1991 INTERNATIONAL COASTAL CLEANUP RESULTS

CENTER FOR MARINE CONSERVATION

U.S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
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CHARLESTON, SC 29405-2413

1991 INTERNATIONAL COASTAL CLEANUP RESULTS

CENTER FOR MARINE CONSERVATION

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1991 INTERNATIONAL COASTAL CLEANUP RESULTS

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The Center for Marine Conservation (CMC), established in 1972, is a marine conservation organization dedicated to protecting marine wildlife and conserving coastal and ocean resources. To further these conservation goals, CMC conducts policy-oriented research; promotes public awareness, education, and citizen involvement; supports domestic and international programs for marine wildlife and their habitats; and advocates sound policies concerning the marine environment.

The International Coastal Cleanup, part of CMC's Clean Ocean Campaign, is supported by the Center's 110,000 members and special contributions from Pew Charitable Trust, the Environmental Protection Agency, National Oceanic and Atmospheric Administration*, the Society of the Plastics Industry, Prospect Hill Foundation, ARCO Chemical Company, Chevron, USA, Inc., DOW Chemical USA, the Kettering Family Foundation, NAPCOR, PAXON Polymer, Jantzen, Inc,. and the Merck Family Fund.

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ACKNOWLEDGEMENTS

It would take a document the size of this report to adequately express our gratitude to all the people who helped to make this report possible. It is mind-boggling to realize the incredible numbers of people involved in the cleanup, from the hundreds of thousands of cleanup volunteers to the network of dedicated cleanup coordinators and zone captains. Appendix 2 provides a state-by-state and country-by-country listing of the individuals and organizations who worked on a local level to make the cleanup a true success. Those individuals listed below are just a few of the many who dedicated time and effort to this project.

Kathy O'Hara - Director of CMC's Pollution Prevention Program. Known at CMC as the "trash guru," Kathy's vast store of knowledge in the area of marine debris is invaluable in creating this report. Her imagination and ability to view the cleanup information from new and innovative angles allows our yearly report to maintain a consistent, yet fresh, quality that makes it a valuable resource tool, as well as an interesting bit of reading. By the time this report is published, Kathy will be taking on the additional responsibilities of motherhood, something she has been practicing on her "garbage apprentices" here at CMC for many years.

Patrick Kane - "computer-crisis central." Every conversation with Patrick begins with, "Patrick, I have a question." He has talked us through many a computer disaster, from data loss caused by any number of reasons to pointing us to the right page in the software manual even when we were convinced "it's not in the book." His unending patience and good humor helped get us through many tough situations, which helps turn a potential setback into a learning experience. And all at the cost of an occasional lunch!

Megumi Nishikubo - As wife of Japan's Environmental Attache located in Washington, DC, Megumi has a special compassion for the environment and its preservation. She brings this compassion to CMC as a volunteer in CMC's Washington DC headquarters. She has been invaluable in facilitating communications with Japan's cleanup coordinator, as well as translating Japanese materials needed by CMC staff. Her friendliness and caring attitude, as well as her willingness to donate her time toward improving the marine environment, are qualities we should all strive for.

Tuwana Jones, Wendi Powers, Beverly Sauls, and Lynette Shelton - the most patient people in the world. Many hours were spent by these four girls entering over 19,000 data cards into the Marine Debris Database. Without their dedication to this extensive job, the compilation of this report would not have been possible.

SPECIAL DEDICATION

The importance of the preservation of the world's oceans and waterway resources is becoming more and more apparent with each passing year. Governmental agencies from many countries are accepting the protection of the oceans and waterways as a responsibility and a duty that affects not only their own country's inhabitants, but to people and future generations all over the world. The United States Congress has officially designated 1992 as the "Year of Clean Water" and "Year of the Gulf of Mexico."

The Year of Clean Water designation is designed to underscore the United States' commitment to continually strive toward pollution-free waters, and to recognize the progress that has been made under the Federal Water Pollution Control Act (Clean Water Act). This designation recognizes the value of clean water to protect not only the health of this country's citizens, but the health and continued prosperity of animal and plant life that depend on clean water for their survival. This resolution also recognizes that there are still many problems remaining to be dealt with and resolves to continue to work toward solving these problems.

The designation of 1992 as the Year of the Gulf of Mexico coincides with another designation regarding the Gulf area. Under the international MARPOL Treaty, which restricts the dumping of plastics into the ocean and regulates the dumping of other types of trash, the Gulf of Mexico and the Wider Caribbean will be formally recognized by the International Maritime Organization (IMO) as a "Special Area." Special Area designation carries with it strict provisions that prohibit the dumping of *any* trash, with separate provisions for food waste, into areas so designated. The Gulf of Mexico is a critical area, not only for the economic and recreational resources it provides to individuals along its coast, but also for the habitats it provides for the vast array of wildlife that make their homes in and along the Gulf.

And last, but certainly not least, on the 20th anniversary of the founding of the Center for Marine Conservation, our gratitude to all CMC staff members, interns, volunteers, and consultants, whose efforts, past, present, and future, have, and will continue to, protect and preserve the vast resource covering most of our planet and the multitude of plant and animal life that call the ocean home.

It is to these milestones that this report is dedicated.

Public Law 101-424
101st Congress

Joint Resolution

Oct. 12, 1990
[S.J. Res. 181]

To establish calendar year 1992 as the "Year of Clean Water".

Whereas, clean water is a natural resource of tremendous value and importance to the Nation;

Whereas, there is resounding public support for protecting and enhancing the quality of this Nation's rivers, streams, lakes, wetlands, and marine waters;

Whereas, maintaining and improving water quality is essential to protect public health, to protect fisheries and wildlife, and to assure abundant opportunities for public recreation;

Whereas, it is a national responsibility to provide clean water as a legacy for future generations;

Whereas, substantial progress has been made in protecting and enhancing water quality since passage of the 1972 Federal Water Pollution Control Act (Clean Water Act) due to concerted efforts by Federal, State, and local governments, the private sector, and the public;

Whereas, serious water pollution problems persist throughout the Nation and significant challenges lie ahead in the effort to protect water resources from point and nonpoint sources of conventional and toxic pollution;

Whereas, further development of water pollution control programs and advancement of water pollution control research, technology, and education are necessary and desirable; and

Whereas, October of 1992 is the 20th anniversary of the enactment into law of the Clean Water Act: Now, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That, the Congress of the United States hereby designates calendar year 1992 as the "Year of Clean Water" and the month of October 1992 as "Clean Water Month" in celebration of the Nation's accomplishments under the Clean Water Act, and the firm commitment of the Nation to the goals of that Act.

Approved October 12, 1990.

Public Law 102-178
102d Congress

Joint Resolution

Designating 1992 as the "Year of the Gulf of Mexico".

Dec. 2, 1991
[H.J. Res. 327]

Whereas the Gulf of Mexico, which is bordered by the United States on 3 sides, is a national treasure deserving of our time, attention, and best stewardship efforts;

Whereas, although the Gulf of Mexico is a body of water that is of prime economic importance to the United States and is a recreational retreat for millions of Americans, there are signs of serious long-term environmental damage appearing throughout the marine ecosystem of the Gulf of Mexico;

Whereas commercial fishing in the Gulf of Mexico accounts for more than 20 percent of the total commercial fish yield of the United States, and the Gulf of Mexico currently yields close to twice the amount of shrimp than all other United States fisheries combined;

Whereas the estuaries, wetlands, and barrier islands of the Gulf of Mexico provide critical habitat for large populations of finfish, shellfish, waterfowl, shorebirds, colonial nesting birds, and 75 percent of the migratory waterfowl traversing the United States;

Whereas the Gulf of Mexico is an economic cornerstone for the States that border it, in that 90 percent of domestic offshore production of oil and gas comes from the Gulf of Mexico and close to 50 percent of the United States shipping tonnage passes through Gulf of Mexico ports;

Whereas it is estimated that tourism-related dollars in States that border the Gulf of Mexico contribute an estimated $20,000,000,000 to the economy of the United States, drawing millions of sport fishermen and beach users annually;

Whereas during the past few decades the Gulf of Mexico has begun to show signs of deteriorating environmental quality, including excess nutrients, toxic substance and pesticide contamination, and the presence of human pathogens, which are contributing to the deteriorating water quality and closed fishing and shellfish areas in the Gulf of Mexico;

Whereas shoreline development, canal and channel dredging, and alterations of freshwater flow into the Gulf of Mexico estuaries are causing extensive losses of marshes, mangroves, and seagrass beds, which are critical and highly productive habitats to a wide variety of estuarine and marine organisms; and

Whereas it is in the best interest of the United States to preserve and enhance the natural and economic resources of the Gulf of Mexico by heightening awareness of the need for active participation in the protection of the Gulf of Mexico: Now, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That—

(1) 1992 is designated as the "Year of the Gulf of Mexico";

(2) all Federal and State agencies which have responsibility for matters affecting the Gulf of Mexico should take a responsible role in the cooperative effort to increase the awareness of the public regarding the immeasurable value of this resource and the current conditions which threaten its aesthetic and economic value; and

(3) the President is authorized and requested to issue a proclamation recognizing such year and calling upon the people of the United States to observe such year with appropriate ceremonies and activities.

Approved December 2, 1991.

Anne Ryan from the Office of General Counsel, and Peter Gray and Lujuana Wilcher, Assistant Administrator for Water, from the Environmental Protection Agency's headquarters in Washington, D.C. help out at the Delaware cleanup.

INTRODUCTION

The Center for Marine Conservation (CMC) first began organizing beach cleanups in 1986 as part of COASTWEEKS, the annual fall celebration of the beauty and value of our coasts. This first effort was a statewide cleanup of Texas beaches, with 2,800 volunteers turning out to take a first crack at data collection of beach debris. Who would have dreamed that a mere six years later this volunteer base would grow to number over 145,000? Who could have imagined that six years later the cleanup would include 35 U.S. states and territories[1], as well as twelve foreign countries?

The types and amounts of debris encountered by this army of volunteers are as varied as the volunteers themselves. From hundreds of thousands of cigarette butts to large household furnishings, volunteers reported finding just about everything imaginable. The graphic "Furnished Through Thoughtlessness", found in Appendix 1 illustrates debris items not generally thought of as "beach litter."

The success and continuing growth of the International Coastal Cleanup is amazing. The volunteers that turn out in increasing numbers each year to collect data on the trash they encounter are the backbone of this effort. Through their dedicated efforts, these beach cleanup volunteers provide the information necessary to tackle the marine debris problem at the source. While many and varied efforts (including enactment of the international MARPOL treaty[2]) have been mounted over the past few years to halt the dumping of garbage in the ocean, particularly plastic trash, information collected by this army of volunteers shows very little change in the marine debris picture. This has raised some very serious questions about the effectiveness of regulatory efforts, including the international restrictions. Are people ignoring the law and dumping their trash? Do they even know about the law? Or do they think this may be an unenforceable regulation, given the manpower and resources available? Or is there just so much trash in our oceans that we are still collecting debris dumped years ago? These questions are currently being explored by CMC and other organizations, including U.S. lawmakers, to determine what must still be done to solve this enormous problem. As in the past, the information from cleanup volunteers provided in this report will be crucial in determining the state of the marine debris problem.

As the cleanup continues to expand to additional international areas, the global scope of the marine debris problem is becoming more and more evident. Because the ocean connects all parts of the world, trash dumped in one part has the potential to travel to any other part without so much as a passport. It is this mobility that necessitates global cooperation. Without this international cooperation, marine debris promises to continue its assault on marine wildlife through entanglement and ingestion, as well as endangering ocean-going vessels of all shapes and sizes. As international participation in the cleanup grows, so, hopefully, will the awareness and understanding of the many problems and hazards caused by pollution in our oceans.

---

1 For purposes of comparison, U.S. territories and the District of Columbia will be referred to throughout this report as states.

2 The International Convention for the Prevention of Pollution from Ships, known as the MARPOL Treaty, (MARine POLlution) prohibits the dumping of garbage at sea. Annex V of this treaty specifically prohibits the dumping of plastics.

An all-species cleanup: Minnie Mouse doesn't minimize the importance of keeping our beaches clean.

How Many, How Much, How Long?

In every way, the U. S. aspect of the 1991 International Coastal Cleanup was the largest to date. A record 130,152 volunteers (Figure 1), armed with data cards and trash bags, cleared 4,347 miles of beaches and waterways (Figure 2) of 2,878,913 pounds of trash (Figure 3). The 1991 cleanup saw the addition of several states participating in the cleanup for the first time, including the Great Lakes states of Michigan, Minnesota, and Wisconsin, as well as the state of Nebraska. While cleanups in these inland areas may seem out of place in a "coastal" cleanup, debris is as much of a problem inland as it is in coastal areas. Hence, data collection conducted during inland waterway cleanups will help to assess the debris situation in these areas. Furthermore, a portion of the debris found in coastal areas could have originated from far inland, carried to the coast by rivers. As more and more state cleanup efforts begin to move inland, the connection between inland waterway debris and the trash collected during "ocean" cleanups will become clearer. This will enable the creation of solutions to all debris problems. It is also important to remember that the legislation implemented by the United States (the Marine Plastic Pollution Research and Control Act of 1987) to adopt the dumping regulations specified in the international MARPOL Treaty extends these no-dumping restrictions to all lakes, rivers, streams, and navigable waterways in the United States.

California's cleanup led the way with the largest number of volunteers ever participating in a statewide coastal cleanup. With 29,337 volunteers, California has surpassed Florida's 1990 Guinness World Book record for the most volunteers. Florida, with 18,488 volunteers, Texas with 12,716, and North Carolina with 12,500 also reported tremendous participation for the 1991 cleanup.

What is the Most Prevalent Type of Debris on U.S. Beaches?

Data collected by cleanup volunteers provides the level of information needed to analyze and formulate solutions to the debris problem. Using specially designed Beach Cleanup Data Cards (Figure 4) and two educational materials, a hand-held Guide to Good Data Collection (Figure 5), and the Data Detective poster (Figure 6), volunteers first categorize debris by its composition. Eight composition types are listed on the data card: plastic, glass, styrofoam[3], rubber, paper, metal, wood, and cloth. Eighty-one debris items are listed under their respective composition categories. Volunteers during the 1991 U. S. cleanup completed a record 19,505 data cards, listing 5,200,741 individual trash items (Table 1). Plastics, as in previous cleanups, were the most common items reported, accounting for approximately 59% of all debris collected[4] (Figure 7).

---

3 The term "styrofoam" is used on the data card instead of the technical term "foamed plastic" to assist volunteers in accurate data collection. In analysis of data, plastic and styrofoam are combined and analyzed under the single term "plastic." Any reference to "styrofoam" in this report includes any and all types of foamed plastic.

4 Cigarette filters or "butts," which are categorized as plastic, were the most abundant debris items found overall. Since the purposes of these broad analyses is to determine the extent of the debris washed in from the water, it was determined that the inclusion of cigarette butts in the plastics composition category would give an inaccurate representation of plastic marine debris. In the individual state and country analyses, cigarette filters are included in the plastic composition category to give a true and accurate representation of what was found on the beach, not simply what was carried in from the water.

