program, which seeks to reduce the amount of derelict fishing gear in Hawaiian waters. Fishers and other boaters who spot derelict gear while at sea report its location to Hawaii Sea Grant, which then removes the gear from the water. Citizens who report derelict gear are rewarded with "thank you" prizes from local sponsors.

Shoreside Activities

The lack of adequate waste disposal facilities, at a popular beach in Piñones, Puerto Rico led community leaders and Model Community partners to conduct an intensive, "one-on-one" education and recycling campaign. Recyclable trash is now separated and taken to a recycling center. The program has



Business owners in Piñones, Puerto Rico, display new recycling posters.

expanded from Piñones to include other communities surrounding the San Juan Bay Estuary.

Urban and Coastal Littering

ICC data consistently reveals cigarette butts as the top debris item recovered from beaches and waterways. Because this litter is so prevalent, two Model Communities projects focus on cigarette litter. In Ocean City, New Jersey organizers are working to encourage beach users to use the trashcans and several newly installed cigarette receptacles. (Organizers also discovered that other litter on the boardwalk was actually due to the design of the trash cans, not careless beachgoers. Open trash cans have been replaced with domed-lid cans, to thwart the seagulls that pick through—and spill—the trash.) In Baton Rouge, Louisiana, project partners developed informational materials explaining the environmental impacts of cigarette litter. The materials are being distributed at festivals and public meeting places, with additional plans to distribute them at college football tailgate parties and local hotels.

CMC has also produced an educational video for schoolchildren on ways to keep trash off the streets and out of the ocean. Called "Think Twice," the video discourages people from tossing litter onto streets, sidewalks, and other areas where they are like-

ly to be washed into storm drains. The video and accompanying educators' guide will be available to schools and community and civic groups in January 2001.

Other Programs

Many of our Cleanup partner organizations also conduct programs designed to prevent waste from becoming marine debris. We encourage readers interested in learning about these programs to contact the cleanup coordinator in your state.

Several corporate and industry leaders, including several of the international sponsors of the International Coastal Cleanup, also conduct programs to reduce the occurrence of marine debris. Please visit their websites for more information.

U.S. Environmental Protection Agency:

www.epa.gov/owow/oceans/debris/index;
www.epa.gov/owow/info/PubList;
www.epa.gov/ost/beaches;
www.epa.gov/epaoswer/osw/index/htm

SeaWorld/Busch Gardens:

www.seaworld.org **or**
www.buschgardens.org

AT&T Foundation:

www.att.com/foundation

National Soft Drink Association:

www.nsda.org

ITW Hi-Cone:

www.ringleader.com

PADI Project Aware:

www.projectaware.org

Dow Chemical Company:

www.dow.com

The Coca-Cola Company:

www.thecoca-colacompany.com

Appendix 1

International Sponsors of the 1999 International Coastal Cleanup

BENEFACTORS

AT&T
The Brita Products Company
The Brunswick Public Foundation
Royal Caribbean International and Celebrity Cruises
See's Candies, Inc.
U.S. Environmental Protection Agency

PATRONS

American Plastics Council
Anheuser-Busch Companies
The Coca-Cola Company
The Dow Chemical Company
Golden Family Charitable Fund, Inc.
The Harry & Grace Steele Foundation
ITW Hi-Cone
Busch Gardens & Sea World Adventure Parks
Tenneco Packaging

SPONSORS

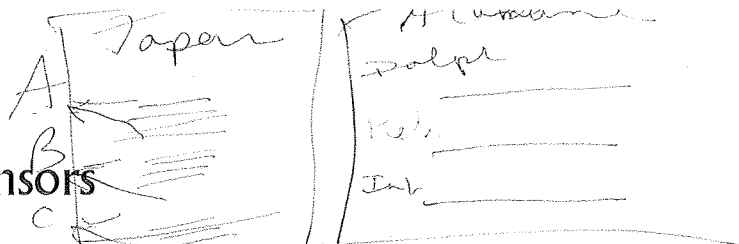
ARCO Foundation
BellSouth
Browning-Ferris Industries
Chevron Corporation
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Dive Equipment and Marketing Association
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Rockwell Fund, Inc.

ASSOCIATES

Ruth McClean Bowman Bowers Foundation
Holland and Knight Foundation
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Precision Environmental Laboratory
Trull Foundation
West Marine Products, Inc.

Appendix 2

Country and State Sponsors



COUNTRY SPONSORS

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Isenbeck
Provincia Seguros
Bimbo
Cabrales
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Sadia
Cerveceria Quilmes
Pehuamar

Barbados

Alamac Trading
Barbados Union of Fisherfolk
Organization
Caribbean Youth Environment Network
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Wadadah
Nico's Wine Bar
Moore Paragon
Club Rockley Barbados
Cave Shepherd
Hanschell Inniss
Club Barbados
Williams Industries Incorporated
Leverage Incorporated
David Lashley and Partners
Abundant Life
Arawak Cement Plant
International Insurance Management Ltd.
Leo Club East
Casuarina Beach Club
Almond Beach Club
CERMES
MJ Distributors Ltd.

Belize

Bank of Nova Scotia
Crystal Water (Bowen & Bowen Ltd.)
Batty Brothers Bus Services Ltd.
Hofius Limited
Rosado's Bakery
Belize Bank Ltd.
Kee's Bakery
Maria Chang & Sons Co. Ltd.
Belize Waste Control Ltd.
Augusto Quan Ltd.
Benny's Home Center
Rotary Club of Corozal
Belize City Council
LOVE FM
Belize Tourism Board

Bermuda

Ace World
The Bank of N.T. Butterfield & Son Ltd.
The Bermuda Boy Scouts Association
The Bermuda Monetary Authority
The Bermuda Stock Exchange

CedarBridge Academy
Centre Solutions
The Explorers Club
The Family Learning Centre
The Hamilton Lioness Club
The Hamilton Lions Club
The Island Press PaperHouse
Kitson & Company Limited
Logic Communications Limited
Oil Management Services Limited
Select Sites Group
TeleBermuda International Limited

British Virgin Islands

TICO Wines & Spirits
AMS Financial Services

Canada

Canada Trust Friends of the Environment
Foundation
Vancouver Aquarium Marine Science
Centre
CMC
Stolt Sea Farm Inc
Canada Enterprises Stevedoring and
Terminals Ltd.
ACAP Saint John
Market Square
Lantic Sugar
Province of New Brunswick
City of Saint John
Connors Bros
Friends of the Environment Foundation
Eastern Charlotte Waterways
Saint John Port Authority
Canadian Coast Guard
Melanson's Waste Management
ALERT
Fundy Region Solid Waste Commission
Tim Horton's West
Braxco
GE Barbours Ltd.
Mispec Recreation Committee Inc.
Irving Oil
Ship & Shore Cartage Ltd.
Hon. Elsie Wayne MP
Saint John Recycling

Dominica

Dominica Coconut Products
Agriculture Industrial Bank
Island Car Rentals
H.H.V. Whitechurch & Co. Ltd
Harris Paints Dominica
O.D. Brisbane & Sons. Ltd
Tropical Star NewsPaper
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Depex Colour LAB
Jolly's Pharmacy
Dominica Brewery & Beverages
Dominica Electricity & Company
Dominica Water & Sewerage Company
Kentucky Fried Chicken
Josephine Gabriel & Co Ltd
A.C. Shillingford & Co Ltd
Malcolm Stevens & Sons
Barclays Bank

Grand Bazaar
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LTU International Airways
Ministry of Tourism, Rep. of Maldives
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Corail Base
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Ecole Evangelique Baptiste
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UNESCO/CSI
Ecole Armeé du Salut de Luly
Ecole Etzer Vilaire de Saintard
Ecole Reformee de Saintard
Thierry Chilos
Camellien Audain
Gaspard Louisaint

Hong Kong

Marine Parks Division, Agriculture and
Fisheries Department, Hong Kong
government
Regional Services Division, Hong Kong
government
The Hong Kong Marine Conservation
Society
King George V School

Jamaica

Canada / Jamaica Green Fund Project

Japan

Ana Hotels Workers Union
Circle K Japan Co., Ltd.
Esso
Kanagawa Beach Cleaning Foundation
Sapporo Brewery Ltd.
Sankus and Associates
The Beverage Industry Environment
Beautification Association
Dunlop Home Products Ltd.
Kirin Brewery Co., Ltd.
Kobe Sales Head Office

Kinki Coca-Cola Bottling Co., Ltd.
Sanyo Electric Co., Ltd.
Coop Kobe
Mycal Agency Co., Ltd., Sendai Branch
Sendai Coca-Cola Bottling Co., Ltd.
Toyo Tire & Rubber Co., Ltd. (Toyo
Environmental Protection Fund)

Kenya

Friends of Fort Jesus
Wema Centre Street children
Wildlife Club Members
Curio Dealers
Hotel staff from North and Southcoast
Beach Operators
Boy Scouts
Rotaract club
Bamburi Cement staff
Street children
Kenya Wildlife Service
Changamwe youth Solidarity
Environmental Conservationists of the
present
Likoni School for the Blind
Keen Kleeners
Municipal Council of Mombasa
Nyali Baptist Church

Kuwait

McDonald's
American International School

Lithuania

Shool Club "Baltijos akis" (The Baltic Eye)
Joint stock company "Smiltynes Ferry"
Klaipeda municipality
Palanga municipality
Joint stock company "Spec transport"
Radio station "LaLuna"

Mexico

The Ritz-Carlton Cancun
SEMARNAP
H. Ayuntamiento Benito Juarez Direccion
de Ecologia
Fonatur
L. Carrillo y Asociados
Copicat
TEKNOGRAPHICS
100% natural restaurantes
World Famoso Grupo Anderson's
Electropura
Aerocaribe
Vive Cancun Vive Cuba
Pixelpress
Xcaret
Xel-Ha
CITMA
Instituto de Oceanologia

Papua New Guinea

Arnott's Biscuits
Brian Bell
British High Commission
Bank of Hawaii
Coca Cola
Deloitte Touche Tohmatsu
Eda-Ranu
Department of Education
Finance Pac
Harbours
Independent Group
Kwik Print
Office of Lady Carol Kou