Figure 1. Total Number of Volunteers Participating in 1991 U.S. Coastal Cleanups

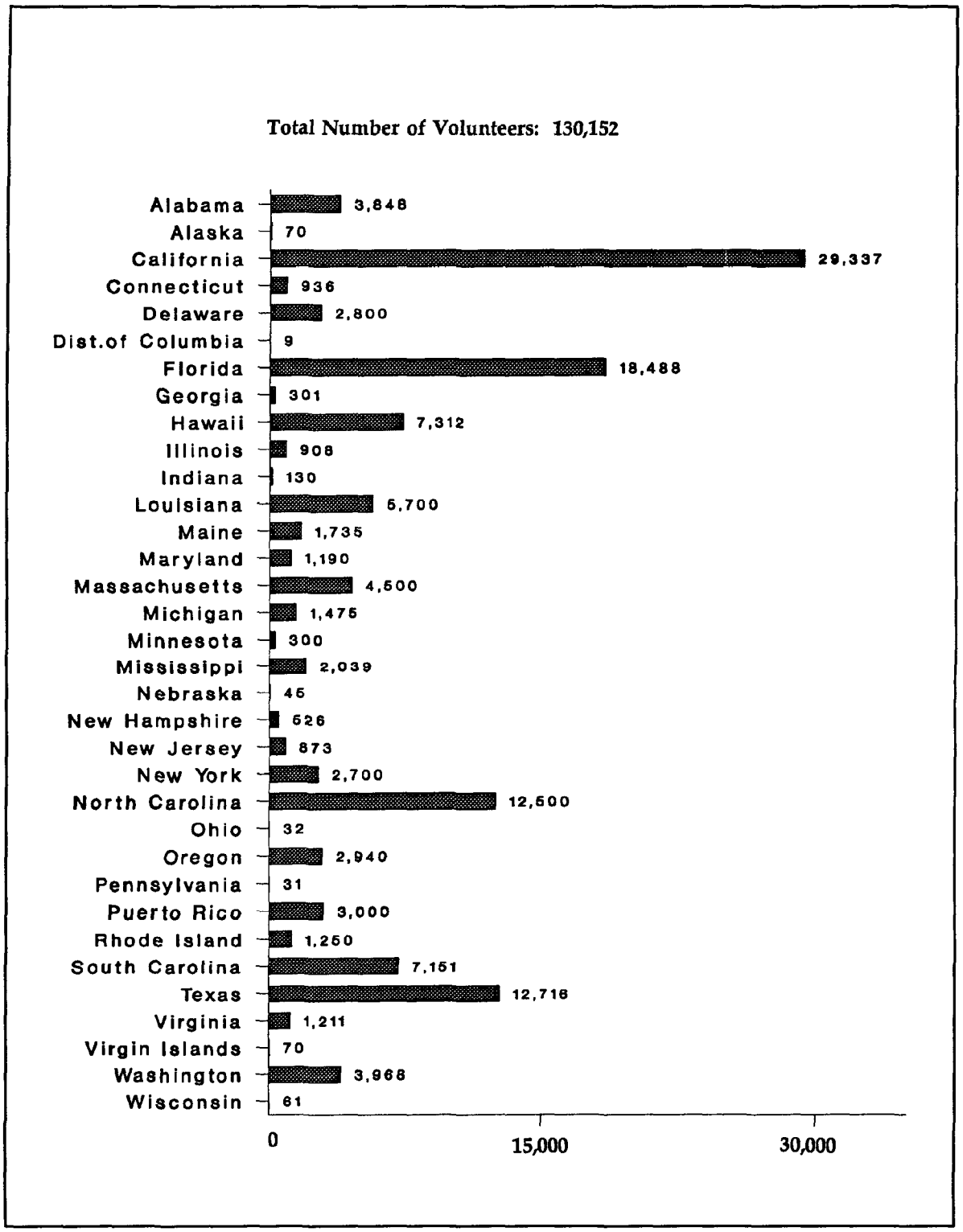


Figure 2. Total Number of Miles Cleaned During 1991 U.S. Coastal Cleanups

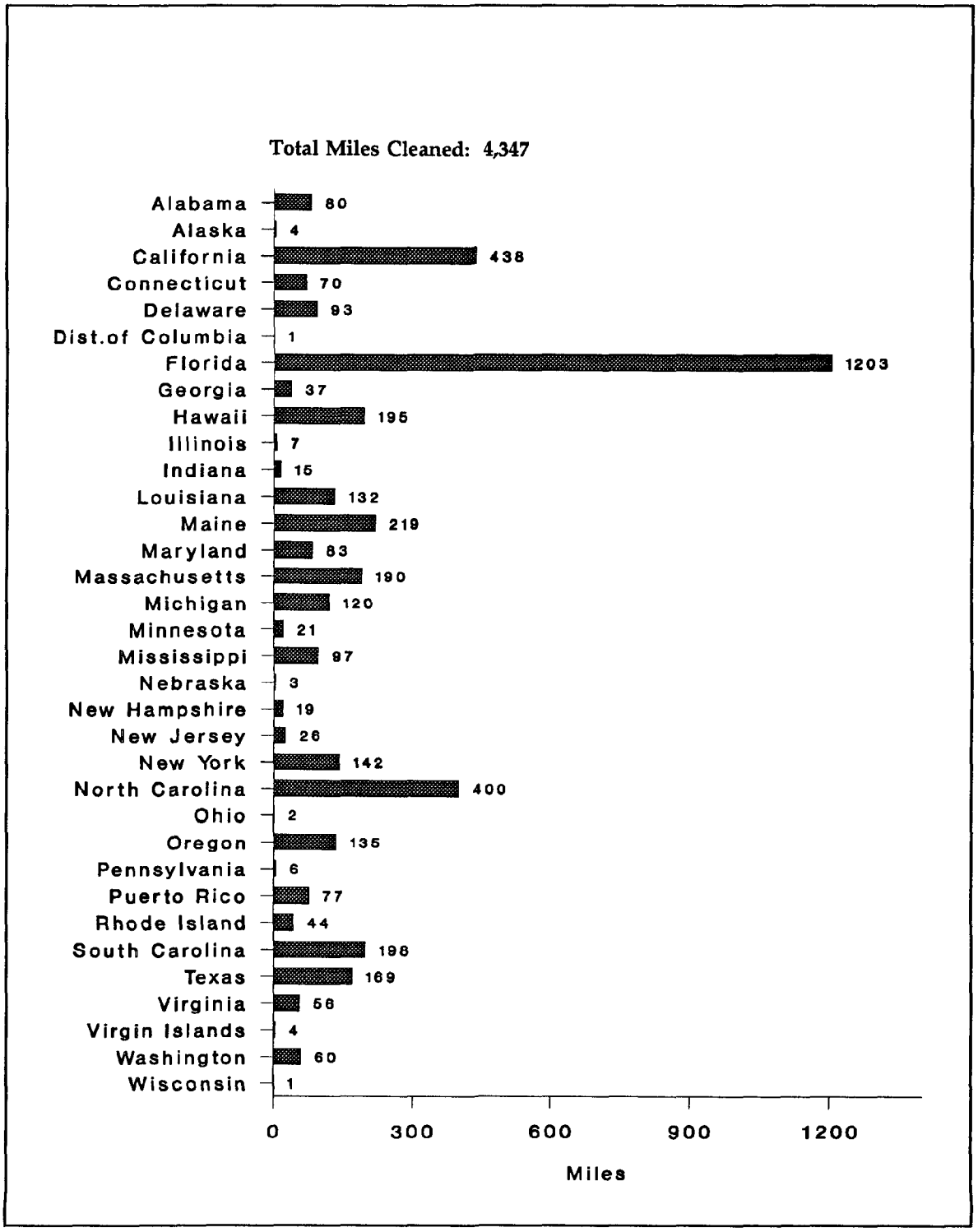
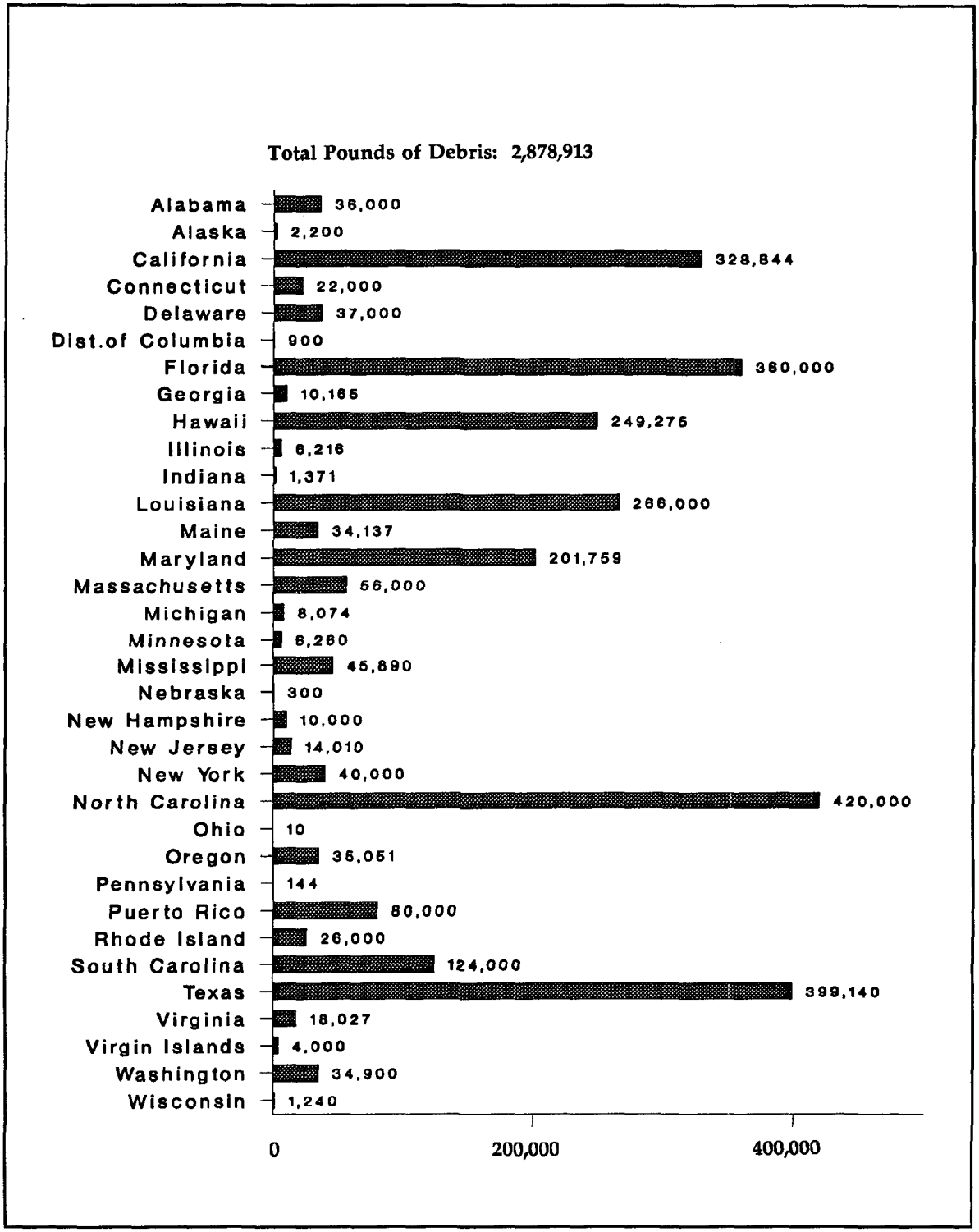


Figure 3. Total Number of Pounds Collected During 1991 U.S. Coastal Cleanups



Popeye shows up in Texas to lend support to cleanup volunteers.

Figure 4. Data Card Used by 1991 Coastal Cleanup Volunteers (front)

BEACH CLEANUP DATA CARD

Thank you for completing this data card. Answer the questions and return to your area coordinator or to the address at the bottom of this card. This information will be used in the Center for Marine Conservation's National Marine Debris Database and Report to help develop solutions to stopping marine debris.

Name _____ Affiliation _____

Address _____ Occupation _____ Phone (_____) _____

City _____ State _____ Zip _____ M ___ F ___ Age: _____

Today's Date: Month: _____ Day _____ Year _____ Name of Coordinator _____

Location of beach cleaned _____ Nearest city _____

How did you hear about the cleanup? _____

Number of people working together on this data card _____ **Estimated distance of beach cleaned** _____

Number of bags filled _____

SAFETY TIPS

1. **Do not go near any large drums.**
2. **Be careful with sharp objects.**
3. **Wear gloves.**
4. **Stay out of the dune areas.**
5. **Watch out for snakes.**
6. **Don't lift anything too heavy.**

WE WANT YOU TO BE SAFE

SOURCES OF DEBRIS. Please list all items with foreign labels (such as plastic bleach bottles from Mexico) or other markings that indicate the item's origin (such as cruise line names, military identification or debris with names and/or address of shipping/freighting or fishing companies, or oil/gas exploration activities).

SOURCE	ITEM FOUND
Example: ABC Shipping Company	plastic strapping band

STRANDED AND/OR ENTANGLED ANIMALS (Please describe type of animal and type of entangling debris. Be as specific as you can.)

_____

_____

_____

What was the most peculiar item you collected? _____

Comments _____

_____

Thank you!

PLEASE RETURN THIS CARD TO YOUR AREA COORDINATOR OR MAIL IT TO:

Center for Marine Conservation
1725 DeSales Street, NW
Washington, DC 20036

A Membership Organization

Center for Marine Conservation

EPA United States Environmental Protection Agency

NOAA

United States Coast Guard 1790

Formerly Center for Environmental Education, Est. 1972

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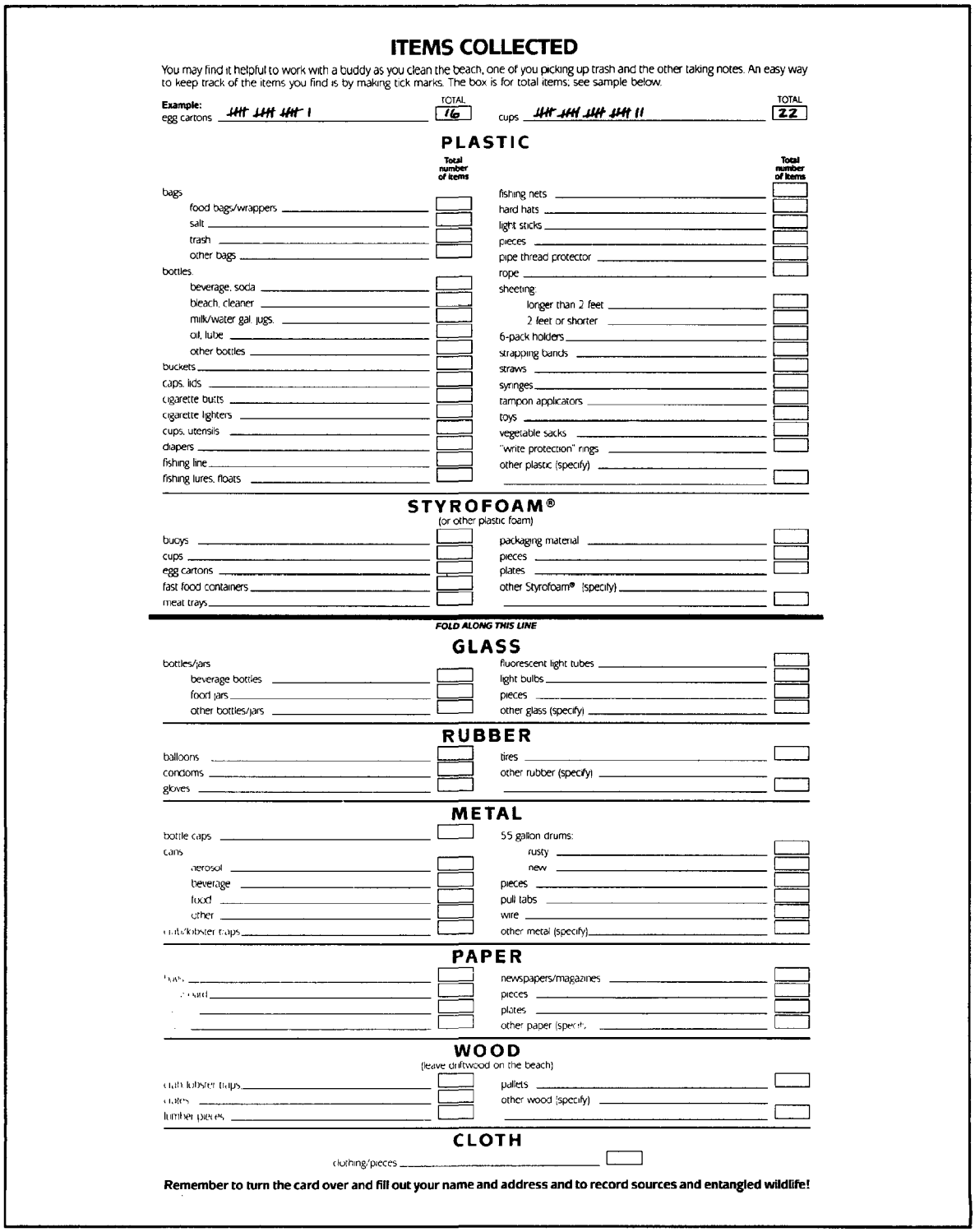
Figure 4. Data Card Used by 1991 Coastal Cleanup Volunteers (back)



ITEMS COLLECTED

You may find it helpful to work with a buddy as you clean the beach, one of you picking up trash and the other taking notes. An easy way to keep track of the items you find is by making tick marks. The box is for total items; see sample below.

Example: egg cartons 𝍸 𝍸 𝍸 I — TOTAL 16 | cups 𝍸 𝍸 𝍸 𝍸 II — TOTAL 22

PLASTIC

	Total number of items		Total number of items
bags		fishing nets	
food bags/wrappers		hard hats	
salt		light sticks	
trash		pieces	
other bags		pipe thread protector	
bottles		rope	
beverage, soda		sheeting:	
bleach, cleaner		longer than 2 feet	
milk/water gal. jugs		2 feet or shorter	
oil, lube		6-pack holders	
other bottles		strapping bands	
buckets		straws	
caps, lids		syringes	
cigarette butts		tampon applicators	
cigarette lighters		toys	
cups, utensils		vegetable sacks	
diapers		"wrist protection" rings	
fishing line		other plastic (specify)	
fishing lures, floats			

STYROFOAM®

(or other plastic foam)

buoys		packaging material	
cups		pieces	
egg cartons		plates	
fast food containers		other Styrofoam® (specify)	
meat trays			

FOLD ALONG THIS LINE

GLASS

bottles/jars		fluorescent light tubes	
beverage bottles		light bulbs	
food jars		pieces	
other bottles/jars		other glass (specify)	

RUBBER

balloons		tires	
condoms		other rubber (specify)	
gloves			

METAL

bottle caps		55 gallon drums:	
cans		rusty	
aerosol		new	
beverage		pieces	
food		pull tabs	
other		wire	
crab/lobster traps		other metal (specify)	

PAPER

bags		newspapers/magazines	
cardboard		pieces	
		plates	
		other paper (specify)	

WOOD

(leave driftwood on the beach)

crab/lobster traps		pallets	
crates		other wood (specify)	
lumber pieces			

CLOTH

clothing/pieces

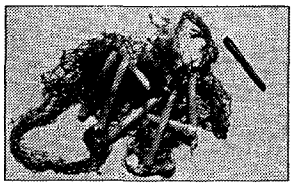
Remember to turn the card over and fill out your name and address and to record sources and entangled wildlife!

Figure 5. Guide to Good Data Collection Used by 1991 Coastal Cleanup Volunteers (front)

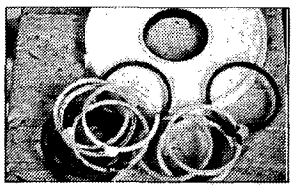
GUIDE TO MARINE DEBRIS

The best data recording can be done if you know what the items listed on your cards look like.

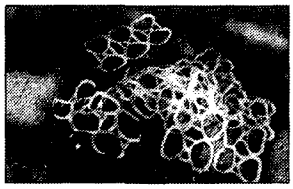
Here are some examples of unusual items you may find.



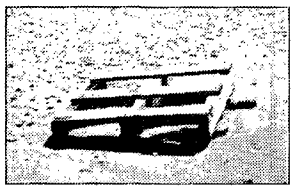
Light Sticks. *Listed under plastic, these clear plastic tubes about 6 inches long are mostly used by fishermen. When new, the liquid will glow in the dark and attract fish to baited hooks.*



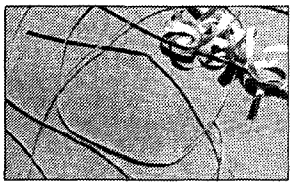
Wrist Protection Rings. *Listed under plastic, these are used on computer tapes on ships doing seismic testing.*



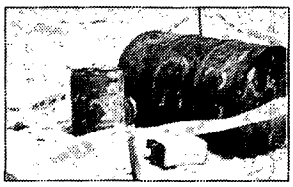
6-Pack Rings. *Listed under plastic, these items are used to hold cans.*



Wooden Pallets. *Listed under wood, these items are used to help stack and transport cargo.*



Strapping Bands. *Listed under plastic, these strong, narrow, light-weight plastic bands are used to bind materials and boxes.*



55 Gallon Drums. *Listed under metal, these drums could contain dangerous chemicals.* ***Do not go near a drum*** *because the vapor or liquid could hurt you.*

Vegetable Sacks. *Listed under plastic, these large mesh bags are used to hold bulk quantities of onions, potatoes, or fruit.*

Sea Whip. *This yellow, orange or purple colony of animals is long, thin and has a dark string-like core. This may look like wire or rope, but it is a natural item found from North Carolina to the Gulf of Mexico. Please leave this on the beach.*

FOR YOUR SAFETY

Do not approach any 55 gallon drums. They may contain dangerous liquids. Even the vapor could harm you. Leave the drum, but record it on your card.

Do not go into the dunes; snakes may be there.

Be very careful of broken glass and other sharp objects.

Wear gloves.

Don't lift anything heavy.

Figure 5. Guide to Good Data Collection Used by 1991 Coastal Cleanup Volunteers (back)

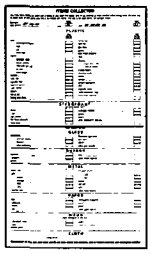
A GUIDE TO GOOD DATA COLLECTION

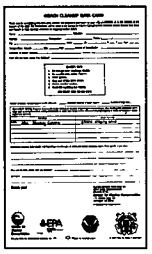
When you help at a beach cleanup, you'll be asked not only to remove marine debris, but to record on Data Cards the kinds and amounts of trash you find.

The information you record on these cards will be used by the Center for Marine Conservation (CMC) in a national marine debris study to help policy makers on the state, federal and international levels develop solutions to ending the serious marine debris problems facing all coastal states.

Data collected since 1986 and analyzed by CMC has been used in reports, in testimony on Capitol Hill and at the International Maritime Organization meetings in London to determine how plastic trash will be handled by ships at sea and at ports all around the world.

DATA COUNTS!. . .YOUR HELP WILL MAKE A DIFFERENCE!





HELPFUL TIPS FOR DATA COLLECTORS:

1. *Count items in groups of five like this* 𝍸 *, and record the total in the box.*
2. *Do not write the words "Lots" or "Many". Only numbers of items can be put into the computer.*
3. *Stranded Animals: In this section, please list animals you find stranded or dead on the beach and, if possible, any entangling debris items.*
4. *Sources: In this section, please list foreign items found, country and any debris with identifiable markings, such as a company name.*
5. *Please leave natural items on the beach like driftwood, sea whip and seaweed. Avoid stepping on dune grass and plants. These things hold the sand and prevent erosion.*
6. *Work with a few people, have one person record the numbers while others collect and bag the trash.*
7. *Please return your data card to your area coordinator so that all your data will be added to state and national totals.*

THANK YOU for your help and interest in keeping the coast and ocean safe for all of us and for marine wildlife!

Center for Marine Conservation

© 1991 Center for Marine Conservation

Return this card for future use

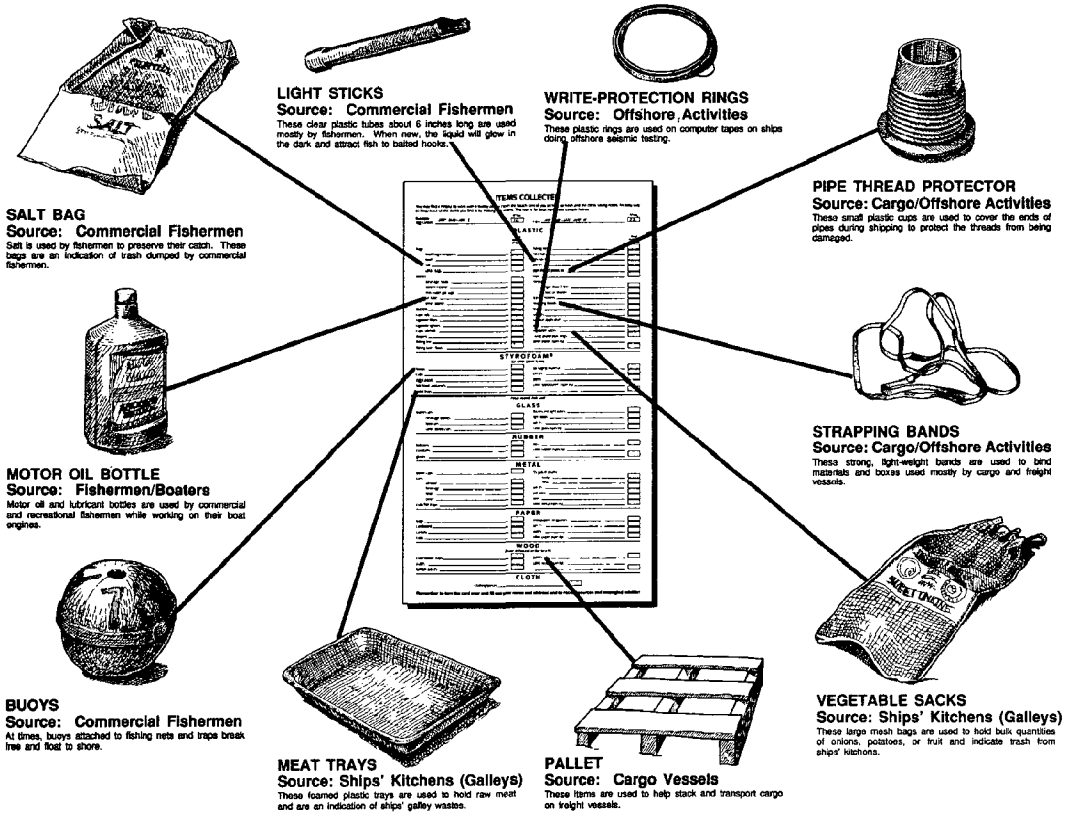
Printed on recycled paper

Figure 6. Data Detective Poster Used by 1991 Coastal Cleanup Volunteers

WHO'S TRASHING THE OCEANS? HELP US FIND OUT!

BE A DATA DETECTIVE!

An international law now prohibits dumping trash at sea. But some people are still throwing their trash overboard and we need your help to identify them. [redacted]. They are important clues to identify the sources of marine debris. If you find one of these items, be very careful to correctly record it on the data card. If you can, [redacted] showing the identifying markings and give it to your zone captain. The picture will be sent to the Coast Guard so they can investigate the debris source. Working together, we can stop the crime of dumping trash in the ocean!!



SALT BAG
Source: Commercial Fishermen
Salt is used by fishermen to preserve their catch. These bags are an indication of trash dumped by commercial fishermen.

LIGHT STICKS
Source: Commercial Fishermen
These clear plastic tubes about 6 inches long are used mostly by fishermen. When new, the liquid will glow in the dark and attract fish to baited hooks.

WRITE-PROTECTION RINGS
Source: Offshore Activities
These plastic rings are used on computer tapes on ships doing offshore seismic testing.

PIPE THREAD PROTECTOR
Source: Cargo/Offshore Activities
These small plastic cups are used to cover the ends of pipes during shipping to protect the threads from being damaged.

MOTOR OIL BOTTLE
Source: Fishermen/Boaters
Motor oil and lubricant bottles are used by commercial and recreational fishermen while working on their boat engines.

STRAPPING BANDS
Source: Cargo/Offshore Activities
These strong, light-weight bands are used to bind materials and boxes used mostly by cargo and freight vessels.

BUOYS
Source: Commercial Fishermen
At times, buoys attached to fishing nets and traps break free and float to shore.

MEAT TRAYS
Source: Ships' Kitchens (Galleys)
These foamed plastic trays are used to hold raw meat and are an indication of ships' galley wastes.

PALLET
Source: Cargo Vessels
These items are used to help stack and transport cargo on freight vessels.

VEGETABLE SACKS
Source: Ships' Kitchens (Galleys)
These large mesh bags are used to hold bulk quantities of onions, potatoes, or fruit and indicate trash from ships' kitchens.

The information recorded on the data cards will be used by The Center for Marine Conservation in a national study to develop solutions to ending the serious marine debris problems facing all coastlines and waterways.

- Collect data as a team, one person recording items, while the others collect and bag the trash.
- Count items in groups of five and record the total in the box.
- Do not write words like "Lots" or "Many." Use only numbers.
- Leave natural items like driftwood or seaweed on the beach. Avoid stepping on dune plants and grass.

BE SURE TO READ THE SAFETY TIPS ON THE DATA CARD!!

Center for Marine Conservation

EPA

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NOAA

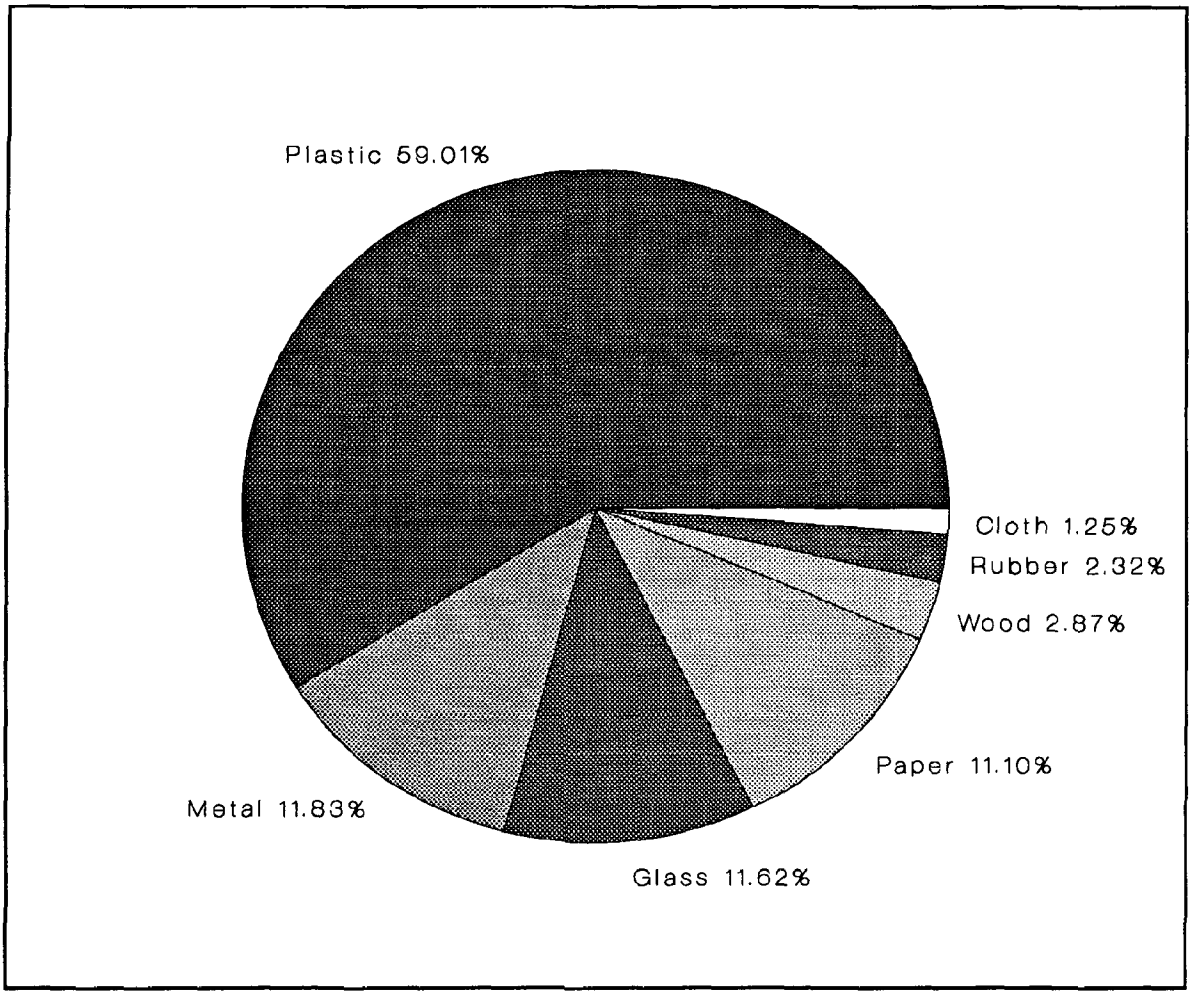
Table 1. Total Number of Debris Items Collected During 1991 U.S. Coastal Cleanups