Merrill Lynch
Motu Koitabu Council
NAUFM
JC-KRTA Consulting Group Ltd
Orogen Minerals Limited
National Gaming Control Board
PriceWaterhouseCoopers
Royal Papua Yacht Club
Papua New Guinea Defence Force
Conservation International
PNGFM
POSF
The Order of St. John, Papua New Guinea
United Nation
PNG Coastal Clean Up Association Inc

Saudi Arabia

Red Sea Divers

South Africa

Toyota South Africa
Sappi LTD
East Rand Plastics
Richards Bay Materials
Pick 'n Pay

Tonga

Peace Corps Partnership Program
Vava'u Youth Congress

Venezuela

Venezuelan National Guard
Coast Guard

U.S. STATE SPONSORS

Alabama

The Forum
Mobil Oil
Alabama Power Company
Degussa-Hals
Exxon Company USA
Mitsubishi Polysilicon
Alabama Coastal Foundation
ADECA Coastal Programs
Alabama Dept. of Environmental
Management
Baldwin County Commission
Browning Ferris Industries
City of Mobile
Compass Marketing, Inc.
Kimberly-Clark Corporation
Shell Chemical

Alaska

The Alaska SeaLife Center
The Alaska Fly Fishers Association
Windsong Lodge/Resurrection Road
House
Kenai Fjords Tours
Seward Parks and Recreation
Renowna Charters
Allen Marine Tours
Major Marine Tours

Delaware

Alliance to Conquer Tobacco in our
Neighborhoods
American Lung Association of Maryland
Assateague Coastal Trust
Assateague Island National Seashore-MPS
Assateague Mobile Sportfishermen's
Association

Browning Ferris Industries
Center for Marine Conservation
Chamber of Commerce of Chincoteague
Island
Chincoteague National Wildlife Refuge-US
Fish and Wildlife Service
Chincoteague Volunteer Fire Department
County of Accomack
Cat Country 97.5 & 105.9 FM
Delmarva Broadcasting Company
Delaware Chapter-Surfrider Foundation
Delaware Department of Natural Resources
and Environmental Control
Dorchester County Highway Administration
Maryland Dept. of Natural Resources
Nanticoke Watershed Alliance
Nassawango Creek Stewardship
Committee-The Nature Conservancy
Ocean City Dune Patrol
Playtex Family Products
Pocomoke River Canoe Company
Salisbury Zoo
Soroptimist International of Talbot
County
The Nature Conservancy of Maryland
The Nature Conservancy of New Jersey,
Delaware Bayshores Office
Town of Chincoteague
US Coast Guard Group Eastern Shore
Virginia Dept. of Conservation and
Recreation
Wallops Flight Facility
West Marine-Kent Island/Easton

District of Columbia

American Plastics Council
International Council of Cruise Lines
Conrad Associates
Splash Dive Center
Night Club 9:30

Guam

Coca Cola Beverage Company
Foremost Crystal Clear Drinking Water
Duty Free Shoppers
Enron Development
CreativaTees Inc.
American Printing
IT&E
Pacific Daily News
Underwater World

Illinois

ITW-HiCone
Chicago White Sox
Chicago Park District
Active Endeavors
Friends of the Parks
ITW Foundation

Maryland

Alliance to Conquer Tobacco in our
Neighborhoods
American Lung Association of Maryland
Assateague Coastal Trust
Assateague Island National Seashore-NPS
Assateague Mobile Sportfishermen's
Association
Browning Ferris Industries
Chamber of Commerce of Chincoteague
Island
Chincoteague NWF -USF & WS
Chincoteague Volunteer Fire Department

County of Accomack
 Cat Country 97.5 & 105.9 FM
 Delaware Chapter-Surfrider Foundation
 Delaware Department of Natural Resources
 and Environmental Control
 Dorchester County Highway Administration
 MD-DNR
 Nanticoke Watershed Alliance
 Nassawango Creek Stewardship
 Committee-The Nature Conservancy
 Ocean City Dune Patrol
 Playtex Family Products
 Pocomoke River Canoe Company
 Salisbury Zoo
 Soroptimist International of Talbot
 County
 The Nature Conservancy of MD
 The Nature Conservancy of NJ
 Delaware Bayshores Office
 Town of Chincoteague
 USCG Group Eastern Shore
 Virginia Department of Conservation and
 Recreation
 Wallops Flight Facility
 West Marine-Kent Island/Easton
 CONECTIV

Massachusetts

Massachusetts Coastal Zone Management
 Executive Office of Environmental Affairs
 National Oceanic and Atmospheric
 Administration
 Urban Harbors Institute at the University
 of Massachusetts, Boston
 BankBoston
 MBTA
 Tronex Healthcare Industries
 Quest Diagnostics
 Microflex
 Museum of Fine Arts - Boston
 New England Aquarium
 Cape Cod Chips
 Brigham's Ice Cream
 Metropolitan District Commission
 Massachusetts Dept. of Environmental
 Management

Michigan

Alpha Gamma Phi of Hope College
 Alpha Phi Omega of Grand Valley State
 University
 Alpha Phi Omega of Hope College
 AT&T Pioneers
 Bank One
 Bob Mathers
 Boyne Automotive Club
 Boyne Avenue Green House
 Boyne City Rotary Club
 BP gas station
 Charlevoix Rehabilitation
 Country Now and Then
 Emmet Conservation District
 Environmental Issues Group of
 Hope College
 Environmental Stewardship Coalition of
 Calvin College
 Ettermans Supermarket
 Ex-Par
 Focus
 Friends of the Jordan River Watershed
 Friskies Orchards
 Great Lakes Marina
 H.O.W.
 Jan's Hair Fashions

Johans Bakery
 K-Mart
 L.C. and Margaret Walker Foundation
 Lake Michigan Federation
 Ludington Daily News
 Michigan Dept. of Environmental
 Quality
 Muskegon Conservation District
 North Coast, U.S.A.
 Northern Quarterly Waste Disposal
 Service
 Northwestern Savings Bank and Trust
 Old Kent Bank
 P.A.D.I.
 Par T Pac
 Pepsi Cola
 Pippins Restaurant
 Republic Bank
 Spirit of the Woods Conservation Club
 Super Stop Grocery
 Swiss Hideaway Canoe Livery
 United States Coast Guard
 Vista Volunteers
 Volunteer Center of the Tri Cities
 West Michigan Dive Center

Minnesota

Innerspace Scuba Center
 Alakef Coffee Roasters Inc.
 Lakehead Pipeline
 Duluth Seaway Port Authority
 WLSSD
 Lake Superior Paper Industries
 Duluth Engineering and Manufacturing
 Company
 Lake Superior Warehousing Company, Inc.
 Clean Water Action
 Bernick's Pepsi
 Lake Superior Magazine
 Minnesota Sea Grant
 Bullseye Silkscreen
 Lincoln Park School
 Minnesota Power

Mississippi

Mississippi Dept. of Marine Resources
 Chevron Pascagoula Refinery
 Outback Steakhouse
 Gulf Islands National Seashore
 Keep America Beautiful of Pascagoula
 National Marine Fisheries Service
 Earth Shores Foundation
 Hancock County Chamber of Commerce
 Mississippi-Alabama Sea Grant
 Consortium
 Collins & Associates of Biloxi
 Office of Congressman Gene Taylor
 Office of the Mississippi Secretary of State
 Gulf Islands Conservancy
 Cellular South
 Mississippi State University's Coastal
 Research & Extension Center in Biloxi
 Mississippi State University's Extension
 Service in Hancock County

Missouri

NEETR
 Clay County Parks
 Smithville Kiwanis
 Toyota (Kansas City Regional Office)

Montana

PADI Project AWARE

New Hampshire

Waste Management
 Seacoast Coca-Cola
 Frisbee Memorial Hospital
 Carcord Hospital
 Portsmouth Regional Hospital
 Demoula's Market Basket
 Durham Market Place
 Shaw's Supermarkets

New Jersey

Fantasy Island Amusement Park, Beach
 Haven

New York

American Littoral Society
 ALS members Judy & Josh Weston
 Automated Data Processing Foundation
 (ADP)
 Brita
 Chase Manhattan Foundation
 City Parks Foundation
 Consolidated Edison
 Friends of Gateway/Neighborhood Open
 Space Coalition
 Keyspan
 New York City Dept. of Environmental
 Protection
 NYC Environment Fund/The Hudson
 River Foundation
 New York State Dept. of Environmental
 Conservation
 Accabonac Protection Committee
 Akwesasne Task Force on the
 Environment
 American Legion
 U.S. Coast Guard Auxiliary
 Appalachian Mountain Club, New Jersey
 Chapter
 Aquarium of Niagara
 Astoria Residents Reclaiming Our World
 Atlantic Divers
 Atlantic Steamer Fire Company
 ATT Pioneers
 B.O.C.E.S.
 Bayswater Civic Association
 Bell Atlantic Telephone Pioneers
 Blue Water Divers/Riverside Park Fund
 Boy Scouts of America
 Bridge Marina
 Brueggers Bagels
 Buffalo Aqua Club
 Buffalo Parks Department
 Caffe Aurora
 Canadaigua Sailboards
 Canarsie Pier Fishing Association
 Centre Island Association
 Chase Manhattan Bank
 Chase Pitkin Home and Garden
 Chenango Co Environmental Mgt.
 Council-Rogers Env.
 Christeen Oyster Sloop Preservation Corp.
 Church of the Holy Trinity
 City of Cortland
 Coalition of Lake Shore Taxpayers
 Coalition to Save Hempstead Harbor
 Community Board 1
 Concerned Citizens of Manorhaven
 Concerned Citizens of Montauk
 Cornell Cooperative Extension
 Cortland Co. Soil & Water Conservation
 District
 Croton Conservation Advisor