PLASTIC	
Bags:	
food	220,945
salt	15,623
trash	38,595
other	72,100
Bottles:	
beverage	117,778
bleach	21,463
milk/water	32,375
oil/lube	23,030
other	45,497
Buckets	10,335
Caps/lids	212,852
Cigarette butts	940,430
Cigarette lighters	34,501
Cups/utensils	128,597
Diapers	12,686
Fishing line	36,124
Fishing nets	9,496
Floats/lures	13,381
Hard hats	1,777
Light sticks	16,020
Pieces	344,268
Pipe thread protectors	8,033
Rope	88,862
Sheeting:	
longer than 2 feet	6,655
2 feet or shorter	13,095
Six-pack holders	34,492
Strapping bands	22,512
Straws	191,401
Syringes	8,280
Tampon applicators	20,794
Toys	21,770
Vegetable sacks	7,336
Write protection rings	9,148
Other	100,210
STYROFOAM	
Buoys	16,096
Cups	125,008
Egg cartons	8,605
Fast-food containers	31,856
Meat trays	16,532
Packaging	44,025
Pieces	289,802
Plates	23,729
Other	28,102

GLASS	
Bottles:	
beverage	189,855
food	23,547
other	21,822
Fluorescent light tubes	4,561
Light bulbs	11,766
Pieces	219,468
Other	24,064
RUBBER	
Balloons	36,164
Condoms	6,957
Gloves	11,238
Tires	8,069
Other	36,451
METAL	
Bottle caps	106,626
Cans:	
aerosol	17,148
beverage	189,447
food	15,611
other	15,081
Crab/lobster traps	3,795
55 gallon drums:	
rusty	3,739
new	848
Pieces	41,204
Pull tabs	48,670
Wire	17,535
Other	44,359
PAPER	
Bags	38,427
Cardboard	33,450
Cartons	24,727
Cups	46,746
Newspapers	26,393
Pieces	225,297
Plates	21,235
Other	56,436
WOOD	
Crab/lobster traps	7,254
Crates	2,811
Lumber	76,830
Pallets	4,293
Other	31,196
CLOTH (clothing pieces)	53,405

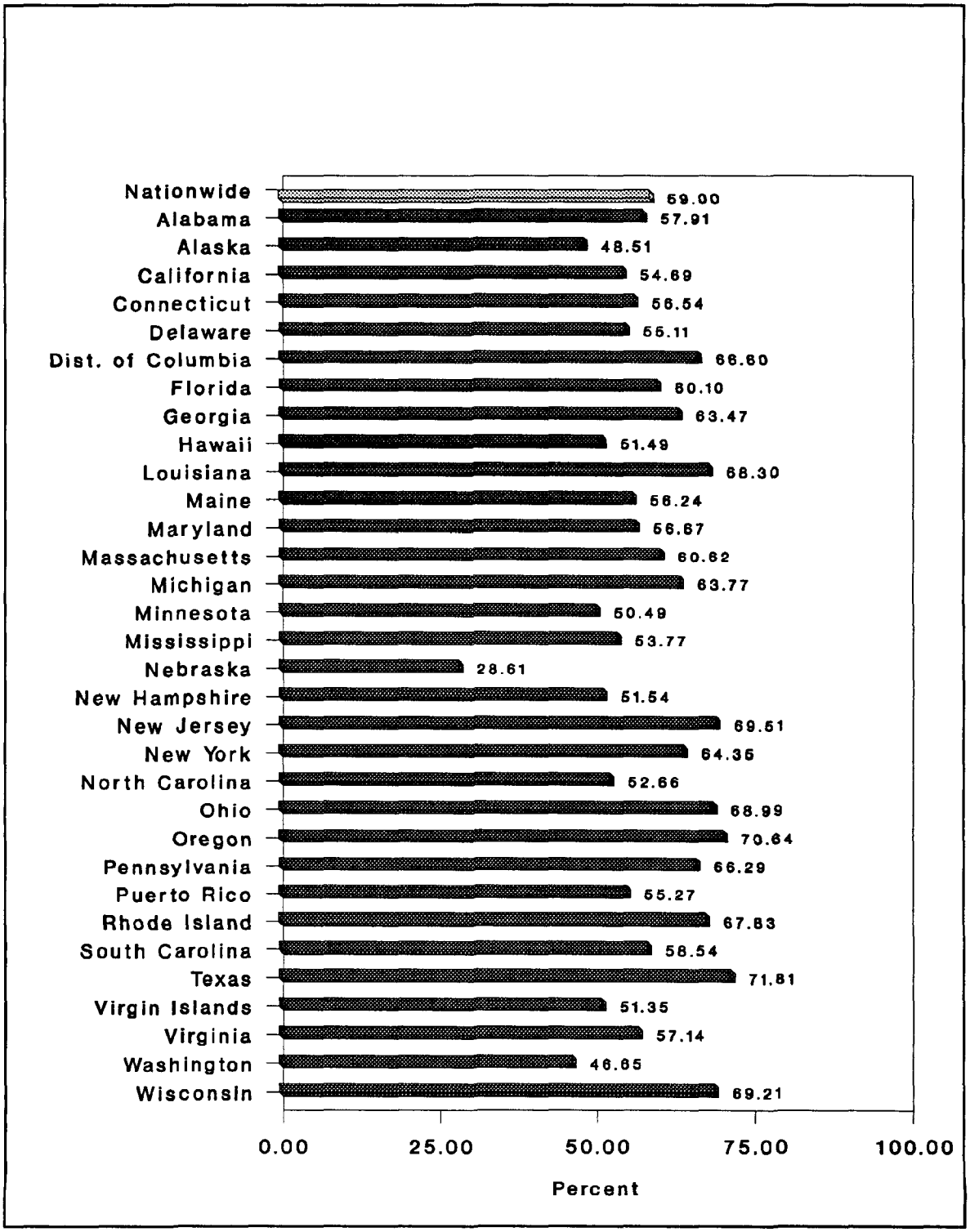
TOTAL - 5,200,741

Figure 7. Percent Composition of Debris Reported During 1991 U.S. Coastal Cleanups



Plastic items were the most frequently reported debris item in *all* states participating in the cleanup. The highest percentage reported was in Texas, where 71.81% of all debris collected was plastic, while a low of 28.61% was reported in Nebraska (Figure 8). Fourteen states had higher percentages of plastics than the United States as a whole: the District of Columbia, Florida, Georgia, Louisiana, Massachusetts, Michigan, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, and Wisconsin. In fact, the prevalence of plastics demonstrated regional patterns of high abundance: the western Gulf of Mexico, the Great Lakes, and the northern mid-Atlantic areas have the highest plastic percentages.

Figure 8. Plastic Debris Reported from 1991 U.S. Coastal Cleanups



The Dirty Dozen

Each year, the twelve most common debris items recorded during the cleanup have the distinction of being dubbed "the Dirty Dozen." These items give a true indication of the trash most often found on U.S. beaches. A comparison of the 1991 and past Dirty Dozens can be found in the "U.S National Trends" section of this report. For 1991, the Dirty Dozen includes:

Rank	Debris Item	Total Number Reported	Percent of Total Debris Collected
1.	cigarette butts	940,430	18.08
2.	plastic pieces (fragments of larger objects)	344,268	6.62
3.	foamed plastic pieces	289,802	5.57
4.	paper pieces	225,297	4.33
5.	plastic food bags/wrappers	220,945	4.25
6.	glass pieces	219,468	4.22
7.	plastic caps/lids	212,852	4.09
8.	plastic straws	191,401	3.68
9.	glass beverage bottles	189,855	3.65
10.	metal beverage cans	189,447	3.64
11.	foamed plastic cups	125,008	2.40
12.	plastic cups/utensils	118,597	2.28
	TOTAL	**3,267,371**	**62.83**

These twelve items account for almost 63% of all trash collected. Cigarette butts alone make up almost one-fifth (18%) of the trash collected by U.S. volunteers. Eliminating these twelve items from U.S. beaches would make them two-thirds cleaner than they currently are. Other items that were also found in abundance include:

13.	plastic beverage bottles	117,778
14.	metal bottle caps	106,626
15.	plastic rope	88,862
16.	lumber pieces	76,830
17.	miscellaneous plastic bags	72,100
18.	clothing pieces	53,405
19.	metal pull tabs	48,670
20.	paper cups	46,746

Many of the Dirty Dozen debris items are associated with litter left on the beach by visitors, or may have been carelessly discarded on local streets and thoroughfares and carried via storm drains or sewer systems to open waterways, at which point they then washed up onto the shore.

A Word About Cigarette Butts

Cigarette filters, or "butts" as they are commonly known, continue to be the most common debris item reported. Contrary to what many people believe, these items are not composed of easily degradable paper. Most cigarette butts are made of cellulose acetate, which is a synthetic plastic polymer. During the 1991 U.S. cleanup, 940,430 cigarette butts were collected by volunteers who often expressed a great deal of frustration at the sheer numbers of these items they encountered. Cigarette butts seem to be most prevalent in those areas where recreational beach use is high. California, Florida, and Hawaii all had large amounts, with 26% of California's, 17% of Florida's, and 23% of Hawaii's debris consisting of cigarette butts. This indicates that beachgoers are using the beaches as an ashtray. This is supported by

the finding of few or no cigarette butts on remote areas of beach, or on barrier islands. Some of these butts may also be washing off city streets and being carried through storm drains to be deposited in area waterways. Besides being an aesthetic problem when found in such abundance, these small debris items are of concern because of the problem of ingestion of debris by wildlife. But perhaps more importantly, these butts serve as an indication of society's careless attitude toward our beaches, an attitude that has contributed to the problem of marine debris.

Bottles and Associated Goods

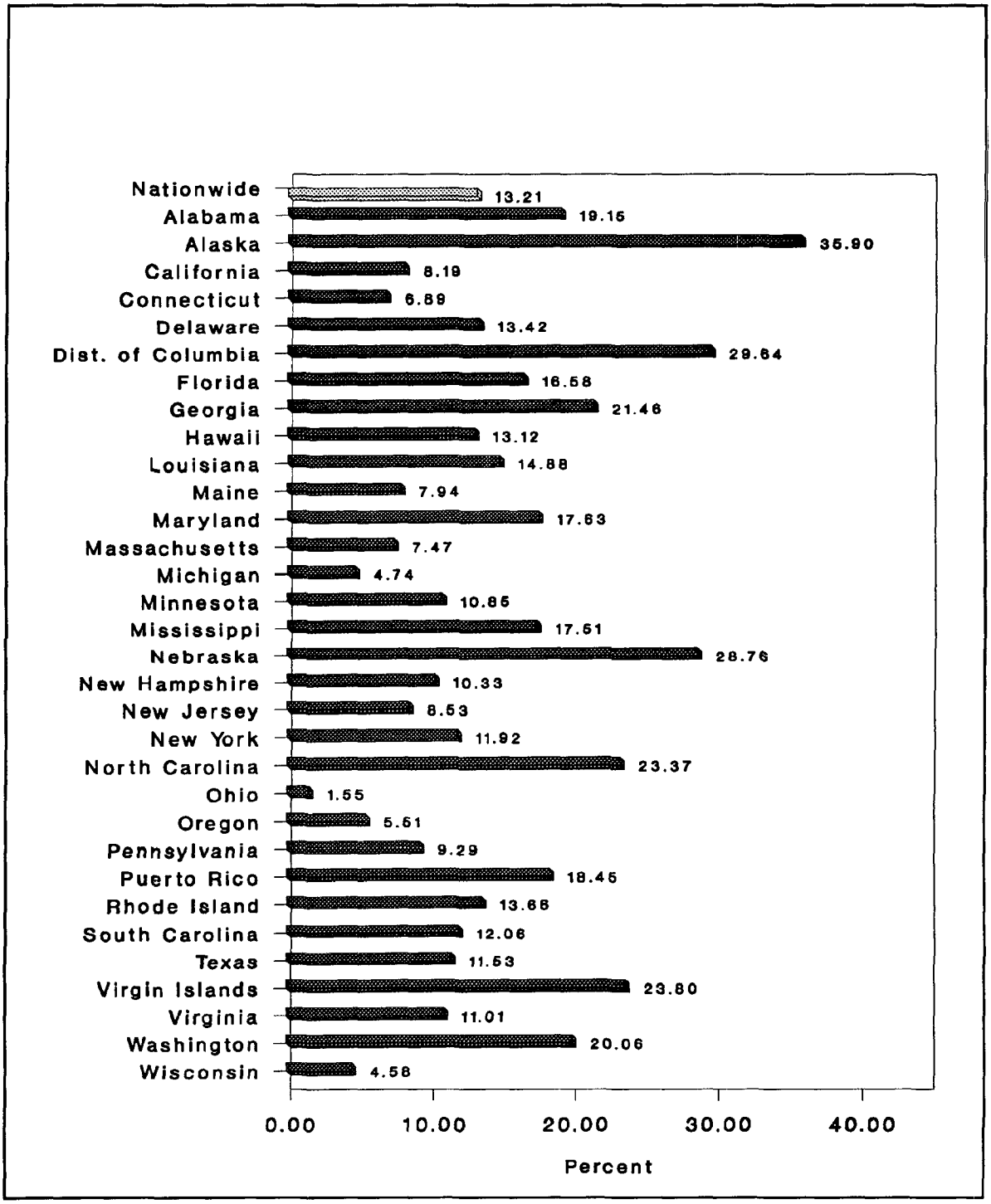
Several items on the cleanup data card have been grouped together to identify what percentage of beach debris is made up of bottles and associated goods. These items include plastic and glass beverage bottles, metal beverage cans, plastic six-pack holders, and metal bottle caps and pull tabs. Nationally, 13% of trash collected was bottles and associated goods (Figure 9). States with a higher than national percentage of these items were Alabama, Alaska, Delaware, the District of Columbia, Florida, Georgia, Louisiana, Maryland, Mississippi, Nebraska, North Carolina, Puerto Rico, Rhode Island, the U.S. Virgin Islands, and Washington. It is interesting to note that among these states, Delaware is the only one with beverage container deposit legislation or a "bottle bill." Delaware's beverage container deposit legislation, however, does not include a deposit on aluminum cans. In the list of the top twelve items reported in Delaware, metal beverage cans, which do not have a deposit, were the fifth most common item, while glass beverage bottles, which do have a deposit, were only the tenth most common item. The rest of these states, with the exception of Rhode Island and Puerto Rico, do not have beverage container deposit legislation, and have recycling programs that cover only portions of the state. Rhode Island does not have beverage container deposit legislation, but does have a statewide recycling program in place.Puerto Rico has neither beverage container deposit legislation nor any kind of recycling program

The lowest percentages of bottles and associated goods were found in states participating in the cleanup that have beverage container deposit legislation in place. Of these states, California and Connecticut also have instituted statewide recycling programs. The remaining states with lower percentages than the national figure do not have bottle bills but do have recycling at various levels within the state. The issue of mandatory recycling programs versus, or in conjunction with, beverage container deposit legislation is now being debated in many state legislatures, and raises the question as to which is the most effective means of recapturing beverage containers for recycling. Data gathered during cleanups may provide important information to assist in determining the best course of action for specific states to lower this percentage of debris in future cleanups.