Duncan Doughnuts, W. Haverstraw
 East Hampton High School
 East Woods School
 Eastern Suffolk BOCES Skills USA-VICA
 Eckerd's Drug Store, Cortland
 Educators for Gateway
 Electrical Testing Labs
 Elegante Restaurant & Pizzeria
 Fair Haven Beach State Park
 Fire Island National Seashore
 Fire Island Year Round Assoc
 Fire Island Year Round Residents Assoc.
 Firends of Thatcher State Park
 Fort Hamilton High School
 Frank M. Flower & Sons Oyster Company
 Friends of Gateway
 Friends of Spuyten Duyvil
 Friends of Sterling Nature Center
 Friends of Sterling Nature Center
 Friends of the Bay
 Frontier Middle Shool Student Council B.F.I.
 Gantry Plaza State Park
 Gateway National Recreation Area
 George Rogers
 Girl Scout of America
 Green Party
 Hair Designs by Colleen
 Hands Across The Bay
 Heron Pointe Condominium
 High School for Environmental Studies
 Hilton Big M
 Hilton DPW
 Hilton Fire Department
 Hither Hills State Park
 Hogansburg Fire Department
 Hogansburg Village Bakery
 Hommocks School
 Hunters Point Community Coalition
 Husdon Valley Promotions
 J & A Concessions, Montauk
 James Madison High School
 JKS Printing
 Joe Rutigliano
 Jones Beach State Park
 Kedley, Harris Beach & Wilcox, LLP
 Key Club Oswego High School
 KIC - Keep Islip Clean
 Lindenhurst Youth Center
 Lisa Gaudioso
 Locust Valley Middle H.S.
 Long Island Diver's Association
 Long Island Shore and Beach Preservation Assoc.
 Main Mail Green Grocer
 Manhasset Bay Protection Committee
 Marshlands Conservance, Rye
 Med-Port of Rockaway Beach Civ Association
 Media Play
 Mohawk Council of Akwesasne on Conservation
 Montauk Chanber of Commerce
 Montauk Point State Park
 Montaul Surfcaster Association
 Morman/Latter Day Saints
 Mormon Church
 Nassau BOCES Outdoor & Environmental Education
 Nassau Department of Recreation & Parks
 Natural Resources Protective Association
 New Rochelle League for the Environment
 New York City Dept of Parks & Recreation
 New York City Outward Bound Center

New York Urban League
 No Limit Scuba
 Noah's Ark
 North Hollow Property Owners Association
 North Shore Audubon Sociey
 North Shore Beach Property Owners Association
 NY Katipunan Lion Club
 Nyack College Food Service
 NYS Office of Parks, Recreation & Historic Preservation
 Ocean Horizon
 On the Bottom Dive Club
 Oswego City School District
 Oswego Classroom Teacher's Assoc.
 Oswego County Landfill
 Partnership for Parks, NYC
 Pelham School District
 Pizza Hut
 Pleasant Plains/Princes Bay/Richmond Valley
 Port Washington Business Improvement District
 Poughkeepsie Recreation Dept.
 Poughkeepsie River Dist. Business Assoc.
 Prince's Bay Boatmen's Association
 Project Challenge of Long Island
 Prospect Park Alliance
 Queens College Center for Environmental Education
 Quest Elementary School, Brockport
 REC Divers, Canandaigua
 Residents Association of Lake Sapphire
 Riverside Park Fund
 Robert Moses State Park
 Rochester Gas & Electric Corp
 Rockaway Action Committee
 Rockaway Beach Civic Association
 Rye Nature Center
 Sandy Beach Property Owners Association
 Schenectady Co. Environmental Advisory Council
 Scuba Newwork
 Seatuck Environmental Association
 Seward Park High School
 Shoprite, West Haverstraw
 Siegle Family
 Sierra Club
 Singles for Charities
 Sodus Rotary Club
 Sodus Town Hall
 Sound Beach Property Owners Association
 Spoons Carting & Rubbish Removal
 St. Mary's Children & Family Services
 St. Regis Mohawk Tribe on the Environment
 Stang Rubbish Removal
 Stanley Isaacs Center
 Suffolk County Marine Environmental Learning
 Superior Removal, Newfield
 Tabernacle Christen Academy
 The Beach Club
 The Scuba Sports Club
 Town of Babylon
 Town of Oyster Bay
 U.S. Army
 Union Springs United Leo Club
 Unitarian Universalist Congregation of Central
 United Federation of Teachers
 United States Coast Guard - Southampton
 Urban Park Rangers, NYC

Village of Homer
 West End Neighbors
 West School
 Western Finger Lakes S.W.M. Authority

North Carolina

Alcoa Foundation
 Ansell Edmont Industrial
 BellSouth
 Carolina Power & Light
 Coleman Company
 CSL Inc
 Duke Power
 First Citizens Bank
 FGI Advertising & Design
 Foothills Equestrian Nature Center Inc.
 Fountain Powerboats
 Glass Packaging Institute
 Glaxo Wellcome
 Glen Raven Mills
 Grady-White Boats
 Hanover Clocks & Banners
 IBM
 The Landmark Project
 Mallinckrodt
 MindSpring Enterprises
 NC Beer & Wine Wholesalers Assn.
 NC Soft Drink Association
 Nantahala Outdoor Center
 NAPCOR
 North Carolina Power
 PCS Phosphate
 Parrish Realty
 RJ Reynolds Tobacco Company
 Surfrider Foundation
 Tar Heel Tobacco
 Tennessee Valley Authority
 US Power Squadrons, District 27
 WGHF Fox 8
 WITN - TV 7
 WLOS - TV 13
 WPTF - 680 AM
 WSOC - TV 9
 WWAY - TV 3

North Dakota

Scuba One, Inc.

Oregon

Jantzen
 Oregon Coast Aquarium
 Portland General Electric
 Shilo Inns
 Spirit Mountain
 The Standard

Puerto Rico

Pepsi Cola, Inc
 Glad bags
 McDonald's
 Playtex
 Tres monjitas
 Cosmos 94
 Girl Scout (troop 221)
 Bristol Myers Squibb Lab
 Caribbean Business
 Hotel Colegial, RUM Mayaguez
 Holiday Inn, Mayaguez
 Mayaguez Resort and Casino
 Parador
 Palmas de Lucia, Yabacoa
 Villa Cofresí, Rincón
 El Faro, Aguadilla
 Perichis, Joyuda Beach and Highway Inn,
 Cabo Rojo

Fajardo Inn, el conquistador, Fajardo
 Copamarina, Guánica
 Buen Cafe, Arecibo
 Posada Porlamar, Lajas
 Conserva El Encanto (Keep America
 Beautiful-PR Chapter)
 Industry and Commerce for Recycling
 (ICPRO)
 Embellece nuestra isla (Clean up the
 world-PR chapter)
 Lige Ecologica de Rincon
 University of Puerto Rico-Mayaguez
 Campus
 Agricultural Extension Service UPRM
 4H clubs, Americorps
 Persbiterian College, Mayaguez
 Department of Education
 Solid Waste Authority (ADS)
 Dept. of Natural and Environmental
 Resources (DNER)
 Tourism Company
 Tourism and Hotel Association of PR

Rhode Island

Rhode Island Dept. of Environmental
 Management

South Carolina

Amoco Chemicals, Co., Cooper River Plant,
 Wando

Amoco Fabrics & Fibers, Seneca and
 Spartanburg
 Amoco Performance Products, Greenville
 and Rock Hill
 Ben & Jerry's Charleston
 Brita Water Filtration Systems
 Carolina Power & Light Company
 Duke Power
 NOAA Coastal Services Center
 The Post and Courier
 Santee Cooper
 Sonoco Products, Inc.
 Marine Terminals of SC, Inc.
 SC Governor's Task Force on Litter
 City Marina Company
 The South Carolina Aquarium
 The Boathouse at Breach Inlet
 CEntraArchy Restaurant Management
 Company
 Coburg Dairy, Inc.
 Del Webb's Sun City Hilton Head
 South Carolina Ports Authority
 Springs Industries, Inc.
 Westvaco Corp.

Virginia

Virginia Dept. of Environmental
 Quality (Litter Prevention and
 Recycling Grant)
 Longwood College in Farmville, Virginia

Virginia Dept. of Conservation &
 Recreation
 National Park Service
 Virginia State Parks
 Soil & Water Conservation Districts
 Citizens and Organizations across the
 state

Washington

Pacific Northwest 4 Wheel Drive
 Association
 Washington State Parks and Recreation
 Commission
 Department of Ecology

Wisconsin

Wal Mart
 Miller Brewing Company
 Wisconsin State Senator Herb Kohl
 IKON Office Solutions
 Cypress Medical
 Target and The Chancery Restaurant
 Kolter Creative
 Medicao Mart
 ProSafety
 Karl's Rental
 Wisconsin Lake Schooner Education
 Association
 Milwaukee Urban Ecology Center
 Keep Greater Milwaukee Beautiful

Sources of Debris and Dirty Dozen—Land and Underwater Only

Figure 9.
Sources of Debris from Land Cleanups
International

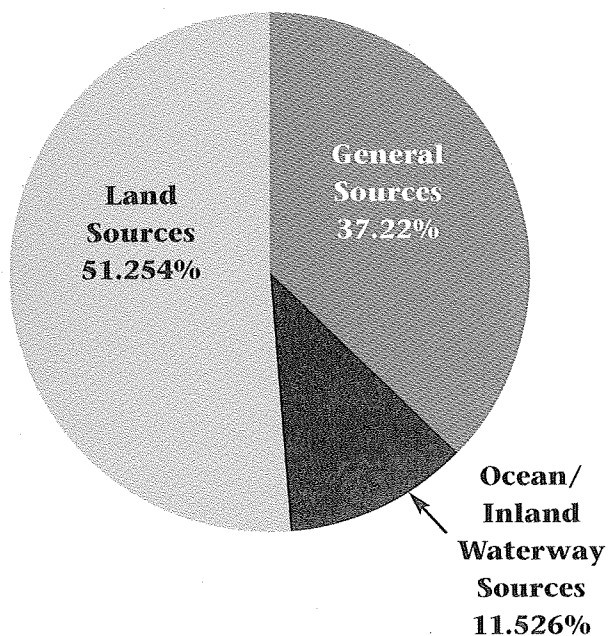


Figure 10.
Sources of Debris from Underwater Cleanups
International

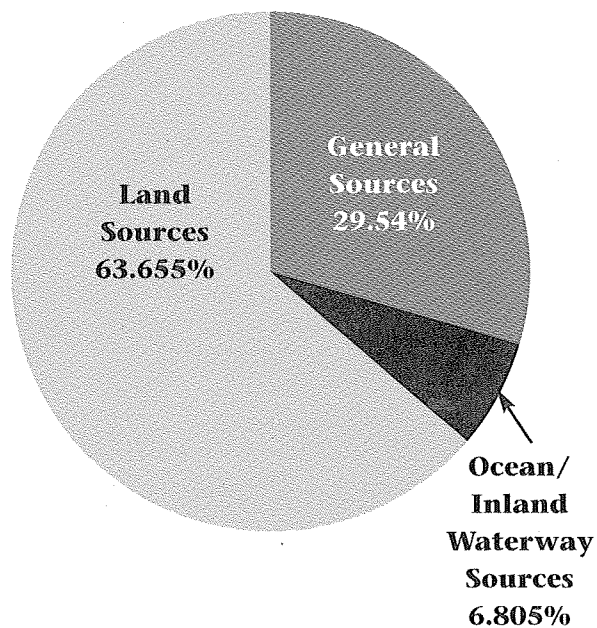


Figure 11.
Sources of Debris from Land Cleanups
United States

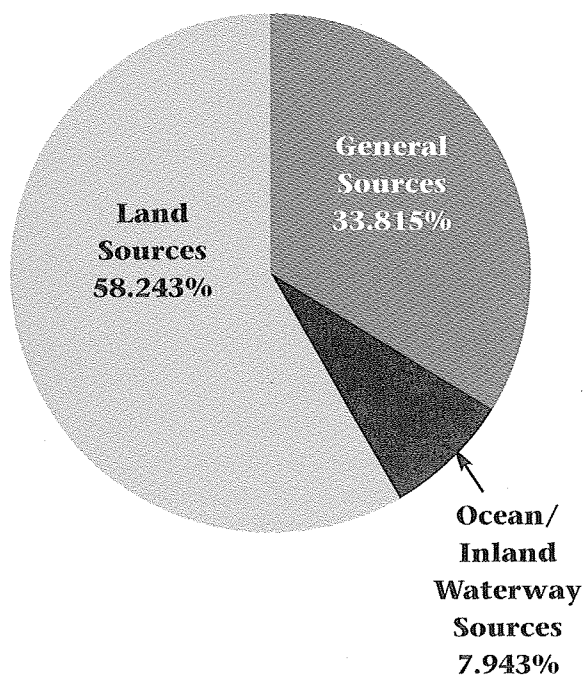
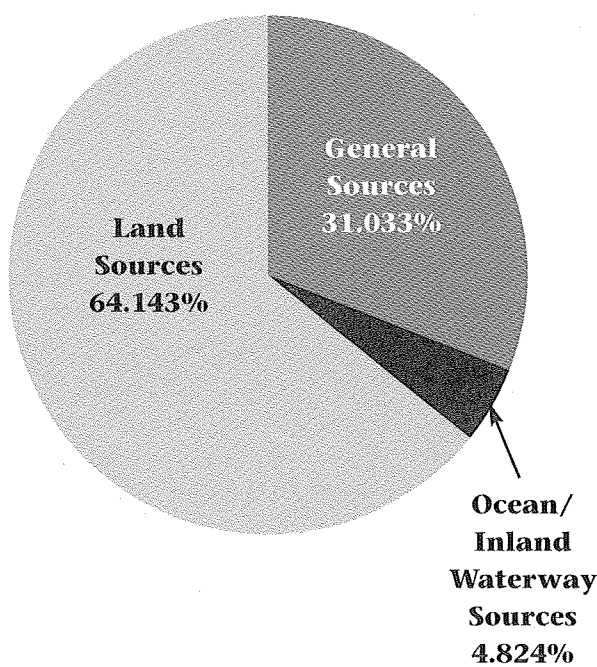


Figure 12.
Sources of Debris from Underwater Cleanups
United States



1999 International Dirty Dozen - Land Only

Debris Items	Total number reported	Percentage of total collected
1. cigarette butts	992,754	12.97 %
2. food bags/wrappers (plastic)	628,819	8.22 %
3. plastic pieces	472,500	6.17 %
4. foamed plastic pieces	393,168	5.14 %
5. paper pieces	322,807	4.22 %
6. glass pieces	313,301	4.09 %
7. caps, lids (plastic)	275,938	3.61 %
8. other plastic items	242,280	3.17 %
9. straws	203,465	2.66 %
10. beverage bottles (plastic)	203,446	2.66 %
11. beverage bottles (glass)	196,191	2.56 %
12. beverage cans	184,289	2.41 %
Dirty Dozen Totals	4,428,958	57.88 %
13. other metal pieces	168,440	2.20 %
14. other plastic bags	166,290	2.17 %
15. bottle caps (metal)	164,025	2.14 %
16. trash bags (plastic)	142,472	1.86 %
17. cups (paper)	137,583	1.80 %
18. cups, utensils (plastic)	132,209	1.73 %
19. rope	124,174	1.62 %
20. cups (foamed plastic)	93,787	1.23 %
Top 20 Totals	5,557,938	72.63 %

1999 International Dirty Dozen - Underwater Only

Debris Items	Total number reported	Percentage of total collected
1. cigarette butts	59,619	21.42 %
2. beverage bottles (glass)	17,870	6.42 %
3. plastic pieces	16,447	5.91 %
4. food bags/wrappers (plastic)	14,606	5.25 %
5. beverage cans	12,082	4.34 %
6. beverage bottles (plastic)	11,127	4.00 %
7. paper pieces	11,003	3.95 %
8. glass pieces	10,225	3.67 %
9. caps, lids (plastic)	9,463	3.40 %
10. foamed plastic pieces	7,031	2.53 %
11. cups, utensils (plastic)	6,746	2.42 %
12. bottle caps (metal)	6,362	2.29 %
Dirty Dozen Totals	182,581	65.60 %
13. straws	6,316	2.27 %
14. other plastic items	5,470	1.97 %
15. cups (foamed plastic)	3,637	1.31 %
16. other plastic bags	3,307	1.19 %
17. other metal pieces	3,187	1.14 %
18. balloons	3,148	1.13 %
19. clothing/pieces	3,065	1.10 %
20. cups (paper)	2,983	1.07 %
Top 20 Totals	213,694	76.78 %

1999 U.S. Dirty Dozen - Land Only

Debris Items	Total number reported	Percentage of total collected
1. cigarette butts	757,538	18.95 %
2. plastic pieces	257,269	6.44 %
3. food bags/wrappers (plastic)	219,040	5.48 %
4. foamed plastic pieces	290,470	5.24 %
5. caps, lids (plastic)	199,406	4.99 %
6. paper pieces	173,845	4.35 %
7. glass pieces	152,334	3.81 %
8. beverage cans	138,714	3.47 %
9. beverage bottles (glass)	133,574	3.34 %
10. straws	125,332	3.13 %
11. beverage bottles (plastic)	117,115	2.93 %
12. bottle caps (metal)	96,428	2.41 %
Dirty Dozen Totals	2,580,065	64.54 %
13. other plastic items	87,990	2.20 %
14. cups (foamed plastic)	81,809	2.05 %
15. cups, utensils (plastic)	71,776	1.80 %
16. lumber pieces	59,290	1.48 %
17. rope	58,860	1.47 %
18. other plastic bags	58,815	1.47 %
19. packaging material (foamed)	47,174	1.18 %
20. trash bags (plastic)	46,107	1.15 %
Top 20 Totals	3,091,886	77.34 %

1999 U.S. Dirty Dozen - Underwater Only

Debris Items	Total number reported	Percentage of total collected
1. cigarette butts	54,615	28.25 %
2. plastic pieces	14,590	7.55 %
3. paper pieces	9,148	4.73 %
4. food bags/wrappers (plastic)	8,394	4.34 %
5. caps, lids (plastic)	8,045	4.16 %
6. beverage cans	7,753	4.01 %
7. glass pieces	7,541	3.90 %
8. beverage bottles (glass)	6,511	3.37 %
9. foamed plastic pieces	5,490	2.84 %
10. straws	5,043	2.61 %
11. bottle caps (metal)	4,578	2.37 %
12. beverage bottles (plastic)	4,189	2.17 %
Dirty Dozen Totals	135,897	70.30 %
13. other plastic items	3,621	1.87 %
14. cups, utensils (plastic)	3,131	1.62 %
15. balloons	3,004	1.55 %
16. cups (foamed plastic)	2,843	1.47 %
17. other paper items	2,732	1.41 %
18. other metal pieces	2,085	1.08 %
19. clothing/pieces	1,839	.95 %
20. other plastic bags	1,821	.94 %
Top 20 Totals	156,973	81.19 %