A Word About Six-Pack Holders

One item that has captured a great deal of individual attention is the plastic six-pack holder. These seemingly harmless conveniences can pose a serious, possibly deadly, hazard to wildlife. During the 1991 cleanup, 34,492 six-pack holders were reported by cleanup volunteers. These devices were the 33rd most common item reported, out of the 81 items listed on the data card. There were several reports of animals entangled in six-pack holders. For example, volunteers in Michigan reported finding a sea gull entangled in a plastic six-pack holder, as did South Carolina volunteers. Industry is attempting to respond to entanglement concerns by developing a six-pack holder with "break-away" tabs attached to each ring. The theory behind this new device is that consumers use the tab to actually break open the plastic rings holding the beverage can, rather than simply pulling the can out of the holder. This is currently being test marketed by Illinois Tool Works, the developers of this new holder.

Figure 9. Bottles and Associated Goods Reported from 1991 U.S. Coastal Cleanups



Many states have attempted to address the wildlife entanglement problem caused by six-pack holders by instituting legislation requiring these devices to be photo- or bio-degradable. However, both Michigan and South Carolina, which both reported wildlife entangled by six-pack holders, have degradable six-pack holder legislation in place. Furthermore, while a degradable holder may, in some cases, lessen the entanglement hazard, it may increase the hazards caused by ingestion of plastic pieces by wildlife, simply by making more smaller pieces available once these holders break up. This possibility is one that must be considered whenever degradability is touted as part of the solution to solid waste issues.

A Note About Balloons

The issue of mass helium balloon releases and the final resting place of these balloons once they have traveled out of sight continues to be another subject of discussion among many state legislatures. Nationally, 36,164 balloons were collected during the 1991 U.S. cleanup. Out of the 81 debris items listed on the data card, balloons were the 30th most common item. Since balloons released into the atmosphere have the ability to travel great distances, it is difficult to pinpoint any single geographic area that may have the greatest problem with these pieces of latex litter. The states of Connecticut, Florida, Tennessee, and Virginia all have legislation in place regulating the release of mass numbers of helium balloons, with several additional states considering such legislation. But having legislation in place does not mean that these states will not have balloons littering their beaches and posing a potential hazard to wildlife that are known to ingest balloons. Balloons floating through the air do not recognize state boundaries and, while they may be released in one state, they can easily find their final resting place in neighboring states. For example, volunteers in Ohio collected a balloon bearing the notation, "Tiger Cubs, Ann Arbor, Michigan" (Ohio reported balloons as the 12th most common item). In Michigan, balloons were the fifth most common item, the only state other than Ohio in which balloons were among the top twelve items. Until society rethinks its methods of celebration and chooses alternatives that do not contribute to the litter problem, we will continue to find balloons littering our waterways and beaches.

Sources of Marine Debris

Specific groups of items listed on the data card can be used to identify particular sources. These groups are broadly broken down into two main categories: ocean-based debris, which includes garbage disposed of at sea by commercial and recreational fishing and boating vessels, merchant and cargo vessels, petroleum industry activities, and passenger cruise ships; and land-based debris, which includes items that make their way to the beach through antiquated or inadequate sewage systems (Table 2). While legislation exists to address both these sources of debris (the Marine Plastic Pollution Research and Control Act to address ocean-based sources, and the Clean Water Act to address land-based sources), the fact that volunteers are still reporting these types of debris indicates that more needs to be done to halt the flow of debris from these sources. Trends in these types of debris are addressed in the **U.S. National Trends** section of this report.

It is important to note that while a few specific items can be traced to a particular source (e.g., nets to commercial fisheries, and hard hats to petroleum industry activities), it by no means indicates that these are the *only* items improperly disposed of by these sources. Indeed, these items may be only a small percentage of the actual debris discarded. But the very presence of these specific items indicates that improper disposal activities, no matter how large or small, are still taking place.

In addition to identifying types and amounts of debris, volunteers also identified items that, because of their labeling or markings were "traceable" to a specific company or organization. Examples from the 1991 cleanup include a balloon found in Los Angeles County, California with the wording "Northwest Airlines," a plastic lid reported at Fowler Beach, Delaware from "Jackson Marine Sales, Pompano Beach, Florida", and a large plastic bag found in the Florence-Reedsport area of Oregon labeled "Puget Sound Herring Sales." Where at all possible, CMC contacts these organizations about the finding

of their debris, informs them about the problems caused by marine debris and asks them to join in the fight against this problem. In many cases these companies may not be directly responsible for the disposal of the items, but have a responsibility to inform their customers about proper disposal methods. From the 1990 cleanup, approximately 150 organizations were identified and contacted, with an overwhelmingly positive response. The majority of organizations were eager to help in any way possible, with several even launching internal investigations into current waste handling procedures in their company. A listing of the organizations identified during the 1991 Coastal Cleanup is found in Appendix 3. CMC will continue the practice of contacting these sources and will hopefully glean the same positive results.

Morton Salt - A Data Collection Success Story

After the 1990 cleanup, CMC received a number of data cards from volunteers in the Gulf of Mexico with information on blue plastic bags marked with the Morton Salt name and logo for a product called "Ship 'n Shore Salt." This product is used by commercial fishermen, specifically shrimpers, to treat their catch. When Morton Salt received an information packet from CMC about this problem, they decided to take action. They are now printing "Stow It, Don't Throw It" and "Don't be a Litter Boat" on their bags and are currently test-marketing this salt packaged in a paper bag instead of plastic. For the plastic bags they still have in stock, they have produced a sticker bearing the same message.

This is just one example of the positive responses CMC has received from companies who were identified by their debris. In many cases, such as Morton Salt, it is not the manufacturers that dispose of the debris improperly, but the buyers of the products. But Morton Salt chose to accept the responsibility to help educate their patrons about proper disposal of these bags. It will be interesting to see whether this education results in fewer bags being found during future cleanups.

Table 2. Categories and Quantities of Indicator Items Reported from 1991 U.S. Coastal Cleanups

Category	Indicator Items	Total Number Reported
Recreational Fishing/ Boating Wastes	plastic fishing line	36,124
	plastic floats and lures	13,381
		49,505 (0.95%)
Commercial Fishing Wastes	plastic rope	88,862
	foamed plastic buoys	16,096
	plastic light sticks	16,020
	plastic salt bags	15,623
	rubber gloves	11,238
	plastic fishing nets	9,496
	wooden crab/lobster traps	7,254
	metal crab/fish traps	3,795
		168,384 (3.24%)
Operational Wastes	plastic strapping bands	22,512
	glass light bulbs	11,766
	write-protection rings	9,148
	plastic pipe thread protectors	8,033
	plastic sheeting longer than 2 feet	6,655
	fluorescent light tubes	4,561
	wooden pallets	4,293
	wooden crates	2,811
	plastic hard hats	1,777
		71,556 (1.38%)
Galley Wastes	plastic trash bags	38,595
	plastic milk/water gallon jugs	32,375
	plastic bleach/cleaner bottles	21,463
	foamed plastic meat trays	16,532
	foamed plastic egg cartons	8,605
	plastic vegetable sacks	7,336
		124,906 (2.40%)
Sewage-Associated Wastes	plastic tampon applicators	20,794
	rubber condoms	6,957
		27,751 (0.53%)
Medical Waste	plastic syringes	**8,280 (0.16%)**
Total Number of Indicator Items		**450,382 (8.66%)**

Ocean-based Sources of Debris

Four groups of debris items are used to indicate sources of ocean-based debris: 1) recreational fishing and boating wastes; 2) commercial fishing gear; 3) operational wastes generated by shipping vessels and offshore activities; and 4) galley-type wastes from ships' kitchens.

Recreational Fishing and Boating Wastes

Items classified as wastes from recreational fishing and boating vessels are monofilament fishing line and plastic fishing floats and lures. Nationally, recreational fishing and boating wastes accounted for approximately 1% of the total debris collected. States with higher amounts of this type of debris are Florida, Hawaii, and Nebraska, in addition to the mid-Atlantic states of Rhode Island, New York, New Jersey, and Maryland, the Gulf coast states of Louisiana and Texas, and the west coast states of Oregon and Alaska (see Figure 10). While the total amount of debris attributable to this source may seem insignificant, the types of debris in this category, particularly monofilament fishing line, poses a very great hazard to marine wildlife. Volunteers in eight states reported 38 separate incidents of wildlife entangled in monofilament line. Monofilament line was responsible for over one-third of all wildlife entanglement reported. These reports underscore the need for increased education of recreational fishermen and boaters about the hazards their carelessly discarded wastes pose. Indeed, improperly discarded monofilament fishing line may come back to haunt the very boater who threw it away, by entangling and disabling the motor of their vessel, an "accident" that is all too common.

Commercial Fishing Wastes

Nationwide, approximately 4% of the total debris collected consisted of items indicating commercial fishing vessels as the sources. These items include plastic rope, plastic light sticks, plastic fishing nets, plastic salt bags, foamed plastic buoys, rubber gloves, metal crab/lobster traps, and wooden crab/lobster traps. Commercial fishing gear was more abundant than the national percentage in the states of Alabama, Alaska, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, Oregon, Puerto Rico, Rhode Island, and Texas (Figure 11).

Geographically, it appears that three particular regions have especially abundant amounts of these wastes: New England, the Gulf of Mexico, and the Pacific Northwest, all of which support various commercial fisheries. In New England, Maine had a percentage almost *three times higher* than the national percentage, while Massachusetts' and New Hampshire's percentages were approximately *twice as high* as the national figure. In the Gulf of Mexico, four out of the five states bordering the Gulf had higher than national percentages, with the fifth state (Florida) only 2/10 of a percent below the national percentage. In the Pacific Northwest, Alaska and Oregon both had percentages approximately *twice as high* as the national figure. Additionally, the upper Chesapeake Bay, where species such as shad and striped bass as well as crabs and oysters are commercially fished, had a percentage of commercial fishing wastes higher than the national figure. Items such as plastic netting and rope, and metal and wooden crab/lobster traps are of particular concern in the Chesapeake Bay, due to the entanglement hazard they pose to the large numbers of juvenile Kemp's ridley and loggerhead sea turtles that summer in the Bay waters.

Figure 10. Recreational Fishing and Boating Wastes Reported from 1991 U.S. Coastal Cleanups

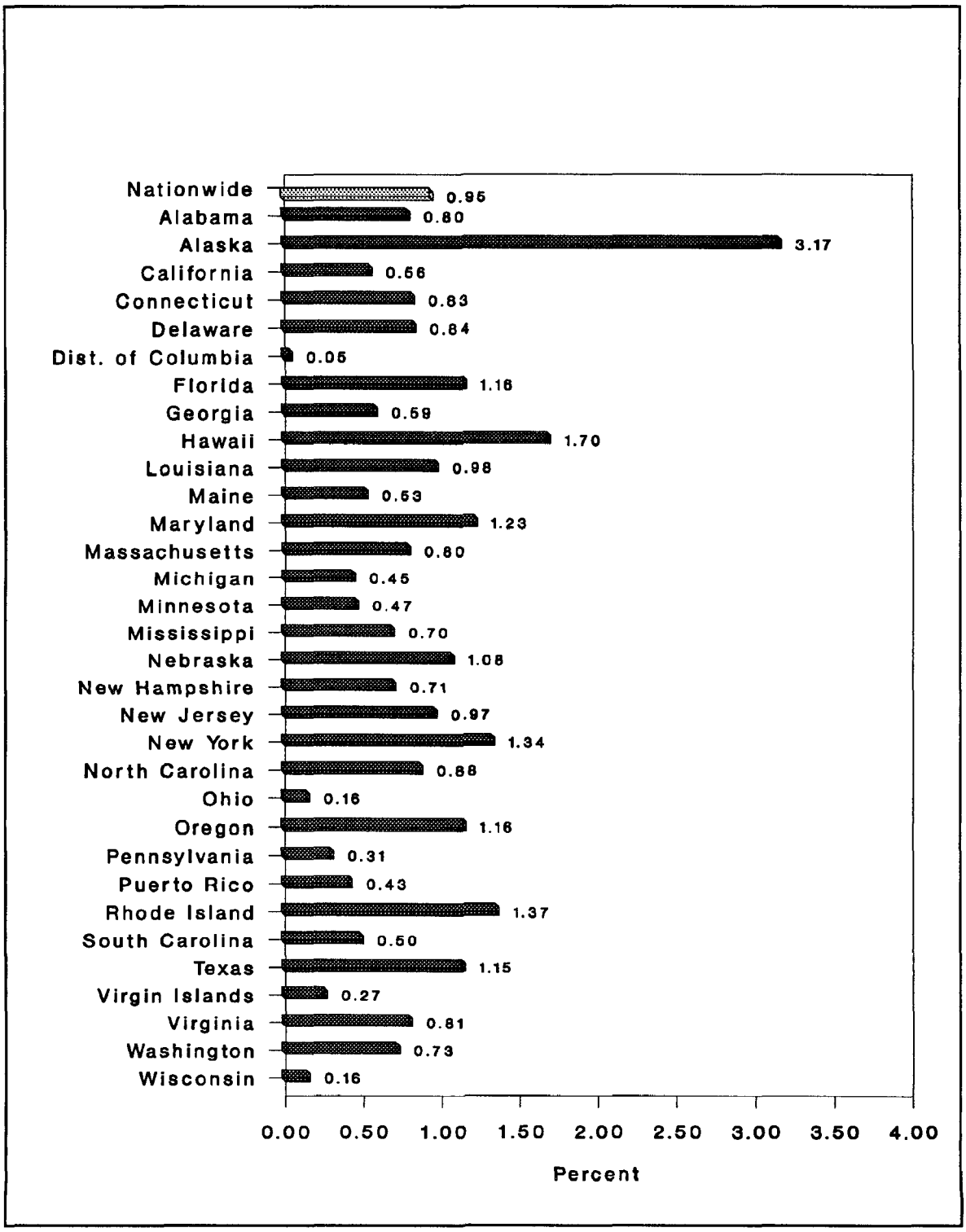
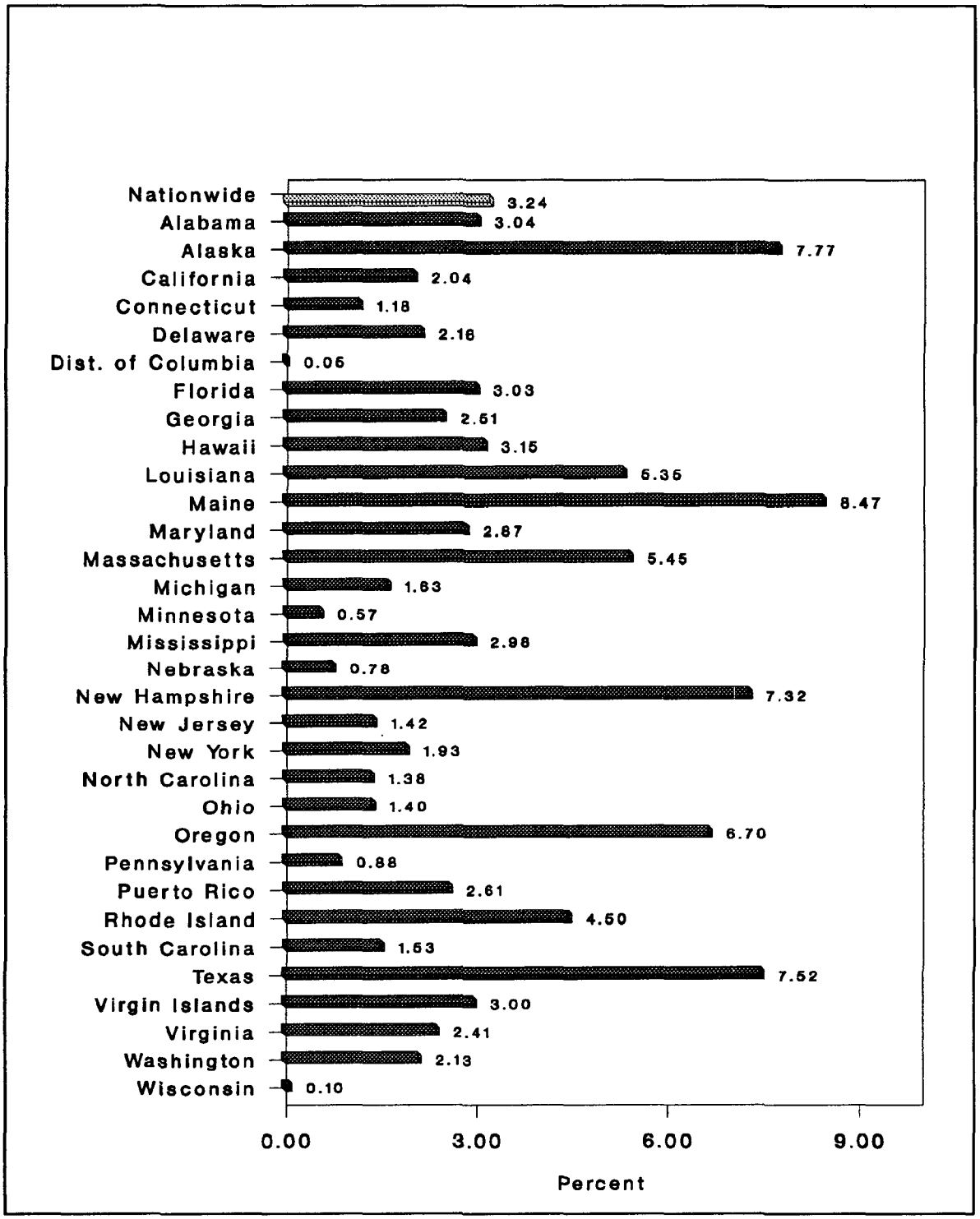