APPENDIX 4. International Raw Data Summary

Debris	Argentina	Australia	Austria	Bahrain	Barbados	Belgium	Belize	Bermuda	Brazil	British V.I.	Canada	Cayman Is.	Colombia
PLASTIC													
Food bags/wrappers	3,125	285	25	227	735	22	2,012	172	263	153	3,697	26	4
Plastic salt bags	80	0	0	29	0	0	122	0	2	0	34	0	0
Trash bags	2,866	4	20	111	132	35	748	40	6	19	768	11	6
Other bags	370	13	11	283	292	1	1,582	65	67	86	1,420	9	0
Beverage, soda	3,263	36	77	422	424	87	1,028	244	209	134	1,220	100	22
Bleach, cleaner	320	5	0	48	33	1	394	4	0	10	246	7	1
Milk/water gallon jugs	18	1	5	141	19	27	489	13	20	87	312	13	0
Oil, lube	304	0	6	104	50	12	506	0	16	20	316	5	3
Other plastic bottles	976	18	6	148	124	56	718	35	1	54	519	37	12
Buckets	131	3	0	26	16	4	183	13	45	10	247	2	2
Caps, lids	3,915	15	0	99	639	1	1,555	141	50	197	2,703	69	0
Cigarette butts	10,534	319	100	4	245	122	384	293	32	18	13,134	96	0
Cigarette lighters	219	10	1	15	19	3	169	15	6	1	226	1	0
Cups, utensils	990	16	16	58	738	2	1,330	82	497	231	1,016	43	8
Diapers	376	0	0	0	26	2	418	1	0	14	70	0	0
Fishing line	129	45	2	9	8	1	85	23	2	77	287	2	0
Fishing lures, floats	63	36	0	27	8	1	58	3	0	1	173	0	0
Plastic fishing nets	75	2	0	39	50	3	21	13	6	13	219	5	6
Hard hats	17	0	0	6	0	0	18	0	0	0	10	2	0
Plastic light sticks	50	0	0	1	12	0	187	4	2	14	26	2	8
Plastic pieces	4,385	23	46	148	492	42	1,555	647	0	290	5,452	85	3
Pipe thread protector	42	0	0	8	1	1	125	0	1	2	78	0	0
Plastic rope	715	34	0	301	410	0	186	59	4	93	2,764	18	0
Sheeting longer than 2 ft	119	1	0	19	0	0	18	1	14	0	143	2	0
Sheeting 2 ft or shorter	49	0	0	13	0	0	18	19	125	0	158	1	5
Six-pack holders	530	0	0	0	0	0	86	0	10	2	382	0	4
Strapping bands	220	18	0	8	44	0	54	4	13	10	430	2	0
Straws	1,830	5	2	5	610	0	1,591	124	0	61	1,697	33	0
Syringes	40	3	0	0	2	0	162	2	1	0	44	3	0
Tampon applicators	241	0	0	1	13	2	34	1	0	8	441	0	0
Toys	163	8	2	3	4	3	302	2	7	0	315	9	0
Vegetable sacks	7	5	0	64	2	0	141	0	2	0	83	0	0
"Write protection" rings	107	0	0	2	1	0	19	0	1	0	65	2	0
Other plastic	739	20	0	58	154	5	1,157	59	140	29	1,891	5	1,853
FOAMED PLASTIC													
Foamed plastic buoys	103	0	0	69	5	0	128	2	0	7	522	3	0
Cups	158	58	10	32	219	0	568	46	163	29	1,407	27	0
Egg cartons	112	0	0	6	5	0	87	1	0	24	41	7	0
Fast food containers	185	29	0	17	153	0	439	28	43	53	504	5	0
Meat trays	370	2	0	10	3	0	142	0	0	8	237	3	2
Packaging material	197	78	0	101	89	2	208	18	132	5	819	36	0
Foamed plastic pieces	2,044	2	8	581	264	0	1,237	222	132	83	5,871	96	0
Styrofoam plates	76	3	0	6	155	0	504	10	14	25	225	20	0
Other foamed plastic	177	40	0	49	149	1	394	35	10	10	1,020	4	12

Debris	Argentina	Australia	Austria	Bahrain	Barbados	Belgium	Belize	Bermuda	Brazil	British V.I.	Canada	Cayman Is.	Colombia-
GLASS													
Beverage bottles	1,001	175	61	140	389	70	611	1,681	169	280	2,253	60	135
Food jars	188	1	5	17	12	0	153	13	20	11	253	2	29
Other glass bottles/jars	345	2	0	26	66	0	275	33	4	26	427	22	3
Fluorescent light tubes	27	0	0	5	7	0	40	0	0	0	9	2	0
Light bulbs	164	0	0	28	7	0	97	0	2	4	50	5	0
Glass pieces	2,886	50	50	45	477	0	855	943	90	158	4,458	12	59
Other glass	273	12	0	3	2	0	47	19	9	1	368	4	1,694
RUBBER													
Balloons	74	0	0	2	6	0	290	5	0	1	337	0	0
Condoms	639	0	0	1	42	8	200	0	7	6	167	0	0
Gloves	285	1	0	9	5	0	312	1	4	11	305	0	0
Tires	298	5	0	32	7	6	139	35	23	13	201	0	0
Other rubber	496	11	0	95	73	3	324	33	19	28	757	23	27
METAL													
Bottle caps	1,084	39	0	33	206	0	1,028	229	57	33	1,818	19	0
Aerosol cans	416	0	0	16	50	3	244	19	22	5	129	5	1
Beverage cans	1,377	60	68	193	95	97	506	288	525	180	1,484	49	26
Food cans	243	6	26	6	71	4	269	1	111	15	222	1	17
Other cans	363	0	0	35	5	0	70	21	22	0	151	0	2
Metal crab/lobster traps	43	3	0	1	0	1	40	0	0	0	36	0	0
55 gallon drum - rusty	234	0	0	7	0	1	58	7	1	26	102	0	0
55 gallon drum - new	45	0	0	1	0	0	2	0	0	0	16	0	0
Metal pieces	711	4	13	11	35	2	208	67	27	25	1,433	2	0
Pull tabs	576	3	0	10	1	0	16	64	60	3	283	0	0
Wire	442	2	0	11	28	0	103	16	2	9	698	0	0
Other metal	255	80	0	17	53	3	271	83	12	15	1,477	15	1,243
PAPER													
Paper bags	519	30	0	18	44	4	383	34	13	35	604	5	0
Cardboard	936	11	0	1	20	0	295	18	133	15	795	5	0
Cartons	991	24	0	101	71	3	303	19	3	33	549	4	0
Paper cups	326	2	0	8	20	6	316	41	10	102	1,074	5	0
Newspapers/magazines	602	14	22	0	66	3	156	4	39	21	909	2	0
Paper pieces	3,340	56	27	7	62	0	614	228	326	83	3,578	32	13
Paper plates	141	0	0	2	28	0	198	14	12	78	185	12	0
Other paper	469	47	0	13	1	0	174	19	91	64	984	3	170
WOOD													
Wood crab/lobster traps	8	0	0	5	0	0	50	0	0	0	14	0	0
Crates	160	0	0	28	5	1	102	0	0	0	37	1	0
Pallets	269	0	0	23	0	4	154	0	0	5	48	0	0
Other wood	178	1	0	44	73	1	256	28	10	14	444	0	61
Lumber pieces	1,915	5	0	871	67	200	561	58	12	110	828	1	0
CLOTH													
Clothing/pieces	671	38	7	87	145	1	712	45	51	50	1,361	9	92
Total by Countries	63,420	1,819	616	5,250	8,584	857	31,594	6,507	3,922	3,338	80,076	1,091	5,523

APPENDIX 4. International Raw Data Summary (continued)

Debris	Costa Rica	Cypress	Czech Repub.	Dominica	Dominican Repub.	Ecuador	Egypt	Fiji	France	Germany	Greece	Hong Kong
PLASTIC												
Food bags/wrappers	417	50	0	2,645	144	4,163	191	1,472	209	190	1,498	466
Plastic salt bags	10	4	0	88	55	268	0	40	2	76	0	0
Trash bags	210	8	0	508	72	3,471	55	59	576	104	2,120	63
Other bags	123	58	0	1,012	125	1,853	75	42	16	84	259	217
Beverage, soda	263	33	5	2,420	149	3,140	338	332	238	435	2,147	217
Bleach, cleaner	125	0	0	601	59	1,031	16	46	38	113	108	118
Milk/water gallon jugs	45	16	0	987	58	1,836	54	0	62	68	1,516	68
Oil, lube	163	0	0	1,402	56	2,368	36	3	14	27	77	32
Other plastic bottles	168	111	30	711	149	1,719	76	98	28	68	571	274
Buckets	22	27	0	102	7	336	1	9	7	14	14	19
Caps, lids	452	6	150	697	334	2,658	6	179	3	393	1,646	170
Cigarette butts	21	500	60	8,048	147	3,324	260	43	1,566	1,570	3,081	21
Cigarette lighters	3	0	2	202	24	212	18	3	187	48	269	47
Cups, utensils	74	14	0	830	350	7,556	34	13	240	573	2,533	24
Diapers	24	2	0	252	20	372	0	22	14	2	6	3
Fishing line	23	5	0	112	16	808	27	44	568	8	181	44
Fishing lures, floats	1	1	0	140	37	173	11	3	0	10	47	78
Plastic fishing nets	0	0	0	15	19	596	4	0	1	2	62	43
Hard hat	0	0	0	10	5	163	0	2	0	15	0	7s
Plastic light sticks	0	0	0	10	21	65	0	0	0	0	120	4
Plastic pieces	308	0	0	1,454	267	3,279	30	298	0	102	130	1,059
Pipe thread protector	1	1	0	18	1	71	5	10	0	4	4	2
Plastic rope	238	3	0	27	70	2,510	2	40	8	18	193	95
Sheeting longer than 2 ft	0	2	0	23	4	447	0	4	3	28	1	21
Sheeting 2 ft or shorter	0	0	0	65	10	163	0	4	0	59	2	27
Six-pack holders	21	0	0	52	121	660	0	4	0	0	2	5
Strapping bands	6	2	0	40	19	119	0	38	0	0	26	101
Straws	41	10	0	745	99	2,462	0	227	0	1,141	817	113
Syringes	6	0	0	2	33	119	0	3	2,041	5	13	17
Tampon applicators	1	0	15	5	19	307	0	15	15	2	6	1
Toys	36	0	0	305	30	268	0	22	38	27	117	37
Vegetable sacks	7	15	0	20	4	496	0	7	10	0	15	7
"Write protection" rings	3	0	0	16	15	286	0	2	0	4	1,177	9
Other plastic	90	3	0	1,228	123	3,368	0	293	10	24	64	85
FOAMED PLASTIC												
Foamed plastic buoys	7	1	0	84	23	680	5	5	2	1	0	35
Cups	4	3	65	889	222	1,136	0	12	105	94	327	20
Egg cartons	0	0	0	201	21	159	10	3	10	0	2	2
Fast food containers	0	10	12	354	149	719	0	20	0	79	118	27
Meat trays	22	0	0	204	46	172	0	18	0	0	10	34
Packaging material	23	0	0	324	58	191	45	64	103	93	630	70
Foamed plastic pieces	56	0	0	564	164	1,101	20	51	28	202	420	574
Syrofoam plates	5	1	0	209	205	617	0	6	43	30	64	9
Other foamed plastic	4	0	5	657	39	348	106	215	2	37	20	487

Debris	Costa Rica	Cyprus	Czech Repub.	Dominica	Dominican Repub.	Ecuador	Egypt	Fiji	France	Germany	Greece	Hong Kong
GLASS												
Beverage bottles	24	26	30	345	476	1,718	293	64	54	9,355	1,136	157
Food jars	3	0	7	301	92	298	13	13	0	182	16	29
Other glass bottles/jars	21	17	20	600	303	764	10	19	0	94	131	137
Fluorescent light tubes	0	0	0	16	0	28	0	0	5	0	0	5
Light bulbs	1	0	0	5	49	141	45	20	17	2	77	28
Glass pieces	8	0	0	1,295	534	2,322	20	5,830	0	1,373	3,384	719
Other glass	11	0	0	708	20	204	4	0	1	44	307	14
RUBBER												
Balloons	0	0	0	40	4	141	5	2	190	0	12	15
Condoms	1	2	0	350	20	71	0	8	50	9	10	5
Gloves	0	1	0	402	6	177	8	12	0	3	94	26
Tires	0	0	1	225	20	176	10	10	12	14	93	11
Other rubber	56	2	0	551	41	357	3	119	0	2	602	37
METAL												
Bottle caps	42	0	50	1,790	106	992	100	91	100	376	115	67
Aerosol cans	11	0	0	380	21	205	48	43	28	1,267	102	5
Beverage cans	90	1	73	756	69	624	132	83	322	510	1,581	65
Food cans	80	11	30	753	22	304	30	111	30	296	699	15
Other cans	3	0	0	307	40	294	0	46	0	278	256	9
Metal crab/lobster traps	0	0	0	23	7	51	0	0	0	1	0	4
55 gallon drum - rusty	0	0	0	10	1	216	1	0	1	1	31	8
55 gallon drum - new	0	0	0	12	0	32	0	0	0	2	0	0
Metal pieces	7	0	6	950	144	395	16	144	102	25	86	37
Pull tabs	0	0	0	13	139	418	0	8	53	1,001	733	46
Wire	1	0	0	343	57	209	2	81	12	26	63	74
Other metal	12	2	0	875	23	141	23	303	8	31	446	99
PAPER												
Paper bags	5	6	4	364	29	501	96	4	0	0	358	4
Cardboard	30	0	0	404	61	562	24	40	5	35	84	6
Cartons	1	5	3	207	105	461	76	6	121	27	322	27
Paper cups	0	1	90	204	91	694	10	3	113	96	60	9
Newspapers/magazines	3	6	0	92	44	1,313	75	20	5	19	293	12
Paper pieces	14	12	200	692	139	2,619	220	0	52	1,000	282	99
Paper plates	0	0	0	410	30	641	0	0	53	0	68	8
Other paper	43	7	5	251	20	352	15	32	0	9	854	14
WOOD												
Wood crab/lobster traps	0	0	0	14	5	117	0	0	2	0	0	1
Crates	0	0	0	15	47	238	0	0	5	2	86	0
Pallets	3	0	0	201	183	2,528	0	2	10	6	17	10
Other wood	6	1	0	650	13	1,257	1	84	13	27	668	146
Lumber pieces	21	0	0	221	307	5,385	3	78	12	10	336	386
CLOTH												
Clothing/pieces	17	5	38	2,514	157	911	56	140	98	38	161	118
Total by Countries	3,537	991	901	45,567	7,014	83,647	2,764	11,187	7,661	21,911	33,976	7,204

APPENDIX 4. International Raw Data Summary (continued)

Debris	Hungary	Indonesia	Ireland	Italy	Jamaica	Japan	Jordan	Kenya	Kuwait	Lithuania	Malaysia	Maldives	Malta
PLASTIC													
Food bags/wrappers	20	51	60	35	2,326	7,665	5	2,542	708	2,229	547	0	5
Plastic salt bags	0	0	0	2	93	25	0	630	37	0	1	0	0
Trash bags	0	0	0	85	1,319	1,674	0	851	129	646	126	0	2
Other bags	0	4	25	15	1,419	4,617	0	2,183	148	1,286	109	4	14
Beverage, soda	58	324	35	1,776	4,866	4,772	91	2,141	389	2,248	411	47	37
Bleach, cleaner	2	0	0	17	759	644	0	702	41	101	31	6	0
Milk/water gallon jugs	0	27	5	399	619	336	0	875	65	426	53	2	13
Oil, lube	3	17	1	90	648	106	0	942	43	94	35	10	3
Other plastic bottles	4	3	20	104	1,636	1,139	0	1,673	312	206	92	71	8
Buckets	0	2	2	8	385	166	0	575	53	74	12	2	3
Caps, lids	0	12	20	10	2,843	10,460	106	2,018	728	1,189	216	0	13
Cigarette butts	0	33	0	51	392	84,601	0	1,915	3,383	3,206	1,050	121	800
Cigarette lighters	12	1	1	0	306	2,137	0	667	129	0	90	1	0
Cups, utensils	0	12	30	126	1,387	1,223	1,520	861	372	525	53	6	25
Diapers	0	0	0	5	347	73	2	250	40	11	25	0	0
Fishing line	5	43	0	56	236	426	10	824	31	24	29	6	2
Fishing lures, floats	0	8	0	30	157	588	0	790	13	75	44	3	0
Plastic fishing nets	1	5	1	9	117	289	1	639	46	31	40	0	1
Hard hats	0	0	0	4	25	15	0	132	15	16	0	0	0
Plastic light sticks	0	0	0	9	308	50	0	758	50	383	5	0	0
Plastic pieces	0	0	0	0	1,694	60,598	0	1,655	192	892	223	0	23
Pipe thread protector	1	0	0	6	102	13	0	113	26	12	4	0	0
Plastic rope	0	12	5	320	410	3,869	0	1,744	64	421	470	0	2
Sheeting longer than 2 ft	0	2	10	26	30	1,314	0	115	5	0	2	0	0
Sheeting 2 ft or shorter	0	2	10	0	52	11,837	0	180	3	495	4	0	0
Six-pack holders	0	0	1	0	59	45	0	71	13	0	6	0	1
Strapping bands	0	0	0	2	134	624	0	324	44	0	23	0	3
Straws	0	12	15	0	1,229	3,350	0	1,469	1,896	232	330	0	12
Syringes	0	0	1	38	70	98	0	218	49	2	0	0	0
Tampon applicators	0	0	5	8	84	40	0	54	86	0	0	0	0
Toys	3	0	1	2	344	898	0	479	122	93	37	0	0
Vegetable sacks	0	4	0	22	48	85	0	463	39	77	3	0	0
Write protection rings	0	0	0	0	17	1	0	178	9	0	8	0	0
Other plastic	2	1	15	30	1,229	26,149	0	1,566	231	547	40	0	0
FOAMED PLASTIC													
Foamed plastic buoys	0	1	0	31	109	85	0	1,276	111	20	85	0	0
Cups	3	0	0	100	969	517	0	701	347	149	64	3	15
Egg cartons	0	0	0	19	88	109	0	148	58	44	13	1	0
Fast food containers	4	20	4	1	584	1,554	0	871	208	5	139	0	34
Meat trays	0	3	4	9	200	2,006	0	81	25	69	6	0	11
Packaging material	10	6	2	8	378	256	0	1,196	131	19	185	9	5
Foamed plastic pieces	0	0	2	15	974	33,391	0	1,257	669	282	319	0	27
Styrofoam plates	2	0	0	126	545	176	0	416	68	217	11	1	8
Other foamed plastic	0	27	0	3	619	573	0	902	395	291	67	4	8

Debris	Hungary	Indonesia	Ireland	Italy	Jamaica	Japan	Jordan	Kenya	Kuwait	Lithuania	Malaysia	Maldives	Malta
GLASS													
Beverage bottles	13	23	30	1,791	1,197	3,076	15	1,211	291	862	224	4	6
Food jars	0	2	15	7	204	404	0	526	38	0	28	21	10
Other glass bottles/jars	0	8	15	114	395	456	0	631	87	812	41	4	8
Fluorescent light tubes	0	0	0	12	71	28	0	220	11	1	14	1	0
Light bulbs	0	4	0	1	66	138	0	303	38	54	33	2	10
Glass pieces	0	0	2	2	846	5,216	0	723	469	997	187	0	18
Other glass	0	7	0	6	214	727	0	272	120	951	38	4	0
RUBBER													
Balloons	0	0	1	12	80	89	0	462	43	169	41	0	0
Condoms	0	0	10	2	168	27	0	570	2	0	21	0	0
Gloves	2	0	0	7	105	61	0	294	146	223	15	7	0
Tires	7	5	2	109	342	81	1	638	99	38	17	1	12
Other rubber	0	6	2	13	973	2,349	0	2,753	129	318	125	0	5
METAL													
Bottle caps	0	2	0	11	838	1,629	0	1,255	430	1,765	75	2	12
Aerosol cans	3	12	6	3	245	619	0	282	38	78	52	8	2
Beverage cans	45	27	75	98	412	8,306	121	921	83	493	440	0	20
Food cans	4	0	0	141	205	516	0	279	80	277	82	0	0
Other cans	0	0	0	2	115	297	4	341	44	205	33	0	0
Metal crab/lobster traps	0	0	0	7	68	0	4	88	14	0	0	0	0
55 gallon drum - rusty	0	0	0	19	154	9	0	379	25	0	10	0	5
55 gallon drum - new	0	0	0	7	25	8	0	58	2	0	0	0	0
Metal pieces	0	4	2	0	424	1,585	0	279	72	11	64	0	18
Pull tabs	0	30	1	23	66	1,975	0	93	45	107	25	11	0
Wire	8	2	2	5	191	651	0	413	63	151	62	0	1
Other metal	14	1	2	10	203	3,029	18	201	87	246	70	0	8
PAPER													
Paper bags	5	0	0	2	580	281	0	1,128	148	90	109	0	0
Cardboard	0	18	0	9	344	343	2	505	67	565	53	0	3
Cartons	0	72	0	14	748	818	0	593	132	544	42	0	1
Paper cups	0	18	0	11	742	566	0	332	231	327	57	0	0
Newspapers/magazines	77	0	0	29	228	341	0	791	124	672	81	0	0
Paper pieces	0	2	1	0	702	4,551	0	1,284	231	1,551	132	0	0
Paper plates	0	0	0	39	285	170	0	341	37	182	16	0	8
Other paper	0	0	0	7	621	1,519	0	355	114	809	32	0	0
WOOD													
Wood crab/lobster traps	0	0	0	47	57	21	0	225	45	0	0	0	0
Crates	0	0	0	40	26	25	0	96	21	51	5	0	0
Pallets	0	0	3	2	93	7	0	538	54	350	24	0	0
Other wood	2	5	2	4	223	3,716	0	1,142	395	427	46	0	3
Lumber pieces	0	5	3	37	601	2,517	0	609	567	329	102	8	0
CLOTH													
Clothing/pieces	2	8	30	4	755	887	0	1,161	192	102	6	18	
Total by Countries	312	893	479	6,244	43,768	315,633	1,900	59,827	16,337	30,306	7,506	376	1,243