Figure 11. Commercial Fishing Wastes Reported from 1991 U.S. Coastal Cleanups



Operational Wastes

Wastes attributed to cargo or merchant vessels, as well as offshore petroleum activities, include plastic strapping bands, plastic sheeting longer than 2 feet, plastic pipe thread protectors, plastic write-protection rings, plastic hard hats, glass light bulbs, fluorescent glass light tubes, wooden pallets, and wooden crates. Nationwide, these wastes made up 1.4% of the total debris collected (for illustrations of the lesser-known items, see Figure 5 - Guide to Good Data Collection and Figure 6 - Data Detective Poster). The states of Alabama, Alaska, Hawaii, Louisiana, Massachusetts, Ohio, Oregon, Rhode Island, Texas, and Washington all reported percentages of operational wastes greater than the national percentage (Figure 12). Of these states, Alaska, Rhode Island, and Texas all show a percentage figure at least *twice as high* as the national percentage. Again, it appears that regions in New England, the Gulf of Mexico, and the Pacific Northwest have significant concentrations of this type of debris littering their shorelines. While debris such as plastic strapping bands and write-protection rings present obvious entanglement threats to marine wildlife, items such as glass light bulbs and fluorescent light tubes pose a hazard to any barefoot beachgoer who accidentally steps on one. As with many types of debris, operational wastes can be as dangerous to humans as they are to wildlife.

Galley-type Wastes

Nationally, items considered wastes from ships' kitchens, or galleys, accounted for 2.4% of the total debris collected. This category of items includes plastic trash bags, plastic milk and water jugs, plastic bleach/cleaner bottles, plastic vegetable sacks, foamed plastic egg cartons, and foamed plastic meat trays. States with percentages of galley-type wastes greater than the national percentage include Alabama, Alaska, Florida, Georgia, Louisiana, Maryland, Mississippi, Nebraska, Puerto Rico, Rhode Island, and Texas (Figure 13). All five states bordering the Gulf of Mexico (Alabama, Florida, Louisiana, Mississippi, and Texas) reported percentages higher than the national figure, with Louisiana's percentage *three times as high* and Texas' percentage *twice as high*.

The inland state of Nebraska reported a higher than national percentage of this type of debris, which indicates not ocean-dumping problems, but perhaps illegal dumping of household wastes or inadequate municipal waste hauling vehicles and facilities. As with all these categories of wastes, it is important to view these findings on a state-by-state basis to target very specific sources of this debris.

Debris Traceable to Passenger Cruise Ships

One of the more glamorous sources of marine debris is the passenger cruise ship industry. Debris from these "floating hotels" is easily identifiable since many items are embossed with the name of the cruise line and sometimes even the name of the particular vessel. Reports of cruise line debris hit a record high in 1991 with 59 separate reports identifying 15 different cruise lines (Table 3). Cruise line items identified by volunteers include plastic shampoo and conditioner bottles, plastic hand lotion bottles, and balloons. It is important to note that these items are not necessarily the only ones discarded by cruise ships and that their very presence may indicate that a percentage of the unlabeled trash collected is generated by passenger cruise vessels as well.

Figure 12. Operational Wastes Reported from 1991 U.S. Coastal Cleanups

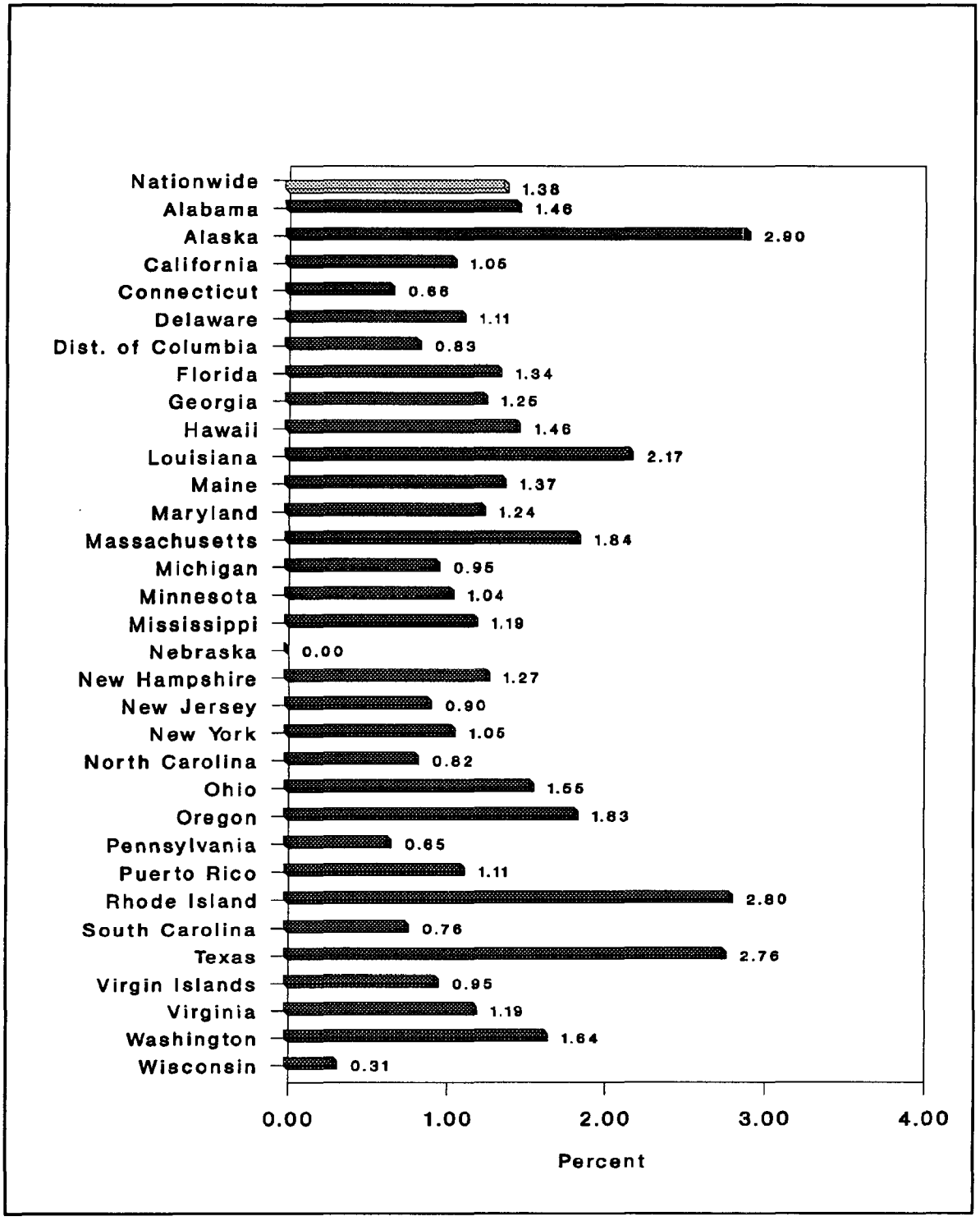


Figure 13. Galley-type Wastes Reported from 1991 U.S. Coastal Cleanups

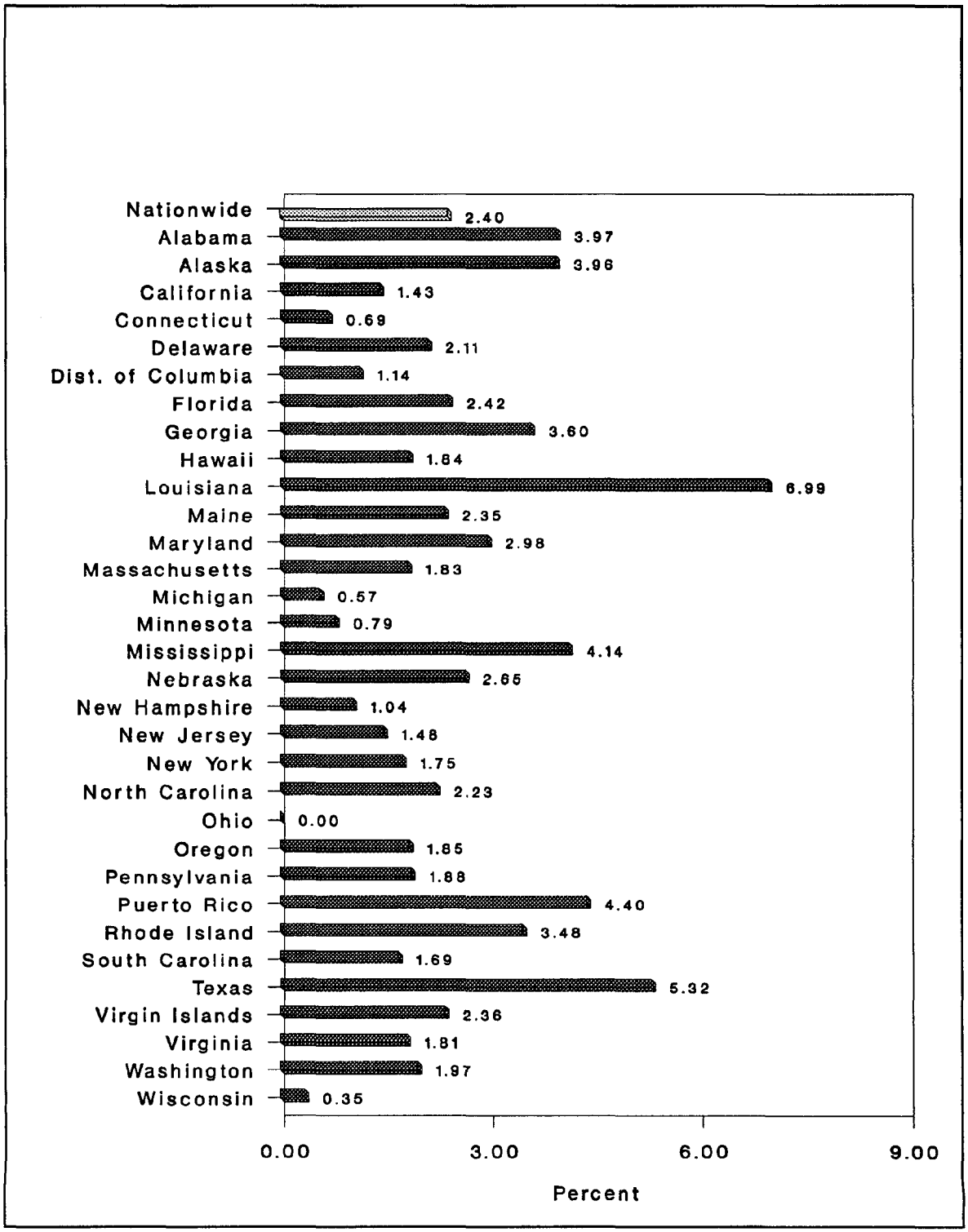


Table 3. Passenger Cruise Line Debris Reported from 1991 U.S. Coastal Cleanups

Location Found	Type of Debris	Cruise Ship Indicated
California		
San Francisco	shampoo bottle	Princess Cruises
San Diego	plastic cup	Norwegian Cruises
	shampoo container	Princess Cruises
	shampoo bottle	Sundance Cruises
Florida		
St. Johns	plastic shampoo bottle	Holland American Lines
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines
Flagler	shampoo container	Royal Caribbean Cruise Lines
Volusia	balloon	Carnival Cruise Lines
	ID tag B12	Commodore Cruise Lines
	2 shampoo bottles	Princess Cruises
	balloons	Royal Caribbean Cruise Lines
	plastic cup	Royal Caribbean Cruise Lines
	plastic wrapper	Royal Caribbean Cruise Lines
	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines
Brevard	2 pieces of balloons	Carnival Cruise Lines
	balloon	Carnival Cruise Lines
	balloons	Carnival Cruise Lines
	6 tea bags	Europe Cruise Lines
	2 plastic hair conditioner bottles	Royal Caribbean Cruise Lines
	plastic cup	Royal Caribbean Cruise Lines
	2 shampoo bottles	Royal Caribbean Cruise Lines
Indian River	conditioner bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
St. Lucie	shampoo bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
	ball point pen	Royal Caribbean Cruise Lines
Martin	plastic cup	Carnival Cruise Lines
	3 shampoo bottles	Royal Caribbean Cruise Lines
	plastic bottles	Royal Caribbean Cruise Lines
Palm Beach	candy wrapper	Carnival Cruise Lines
	plastic glass	Discovery Cruise Lines
	shampoo containers	Princess Cruises
	shampoo bottle	Royal Caribbean Cruise Lines
Dade	plastic hair conditioner bottle	Royal Caribbean Cruise Lines
	3 packages	Royal Caribbean Cruise Lines
Monroe	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	shoe polisher	Royal Caribbean Cruise Lines

Table 3. (cont.) Passenger Cruise Line Debris Reported from 1991 U.S. Coastal Cleanups

Location Found	Type of Debris	Cruise Ship Indicated
Georgia		
Pine Island	small shampoo bottle	Premier Cruise Lines
Sapelo Island	shampoo bottle	Princess Cruises
Puerto Rico		
Ocean Park	plastic wrapper	Carnival Cruise Lines
Pinones	plastic items	Carnival Cruise Lines
	plastic items	Norwegian Cruise Lines
	plastic items	Royal Caribbean Cruise Lines
	baggage claim tickets	Royal Cruise Lines
	plastic bag	Royal Cruise Lines
Rio Grande	cups	Costa Lines
	face cream	Cunard Princess Cruise Line
	Lisboa after shave	Norwegian Cruise Line
	2 cups	Royal Caribbean Cruise Line
Bahia Lucia	plastic items	Norwegian Cruise Line
Levittown	face cream	Princess Cruises
South Carolina		
Folly Beach	plastic cup	Spirit of Charleston
Texas		
McFadden Beach	shampoo bottle	Princess Cruises
U.S. Virgin Islands		
Hassel Island	paper cups	Carnival Cruise Lines
	candy wrappers	Carnival Cruise Lines
Washington		
Kitsap	several balloons	Exeter Lines, Ltd.-Luxury Dinner
Pacific	shampoo bottle	Princess Cruises
	plastic bags	Princess Cruises

The cruise line with the largest number of reports was, as in past years, Royal Caribbean Cruise Lines. Out of 59 reports, Royal Caribbean was identified 24 times as the source of cruise ship debris. Carnival Cruise Line was next with ten reports, followed closely by Princess Cruises with nine. As may be expected, because of the large cruise ship industry there, Florida had the most reports of cruise line debris with 34 reports out of 59.