APPENDIX 4. International Raw Data Summary (continued)

Debris	Mexico	Micronesia	Mozambique	Netherlands	Netherlands Antilles	New Zealand	Norway	Panama	Papua New Guinea	Philippines
PLASTIC										
Food bags/wrappers	3,812	857	30	34	508	94	397	1	48,578	318,363
Plastic salt bags	433	143	0	0	11	0	0	0	128	18,411
Trash bags	2,108	514	0	13	178	4	75	1	2,703	72,748
Other bags	1,100	645	0	5	240	8	102	1	23,776	63,565
Beverage, soda	3,211	293	10	79	766	265	23	0	12,248	38,130
Bleach, cleaner	338	188	0	8	39	1	4	0	0	16,638
Milk/water gallon jugs	887	50	0	0	147	7	6	0	2m259	19,332
Oil, lube	614	176	5	0	59	2	2	0	448	13,427
Other plastic bottles	1,039	454	5	0	225	46	21	0	0	27,004
Buckets	193	88	0	46	69	9	12	0	160	5,916
Caps, lids	3,562	129	100	0	709	103	221	0	8,910	28,720
Cigarette butts	11,872	307	50	14	160	35	1,547	0	0	82,480
Cigarette lighters	227	44	0	3	62	4	3	0	0	12,158
Cups, utensils	7,541	734	0	41	830	62	69	1	496	29,700
Diapers	826	155	0	0	23	17	5	0	1,072	21,518
Fishing line	312	51	3	10	253	40	56	0	0	18,517
Fishing lures, floats	120	50	2	0	17	7	1	0	0	13,893
Plastic fishing nets	132	28	2	1	46	1	15	1	0	28,321
Hard hats	77	9	0	1	4	0	0	0	0	7,632
Plastic light sticks	638	40	0	0	57	2	0	0	0	59,686
Plastic pieces	2,041	538	0	2	1,684	106	496	0	1,135	123,877
Pipe thread protector	63	29	0	35	24	0	5	0	0	4,198
Plastic rope	685	104	1	1	535	301	625	0	195	47,833
Sheeting longer than 2 ft	86	7	0	19	27	3	5	0	0	2,274
Sheeting 2 ft or shorter	230	19	0	5	20	5	7	0	0	3,227
Six-pack holders	1,415	93	0	5	40	16	1	0	0	2,037
Strapping bands	198	47	0	0	46	10	48	0	82	8,429
Straws	1,785	16	5	0	489	137	96	0	0	55,509
Syringes	65	7	0	0	9	2	0	0	0	3,840
Tampon applicators	985	3	0	0	4	0	1	0	0	1,344
Toys	167	102	0	14	34	9	26	0	0	21,888
Vegetable sacks	194	32	6	0	6	2	6	0	0	14,193
Write protection rings	159	6	0	0	5	0	4	0	0	1,270
Other plastic	876	195	0	15	341	62	88	1	4,282	108,172
FOAMED PLASTIC										
Foamed plastic buoys	108	68	0	0	47	3	2	0	1,360	2,037
Cups	1,552	687	0	8	281	23	10	0	612	13
Egg cartons	96	98	0	5	51	1	0	0	0	8,884
Fast food containers	516	104	3	10	215	53	4	0	3,274	28,673
Meat trays	371	48	4	0	90	3	1	0	0	5,121
Packaging material	432	59	10	5	167	11	29	0	973	22,533
Foamed plastic pieces	2,801	349	0	0	836	8	169	0	5,577	123,887
Styrofoam plates	934	234	0	4	111	11	12	0	384	19
Other foamed plastic	264	104	0	0	117	6	23	0	2,133	41,359

Debris	Mexico	Micronesia	Mozambique	Netherlands	Netherlands Antilles	New Zealand	Norway	Panama	Papua New Guinea	Philippines
GLASS										
Beverage bottles	3,202	251	20	62	1,568	591	7	8	120	34,669
Food jars	665	224	1	3	283	19	0	0	24	10,869
Other glass bottles/jars	1,473	141	0	36	254	36	4	8	24	17,252
Fluorescent light tubes	31	7	0	8	117	5	2	0	0	5,263
Light bulbs	100	29	0	0	23	0	2	0	0	6,221
Glass pieces	2,316	425	2	38	1,026	130	35	0	320	123,887
Other glass	81	47	0	26	112	5	13	0	48	16,740
RUBBER										
Balloons	154	42	6	0	49	2	8	0	0	6,173
Condoms	124	46	0	0	48	0	1	0	0	2,810
Gloves	184	4	0	0	67	5	2	0	0	3,689
Tires	141	127	1	64	193	34	1	150	2	9,634
Other rubber	320	234	0	20	758	25	15	0	306	27,438
METAL										
Bottle caps	5,947	161	36	0	410	103	78	0	64	46,677
Aerosol cans	150	91	0	155	119	4	2	0	24	6,421
Beverage cans	1,281	783	0	43	1,062	180	13	10	2,189	20,937
Food cans	701	417	0	10	108	37	5	10	11,549	19,412
Other cans	126	87	0	309	132	15	5	10	0	8,828
Metal crab/lobster traps	32	3	0	9	22	2	0	0	0	14,278
55 gallon drum - rusty	138	36	0	1	26	0	1	0	0	3,589
55 gallon drum - new	58	2	0	50	2	0	0	0	0	822
Metal pieces	551	342	0	25	684	86	20	0	0	123,793
Pull tabs	1,338	4	0	0	21	19	12	0	0	1,534
Wire	455	88	0	2	126	107	15	0	0	6,099
Other metal	303	206	0	11	442	58	54	0	620	15,246
PAPER										
Paper bags	1,150	88	0	13	103	55	16	0	560	22,038
Cardboard	587	27	6	0	78	1	14	0	341	17,061
Cartons	982	68	0	5	74	1	42	0	0	24,122
Paper cups	820	331	0	8	188	0	6	0	67	97,983
Newspapers/magazines	679	42	3	0	54	0	6	0	0	21,313
Paper pieces	2,258	180	0	17	359	0	260	0	560	123,839
Paper plates	660	119	0	0	88	18	0	0	0	72,505
Other paper	786	33	0	0	90	2	79	0	0	20,198
WOOD										
Wood crab/lobster traps	40	5	0	0	9	0	0	0	0	0
Crates	85	49	0	0	20	0	0	0	0	0
Pallets	484	12	0	15	67	2	4	0	0	0
Other wood	473	160	0	37	630	16	38	0	0	10
Lumber pieces	1,320	159	7	26	444	26	45	26	0	13
CLOTH										
Clothing/pieces	532	791	1	47	628	79	41	56	479	14,082
Total by Countries	85,792	13,855	319	1,423	20,066	3,142	5,063	284	138,172	2,479,618

APPENDIX 4. International Raw Data Summary (continued)

Debris	Poland	Portugal	Republic of Mauritius	Saudi Arabia	Seychelles	South Africa	Spain	St. Kitts & Nevis	Switzerland	Taiwan	Thailand	Tonga
PLASTIC												
Food bags/wrappers	103	8	26	1,393	0	70	37	88	45	219	680	1,438
Plastic salt bags	0	0	0	88	0	2	0	1	1	0	10	230
Trash bags	0	0	0	999	0	22	30	75	125	91	13	1,042
Other bags	0	0	23	380	3	59	59	23	23	23	295	674
Beverage, soda	97	0	47	942	7	22	183	311	398	136	172	693
Bleach, cleaner	2	0	0	124	0	0	0	94	0	21	4	318
Milk/water gallon jugs	2	26	0	274	0	1	0	69	3	26	39	387
Oil, lube	0	0	5	127	0	2	0	86	58	8	7	256
Other plastic bottles	0	0	20	127	0	10	11	100	74	6	365	554
Buckets	0	2	1	9	0	8	2	40	10	12	1	213
Caps, lids	12	0	0	180	0	37	0	210	6	14	131	656
Cigarette butts	91	0	0	6	0	86	0	46	1,794	13	1,001	1,174
Cigarette lighters	4	2	1	33	0	6	8	21	15	20	83	276
Cups, utensils	5	0	20	98	1	7	44	87	76	30	73	405
Diapers	0	0	0	38	0	0	3	10	1	4	0	1,043
Fishing line	0	3	31	32	15	17	9	7	6	55	97	178
Fishing lures, floats	0	8	0	24	0	1	0	1	4	41	50	73
Plastic fishing nets	0	2	8	5	0	1	0	60	2	78	58	115
Hard hats	2	0	0	2	0	0	0	0	2	25	0	3
Plastic light sticks	1	2	0	33	0	0	0	0	110	0	11	42
Plastic pieces	30	0	0	17	7	90	2	390	14	27	197	458
Pipe thread protector	2	0	0	2	0	0	0	4	0	29	10	68
Plastic rope	4	0	12	68	0	43	2	172	4	71	196	295
Sheeting longer than 2 ft	3	0	0	1	0	0	0	4	2	6	0	416
Sheeting 2 ft or shorter	7	0	0	8	0	0	0	0	4	12	1	89
Six-pack holders	0	0	0	5	0	6	0	0	40	12	0	199
Strapping bands	0	0	0	2	0	10	0	24	2	49	5	243
Straws	0	0	0	203	5	10	0	32	4	9	373	552
Syringes	0	0	0	1	0	0	0	1	16	0	1	101
Tampon applicators	0	0	0	0	0	0	4	0	24	0	7	16
Toys	7	0	8	14	0	3	0	9	22	12	24	272
Vegetable sacks	4	0	5	53	0	0	0	1	16	4	15	551
Write protection rings	0	0	0	0	0	0	0	0	0	0	3	31
Other plastic	12	2	3	44	0	23	22	71	40	4	87	574
FOAMED PLASTIC												
Foamed plastic buoys	0	0	0	58	0	0	0	39	5	7	11	87
Cups	21	0	28	377	0	16	0	44	33	31	44	498
Egg cartons	1	0	0	36	0	0	0	1	5	0	0	162
Fast food containers	11	0	11	133	0	18	0	10	0	34	74	22
Meat trays	24	0	0	4	0	5	0	5	8	15	3	18
Packaging material	0	0	9	139	0	7	0	47	46	64	32	213
Foamed plastic pieces	6	0	0	42	0	73	8	73	76	79	46	318
Styrofoam plates	0	0	15	115	0	12	0	13	4	23	5	488
Other foamed plastic	0	0	0	0	0	40	0	62	10	1	10	286