With increasing attention being brought to the issue of cruise line debris, the public has become much more aware of the possibility that the cruise ship *they* are vacationing on may be illegally dumping their garbage overboard. CMC is receiving increasing numbers of reports from passengers who have witnessed such dumping incidents, expressing their outrage that these vessels are blatantly disregarding not only the laws regulating such dumping, but the welfare of the very oceans which support their livelihood. In response to this public outcry, this industry will be the target of an intense campaign by CMC to expose those cruise lines that are the worst offenders. The campaign will focus on educating potential cruise line passengers to choose a cruise line with environmentally sound and law-abiding disposal practices, to investigate the disposal habits of the cruise ship they are travelling on, to talk with crew members who handle shipboard garbage, and to document any dumping activity they may witness.

Land-based Sources of Debris

Two groups of debris items are used to indicate land-based sources of marine debris: 1) sewage-associated wastes, which include plastic tampon applicators and rubber condoms; and 2) medical wastes, which include plastic syringes.

Sewage-associated Wastes

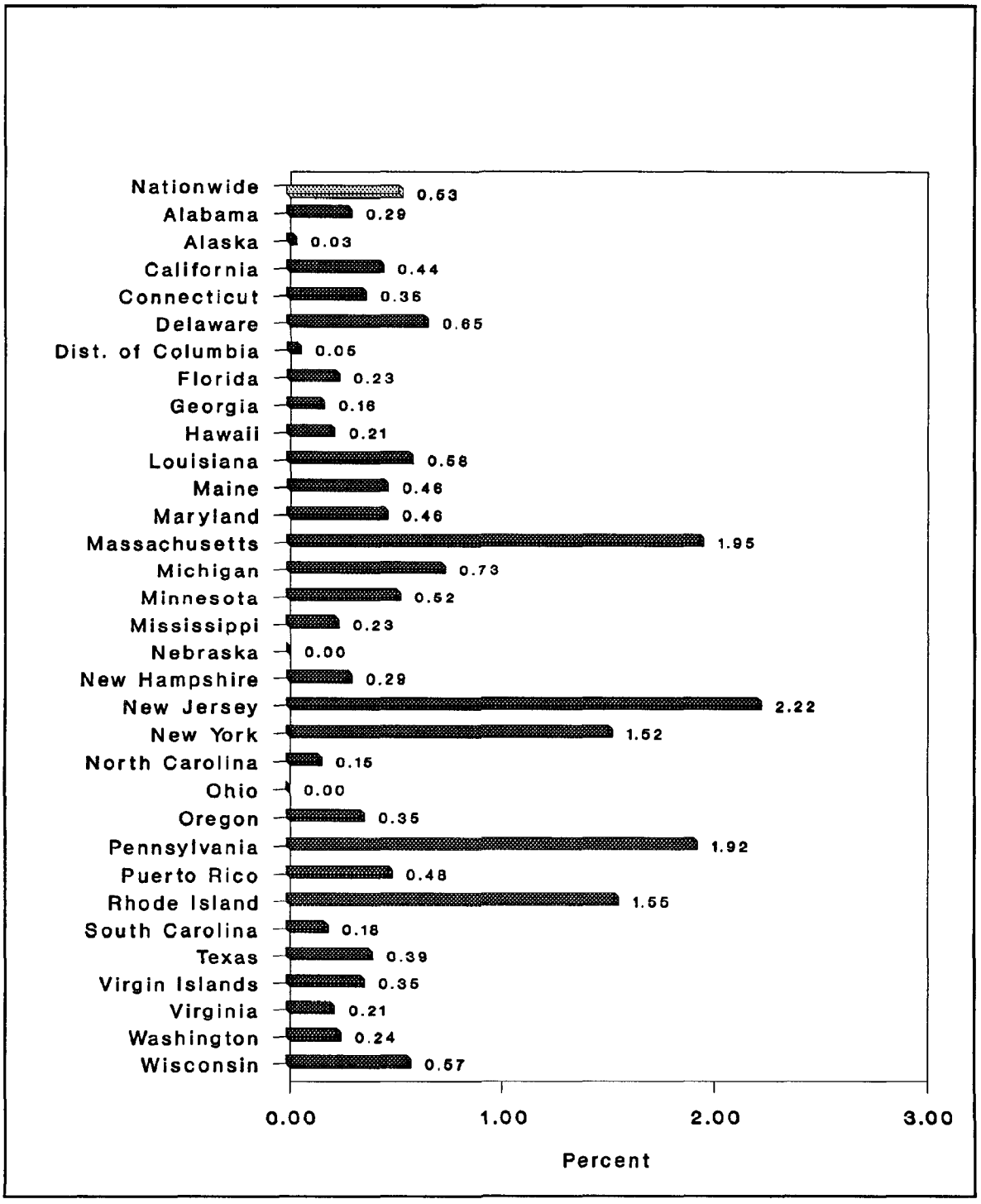
Items indicating the presence of wastes from sewage systems accounted for less than 1% of the total debris collected during the 1991 cleanup. While this may seem to be an extremely low figure relative to the total debris collected, the presence of plastic tampon applicators and rubber condoms is indicative of a much larger, unseen problem emanating from sewage systems. If large, solid items such as plastic tampon applicators can be carried through sewage systems to be deposited in area waterways, one can only imagine the variety of other, less visible, solid and liquid wastes that are making this same journey.

Combined sewer overflows (CSOs) are the primary source of this type of debris. CSOs merge sewage removal and storm drain operations into the same pipe. This means that household and industrial wastes, as well as water from storm drains, are treated at the same facility. This system is usually adequate during dry weather, but wet weather causes these systems to overload and discharge untreated or partially treated sewage into streams, lakes, and coastal waters.

States that reported a higher than national percentage of sewage-associated wastes were Delaware, Louisiana, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Rhode Island, and Wisconsin (Figure 14). Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island, which have reported high percentages of sewage-associated wastes in past cleanups, were more than double the national figure.

For the first time, in 1991, all states bordering the Great Lakes participated in the cleanup. These first-cleanup results indicate that Great Lakes beaches, in particular those of Michigan, Minnesota, New York, Pennsylvania, and Wisconsin, have more or near equal amounts of sewage-associated wastes as compared to the national figure. These results demonstrate the need to address inadequate sewage systems that are depositing improperly treated sewage into the Great Lakes.

Figure 14. Sewage-associated Wastes Reported from 1991 U.S. Coastal Cleanups



As mentioned in the introduction to this report, 1991 has been designated as the Year of Clean Water. This year also marks the 20th anniversary of the enactment of the Federal Water Pollution Control Act (the Clean Water Act). The Clean Water Act is presently the subject of reauthorization discussions in Congress and beach cleanup results will be a part of those discussions. There are obviously areas in the United States with problems related to sewage systems and treatment. Some proposed changes to the Clean Water Act designed to address the continuing problems in these states include uniform discharge standards, optimizing existing facilities, and alternative funding sources for upgrading and repairing obsolete or faulty sewage systems. Cleanup data collected by volunteers has been extremely important in documenting that, even after 20 years under the Clean Water Act regulations, there are still problems that need to be addressed and that changes in these regulations are necessary to control this source of water pollution.

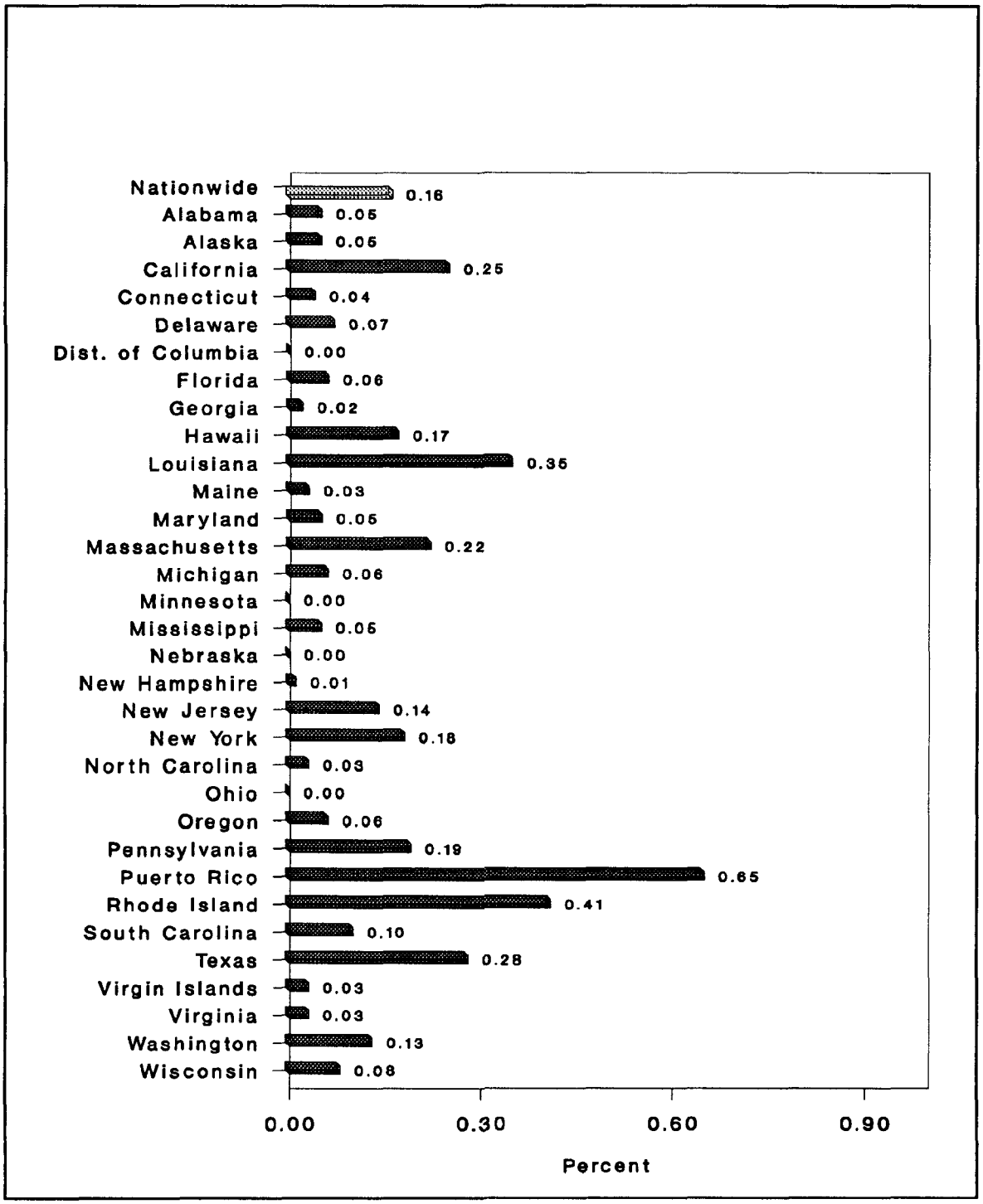
Medical Wastes

The item categorized as medical waste is plastic syringes. Medical waste is classified as land-based debris, based on information from the Environmental Protection Agency (EPA) which indicates that many plastic syringes found on the beach are being discharged through sewage systems or have been discarded by illegal drug users, either directly on the beach or on streets. As mentioned previously, many debris items are thought to be washed off area streets and carried to the beach through storm drain systems. This information also discounts the theory that all medical wastes found on beaches have been dumped illegally by hospitals or vessels. While occasional medical waste wash-ups traceable to a specific ship source have occurred (e.g., a U.S. Navy incident off the coast of North Carolina in 1991), these incidents are very isolated and probably do not account for the majority of medical wastes reported by cleanup volunteers.

But occasionally, medical waste is able to be traced to a specific source. For example, volunteers in Newport, Rhode Island encountered a blood bag, containing what appears to be dried blood, with a label identifying the Newport Naval Hospital. CMC will contact the hospital, informing them of this finding and asking for an explanation.

Medical wastes consisted of only 0.16% of all debris collected during the 1991 cleanup. Areas with a higher than national percentage of medical wastes include California, Hawaii, Louisiana, Massachusetts, New York, Pennsylvania, Puerto Rico, Rhode Island, and Texas (Figure 15). Several of these states, such as Massachusetts, New York, Pennsylvania, and Rhode Island also reported high percentages of sewage-associated wastes, supporting the idea that syringes are being carried through inadequate sewage systems. Puerto Rico historically has the highest percentage of medical wastes. This is again true in 1991, with Puerto Rico reporting a percentage of medical waste *three times higher* than the national percentage. Additional information on medical wastes reported in previous cleanups can be found in the **U.S. National - Trends** section of this report.

Figure 15. Medical Wastes Reported from 1991 U.S. Coastal Cleanups



Foreign Sources of Marine Debris

Trash found on U.S. beaches is not necessarily generated by domestic sources. There continues to be a component of this debris traceable to foreign sources. Findings of foreign debris are particularly disturbing, in view of the international regulations set out in the MARPOL Treaty prohibiting the disposal of plastic debris anywhere in the world's oceans. The United States is signatory to this treaty, making it illegal for *any* vessel to dump plastic debris within 200 miles of the U.S. coastline. Yet, as in previous years, volunteers reported debris from foreign sources. A total of 531 items from 41 countries were represented in the 1991 cleanup by their debris on U.S. beaches (see Appendix 4 for a state-by-state listing of these findings). Of these 41, 20 are signatory to Annex V of the MARPOL Treaty. But it is important to remember that, no matter what country a vessel is from, while they are traveling in the waters of a country that is signatory, the regulations of MARPOL Annex V apply.

Twenty states reported foreign debris during the 1991 cleanup. The Gulf of Mexico had the largest concentration of foreign trash, with four out of the five states bordering the Gulf reporting numerous foreign items. Texas, by far, detailed the largest concentration of foreign debris, much of it taking the form of various types of plastic bottles, including oil and cleaner bottles. As mentioned in the beginning of this report, the Gulf of Mexico and the Wider Caribbean have been designated as a Special Area under the MARPOL Treaty, which prohibits the dumping of plastics anywhere in the Gulf and the Caribbean and regulates the dumping of other debris materials. Foreign vessels will have to comply with these regulations when in these waters, no matter what their country of registry. A potential hindrance to compliance with these regulations may be the fact that Mexico and most Caribbean countries are not signatory to the MARPOL Treaty and may not have disposal facilities equipped to handle large amounts of shipboard debris. Questions such as these must be answered and solutions developed before Special Area designation can have a positive impact on the Gulf and Caribbean.

Marine Debris Impacts on Wildlife

While it is obvious that trash on the beach is aesthetically unpleasant, there are far more serious hazards posed by marine debris. It is not uncommon to read or hear about the plight of an animal entangled in monofilament fishing line or wearing a six-pack holder "collar." Cleanup volunteers all too often encounter these animals first-hand and 1991 was no exception. During the 1991 cleanup, volunteers reported 111 encounters with wildlife entangled in debris. Table 4 details these findings. Monofilament fishing line accounted for the greatest number of reports of entanglement (34%), for a variety of wildlife including birds, fish, and crabs. Plastic netting and rope also continues to take their toll on marine wildlife, with 23 reports of entanglement in these items reported. An item familiar to us all was also indicated as the culprit of entanglement; four animals were reported to be caught in plastic six-pack holders. While four incidents of wildlife clashing with this item may not seem significant, it should be noted that these incidents were recorded on just one day within a three-hour period.