Debris	Poland	Portugal	Republic of Mauritius	Saudi Arabia	Seychelles	South Africa	Spain	St. Kitts & Nevis	Switzerland	Taiwan	Thailand	Tonga
GLASS												
Beverage bottles	44	116	41	1,163	15	13	147	143	918	46	289	846
Food jars	7	0	0	233	6	4	0	11	7	9	7	156
Other glass bottles/jars	3	0	12	113	0	21	0	20	25	21	32	415
Fluorescent light tubes	0	0	0	7	0	0	0	3	0	0	3	155
Light bulbs	1	0	0	9	0	1	0	6	8	5	17	141
Glass pieces	49	0	21	0	0	117	0	5	182	34	142	762
Other glass	0	0	0	3	0	9	0	1	102	0	99	362
RUBBER												
Balloons	0	0	0	0	0	0	0	23	10	0	1	156
Condoms	2	0	16	0	1	0	0	6	1	0	12	120
Gloves	3	0	8	22	0	7	0	1	6	12	7	66
Tires	5	0	6	1	0	1	2	10	42	6	12	183
Other rubber	0	0	0	10	0	9	1	60	2	8	210	309
METAL												
Bottle caps	36	38	6	221	0	11	0	60	54	7	272	681
Aerosol cans	7	0	3	102	0	0	2	3	343	8	3	335
Beverage cans	13	0	59	586	0	20	222	29	150	102	55	1,255
Food cans	8	0	0	110	0	0	0	13	9	28	14	699
Other cans	23	4	2	23	0	3	5	3	0	2	17	384
Metal crab/lobster traps	0	0	0	0	0	0	0	1	0	25	50	27
55 gallon drum - rusty	0	0	0	0	1	4	0	2	26	14	0	286
55 gallon drum - new	0	0	0	0	0	0	0	0	16	2	0	77
Metal pieces	18	0	12	17	4	20	0	44	268	31	49	527
Pull tabs	1	0	0	19	0	2	14	3	62	2	85	49
Wire	7	0	17	25	0	3	1	4	28	18	34	410
Other metal	2	7	7	2	1	8	0	43	106	2	51	400
PAPER												
Paper bags	82	0	28	120	0	9	0	11	40	17	3	307
Cardboard	32	0	0	11	0	0	0	5	0	8	25	462
Cartons	21	0	2	124	0	4	0	5	2	0	12	273
Paper cups	39	0	31	82	0	2	0	3	30	25	10	416
Newspapers/magazines	41	0	13	47	0	11	0	0	59	2	12	392
Paper pieces	105	0	0	0	0	18	58	35	193	4	318	398
Paper plates	0	0	22	43	0	1	0	25	25	6	10	367
Other paper	0	0	0	0	0	8	31	14	15	0	5	251
WOOD												
Wood crab/lobster traps	0	0	0	0	0	0	0	7	0	3	0	23
Crates	1	0	0	1	0	0	0	5	4	19	0	103
Pallets	0	0	1	4	0	4	0	3	21	1	0	116
Other wood	19	0	15	0	0	36	0	155	5	13	107	464
Lumber pieces	5	0	7	60	0	40	0	41	10	15	77	565
CLOTH												
Clothing/pieces	17	8	22	32	12	2	16	42	37	36	60	852
Total by Countries	1,042	227	624	9,436	78	1,095	923	3,176	5,934	1,842	6,334	29,517

APPENDIX 4. International Raw Data Summary (continued)

Debris	Turkey	United Arab Emirates	United Kingdom	United States	Venezuela	TOTAL
PLASTIC						
Food bags/wrappers	282	471	68	227,434	5	643,425
Plastic salt bags	5	0	0	3,014	0	24,075
Trash bags	16	0	0	47,426	3	145,030
Other bags	69	0	0	60,636	1	169,597
Beverage, soda	912	69	76	121,304	1	214,573
Bleach, cleaner	153	1	3	13,977	1	214,573
Milk/water gallon jugs	213	11	2	17,586	6	50,008
Oil, lube	10	1	0	11,806	2	34,613
Other plastic bottles	13	0	0	37,592	6	79,647
Buckets	14	6	1	8,413	0	17,747
Caps, lids	454	61	34	207,451	8	285,401
Cigarette butts	57	11	0	812,153	2	1,052,373
Cigarette lighters	24	0	0	17,635	0	35,673
Cups, utensils	231	84	0	74,907	5	138,955
Diapers	14	0	0	6,646	0	33,752
Fishing line	26	10	116	26,962	8	51,022
Fishing lures, floats	18	0	0	13,535	0	30,424
Plastic fishing nets	6	1	0	7,191	1	38,449
Hard hats	0	1	0	1,023	0	9,244
Plastic light sticks	0	0	0	9,883	0	72,594
Plastic pieces	152	0	431	271,859	22	488,947
Pipe thread protector	3	0	0	4,167	0	9,291
Plastic rope	103	35	113	59,642	3	126,148
Sheeting longer than 2 ft	2	0	2	3,568	0	8,779
Sheeting 2 ft or shorter	24	0	0	6,673	0	23,632
Six-pack holders	0	0	0	14,004	6	19,954
Strapping bands	139	0	17	16,104	0	27,763
Straws	3	16	4	130,375	0	209,781
Syringes	18	1	0	3,135	0	10,169
Tampon applicators	3	0	0	8,545	0	12,340
Toys	26	2	2	18,639	0	44,957
Vegetable sacks	2	1	3	6,283	1	23,004
Write protection rings	0	0	0	6,821	0	10,221
Other plastic	12	2	3	91,611	1	247,750
FOAMED PLASTIC						
Foamed plastic buoys	11	1	0	13,609	0	28,240
Cups	14	0	15	84,652	3	97,424
Egg cartons	3	0	0	3,503	0	14,017
Fast food containers	9	0	1	26,880	0	66,423
Meat trays	13	2	0	8,688	0	18,120
Packaging material	159	103	72	48,329	0	78,930
Foamed plastic pieces	127	0	108	214,960	0	400,199
Styrofoam plates	19	0	0	17,997	3	24,200
Other foamed plastic	13	0	3	42,506	0	93,647

Debris	Turkey	United Arab Emirates	United Kingdom	United States	Venezuela	TOTAL
GLASS						
Beverage bottles	152	69	11	140,085	19	214,061
Food jars	29	0	0	10,897	0	26,367
Other glass bottles/jars	25	0	0	19,698	3	45,532
Fluorescent light tubes	5	0	0	1,792	0	7,900
Light bulbs	20	0	0	4,894	0	12,868
Glass pieces	91	0	30	159,875	11	323,526
Other glass	0	0	2	20,731	0	44,465
RUBBER						
Balloons	0	0	1	32,028	0	40,674
Condoms	14	1	0	5,844	0	11,442
Gloves	3	0	1	14,069	0	20,678
Tires	6	1	2	9,172	6	22,485
Other rubber	52	7	224	31,089	0	71,429
METAL						
Bottle caps	55	67	3	101,006	0	170,387
Aerosol cans	76	0	1	9,640	1	21,858
Beverage cans	146	97	260	146,467	17	196,371
Food cans	5	0	6	12,449	0	50,547
Other cans	1	1	0	7,507	3	20,433
Metal crab/lobster traps	0	0	7	2,719	0	17,566
55 gallon drum - rusty	8	3	0	2,481	0	7,922
55 gallon drum - new	0	0	0	395	0	1,634
Metal pieces	28	2	0	38,197	0	171,627
Pull tabs	0	3	0	22,085	0	31,056
Wire	3	11	0	14,338	6	25,525
Other metal	2	9	17	39,222	0	66,195
PAPER						
Paper bags	10	20	0	33,117	14	63,204
Cardboard	12	0	2	24,846	0	48,997
Cartons	35	11	1	18,293	8	50,511
Paper cups	2	0	0	34,958	0	140,566
Newspapers/magazines	53	0	0	22,075	0	50,865
Paper pieces	65	1	0	182,993	0	333,810
Paper plates	0	0	0	13,363	0	90,300
Other paper	22	0	4	45,133	0	73,765
WOOD						
Wood crab/lobster traps	0	0	0	1,752	0	2,450
Crates	0	1	0	1,790	0	3,069
Pallets	4	1	0	4,195	0	9,468
Other wood	1	0	1	27,157	0	39,278
Lumber pieces	18	23	0	60,754	0	79,846
CLOTH						
Clothing/pieces	15	2	76	44,939	8	73,613
Total by Countries	4,330	1,220	1,723	4,191,169	184	7,930,369

Beach Clean-up Song

(Tune: Waltz of the Flowers)

By Alison Acker, "Victoria Raging Grannies"

*We've got plastic
And elastic.
Food containers
And Remainders.
Bits of lumber
Without number
And more condoms than we'd really rather count.*

*Six pack holders
Cardboard folders.
Bits of models
Cans and bottles.
Rubber gloves and
Rubber tires
And peculiar things with far too many wires.*

*Fishing nets and
Fishing lures.
Stuff that oughta
Be in Sewers.
Bottle cappers,
Bags and wrappers
And some stuff we never want to think about—thank you*

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