Table 4. Wildlife Impacted by Debris Reported from 1991 U.S. Coastal Cleanups

State	Animal	Debris Item	Other Comments
Alabama	sea gull	string	entangled
	crabs	crab trap	trapped inside
	bird	plastic ring	entangled
California	5 dead seabirds	fishing line	entangled
	sea gull	fishing line	entangled
	bird	fishing line	entangled
	bird	fishing line	entangled
	sea gull	hook and lure	entangled
	sea gull	hook	entangled
	sea gull	fishing hook studs	entangled
	bird	tag tape	entangled
	bird	sock	entangled
	bird	yellow strapping bands	entangled
	gull	nylon rope	entangled
	pelican	rope	entangled
	bird	plastic bag	entangled
Connecticut	crab	bottle	trapped inside
	bird	plastic lid	entangled
	canine	tire	entangled
Delaware	sea gull	fishing line	entangled
	sea gull	net	entangled
	bird	boards	entangled
Florida	bird	fishing line	entangled
	bird	monofilament line	entangled
	sea gull	fishing hook, wire and weight	entangled
	seabird	fishing line	entangled
	2 fish and 2 eels	fishing line	entangled
	catfish	fishing line	entangled
	2 fish	fishing line	entangled
	sponge	nylon fishing line	entangled
	brown pelican	lure	entangled
	fish	hook	entangled
	shark	hook	entangled
	bird	rope	entangled
	crane	rope	entangled
	chicken	rope	entangled
	fish	string	entangled
	fish and little crabs	old traps	trapped inside
	crab	duct tape	entangled (released)
Hawaii	moray eel	fish hook	entangled

Table 4. (cont.) Wildlife Impacted by Debris Reported from 1991 U.S. Coastal Cleanups

State	Animal	Debris Item	Other Comments
Louisiana	sea turtle	metal hook and string	entangled
	alligator	metal hook and string	entangled
	fish	plastic debris	entangled
	bird	yellow rope	entangled (released)
	fish	nets	entangled
Maine	heron	netting	entangled (released)
	sea gull	plastic	entangled
	herring	plastic bag	entangled
Maryland	cricket	plastic bag	trapped inside
	crab	balloon ribbon	entangled
	crabs and fish	crab trap	trapped inside
Massachusetts	sea gull	monofilament line	entangled
	sea gull	fishing wire	entangled
	sea gull	netting	entangled
Michigan	bird	balloon string	entangled
	sea gull	6 pack holder	entangled
	sea gull	fishing lure	entangled
Minnesota	sea gull	fishing line	entangled
Mississippi	hermit crabs	plastic bag	entangled
	catfish	ring	entangled
New Hampshire	sea gull	fishing line	entangled
	mice	plastic bottle	entangled
New Jersey	bird	fishing line	entangled
New York	2 crabs	fishing line	entangled
	2 sea gulls	fishing line	entangled
	2 crabs	styrofoam	entangled
North Carolina (Coastal)	sea gull	fishing line	entangled
	seabirds	monofilament	entangled
	pigeon	fishing line	entangled
	heron	fishing line	entangled
	crab	fishing line and net	entangled
(Inland)	fish	tire	entangled

Table 4. (cont.) Wildlife Impacted by Debris Reported from 1991 U.S. Coastal Cleanups

State	Animal	Debris Item	Other Comments
Oregon	5 birds	fishing line	entangled
	3 birds	line	entangled
	bird	multi-hooked fish line	entangled
	sea gull	fishing line	entangled
	sea gull	hook, line and float	entangled
	brown pelican	plastic line	entangled
	bird	plastic bag and rope	entangled
	seal	rope and cord	entangled
	bird	rope	entangled
	bird	rope and string	entangled
	sea gull	plastic bag and rope	entangled
	bird	string	entangled
	bird	kite string	entangled
	bird	fish net	entangled
	bird	plastic strapping	entangled
	2 birds	plastic	entangled
Puerto Rico	bird	net	entangled
	fish	plastic bag	trapped inside
	crab	plastic cup	trapped inside
	crab	plastic	entangled
	crab	glass bottle	entangled
	sponge	cloth	entangled
Rhode Island	fish	rope, fishing line	entangled
	sea gull	plastic strapping	entangled
	sea gull	fish hook	entangled
	bird	six-pack ring	entangled
	dog	fish net	entangled (released)
South Carolina	sea gull	six pack ring	entangled
	crab	crab trap	entangled
Texas	fish	fishing line	entangled
	crab	rope and fishing line	entangled
	2 birds	fishing line	entangled
	bird	strapping/netting	entangled
	mullet	plastic bag	entangled
	crab	plastic bag	entangled
	mullet	plastic holder	entangled
	fish	plastic	entangled
	fish	plastic	entangled
Virginia	sea gull	fishing line	entangled
	2 stone crabs	monofilament net	entangled
	2 horseshoe crabs	fish net	entangled
Washington	sea gull	fishing line	entangled
	crab	fishing line	entangled

U.S. National - Summary

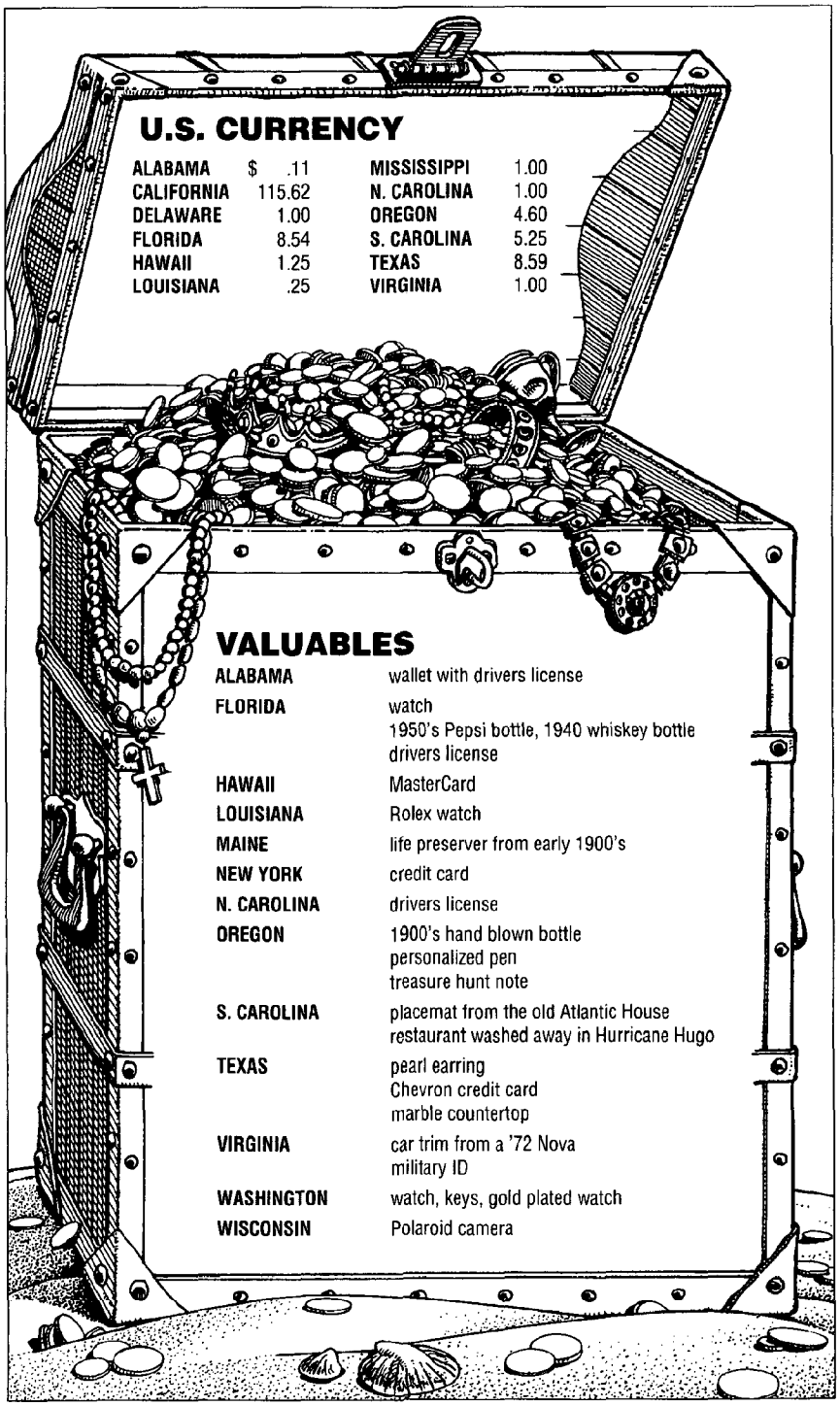
The national picture regarding the marine debris problem is not an optimistic one. Plastics still account for almost 60% of all debris reported. Of the Dirty Dozen items, eight are plastic items. Entanglement of wildlife in plastic debris, such as monofilament fishing line, netting and rope, and six-pack holders is a persistent problem. After three full years under the "no dumping" regulations of Annex V, the lack of an improvement in the marine debris situation raises some serious questions about the effectiveness of these regulations. It is obvious that this legislation has had little or no effect on the marine debris problem. The question now to be answered is why. Are vessels ignoring these rules? Do they even know about the rules? Or do they think that this is a law that is difficult to enforce and therefore they are banking on not getting caught when they dump illegally? These and many other questions are now being explored by a U.S. Congressional oversight committee, to determine why there are still tons of debris littering our beaches and what exactly needs to be done to stop the flow of marine debris at its source.

But ocean-based sources of marine debris are not the only culprits. More and more attention is turning to land-based sources, from careless beachgoers and vacationers to the illegal dumping of household wastes or debris from construction sites, to inadequate sewage and storm drain systems. Increased efforts on the state level may be the most effective way in reaching and educating beach visitors about the importance of the proper disposal of litter. Many states have litter laws already in place that address this problem. The illegal dumping of household or construction wastes may also be covered under these litter laws. But the problem of inadequate sewage and storm drain systems is one that directly affects the waterways themselves and can have detrimental impacts not only on the state that has these systems, but the surrounding states as well.

The Clean Water Act was put into place 20 years ago to address many water quality issues, including sewage treatment. But it appears, as is the case of the MARPOL regulations, that this legislation has not attained the "fishable and swimmable" goals it set for this nation's waters. Cleanup volunteers are still finding sewage-associated wastes in areas that, historically, have sewage problems. This act is up for reauthorization in 1992 and recommendations to control these systems, including a more uniform permitting process to regulate or control flow of sewage material, and increased funding from whatever sources available, to augment upgrading of antiquated systems will be a major part of the process. The results of strengthening this legislation will hopefully be evidenced by future cleanup volunteers encountering fewer and fewer sewage-associated wastes.

With two major pieces of legislation designed to reduce the waste problems plaguing our waterways coming under close scrutiny, the role of citizen participation and volunteer monitoring is an increasingly important one. If enforcement proves to be a major obstacle to reaching the goals of the regulations, citizen monitoring and reporting efforts may be a very far-reaching way to augment enforcement of these laws. With an army of educated, well-trained citizens always on the lookout for violations, the perpetrators may think twice about dumping their garbage over the side of their vessel. As more and more citizens become aware of sewage system problems, greater demand will be put on local municipalities to correct these problem. Volunteer monitors increase enforcement capabilities exponentially by supplying a visible deterrent to violators. With citizens keeping a watchful eye on the environment around them, we may see a speedier improvement in the quality of our beaches and waterways.

Figure 16. Treasures Found During 1991 U.S. Coastal Cleanups



1991 International Coastal Cleanup
Raw Data Summary

U.S. NATIONAL

		AL	AK	CA	CT	DE	DC	FL	GA	HI	LA	ME	MD	MA	MI	MN	MS	NE
PLASTIC																		
Bags	Food	2922	92	38923	3489	6276	32	33055	1093	18240	3736	3671	2337	14149	3372	1087	2089	0
	Salt	84	0	1351	15	24	1	2228	14	2443	121	58	125	1958	48	30	42	0
	Trash	899	86	6223	236	913	0	8557	110	2658	1085	493	341	1805	271	87	511	47
	Other	1141	53	8306	759	1721	16	14317	297	5917	1667	1064	616	3638	548	183	671	32
Bottles	Beverage	4100	45	8006	1273	2799	123	18203	894	8403	3139	1247	1426	4200	569	351	1773	18
	Bleach	594	25	948	55	380	4	3071	253	918	1080	511	531	968	88	13	302	0
	Gallon	1224	22	1795	106	682	10	4826	298	1008	2635	780	661	1479	214	36	817	5
	Oil/lube	783	20	1147	137	518	34	3395	217	578	1002	764	750	729	143	39	600	0
	Other	1127	34	3203	467	986	61	7864	490	3176	1917	685	743	1822	473	89	579	2
Buckets		350	6	693	59	236	5	1682	97	486	321	553	178	594	77	32	166	3
Caps/lids		4109	172	27941	1990	4389	45	33452	1136	12600	6186	2128	2881	13324	5481	702	2336	55
Cigarette butts		11397	56	222510	20690	18359	2	143493	2761	108853	3301	14186	6114	60359	37370	4981	5775	10
Cigarette lighters		805	14	8394	228	411	2	5521	157	2131	638	486	343	2295	928	78	338	0
Cups/utensils		1709	30	12240	1317	2632	34	21259	935	9141	3027	1262	1568	7278	1126	397	928	83
Diapers		282	7	899	52	117	0	1368	24	2698	262	60	138	766	183	194	91	0
Fishing line		573	51	3021	440	849	1	7261	143	7011	464	357	451	1897	407	77	197	19
Fishing nets		404	20	417	23	396	0	903	128	1721	267	433	79	1452	155	10	91	0
Floats/lures		142	65	1753	134	152	0	2648	28	1144	468	114	391	596	154	35	171	3
Hard hats		33	0	609	4	22	1	156	3	116	47	10	13	56	4	0	19	0
Light sticks		276	1	1280	39	210	0	3372	45	2259	569	81	169	1190	839	2	84	0
Pieces		6143	88	45812	4676	8195	32	56335	1151	28476	6716	5804	4404	21104	15445	1299	2932	201
Pipe thread prot.		46	6	589	12	251	1	813	3	995	91	86	18	1277	481	8	49	0
Rope		1234	214	6315	415	1389	0	12308	259	6110	2751	5105	796	9512	782	78	681	16
Sheeting	Long	124	21	345	25	112	1	994	30	477	225	154	39	455	55	17	36	0
	Short	233	28	1239	68	226	4	2035	38	538	351	231	104	924	173	26	105	0
Six-pack holders		873	20	5195	154	608	0	6111	75	2808	1583	140	718	897	489	43	622	23
Strapping bands		391	55	2843	185	452	11	3371	46	1646	557	482	266	1677	308	158	148	0
Straws		2177	22	25241	2677	4978	0	36208	813	10946	5189	1278	1968	14819	9026	604	1118	0
Syringes		44	2	2111	30	78	0	488	6	817	333	28	35	686	71	0	28	0
Tampon applicators		158	1	1180	199	641	0	1342	31	507	389	290	291	5692	844	92	78	0
Toys		384	6	2861	224	704	0	3007	97	1272	546	343	427	1381	638	77	133	0
Vegetable sacks		109	7	1106	30	146	0	889	14	696	183	79	134	640	108	11	59	2
Write prot. rings		145	4	1565	138	179	0	1532	11	854	181	226	63	839	242	36	87	0
Other		1486	273	11992	1297	3109	41	15900	524	7206	2487	2212	1192	5730	4820	517	859	19
STYROFOAM																		
Buoys		402	24	1233	198	171	0	5290	186	1025	521	822	512	1427	10	4	297	0
Cups		2392	80	15906	1120	3406	255	28615	1069	8562	2508	2015	2326	5306	907	582	1808	31
Egg cartons		288	2	798	4	57	0	1067	125	756	690	32	147	341	7	12	152	0
Fast-food cont.		737	19	4346	216	704	76	6473	150	4989	601	234	514	1011	248	196	483	0
Meat trays		434	3	1230	45	323	8	2279	239	2812	962	177	219	498	18	31	343	0
Packaging		679	15	9429	247	956	0	7020	204	5239	1103	647	537	2201	542	284	464	7
Pieces		4008	80	65206	4449	4084	486	53179	4641	16058	4666	5580	5856	13897	4507	1866	2467	15
Plates		503	0	2894	120	179	0	3412	203	3609	863	167	538	950	73	80	355	0
Other		618	34	4251	236	597	2	5680	269	2435	426	741	329	1581	687	156	140	0

	AL	AK	CA	CT	DE	DC	FL	GA	HI	LA	ME	MD	MA	MI	MN	MS	MO
GLASS																	
Bottles Beverage	3395	109	14514	950	3581	133	44672	1699	21683	2736	2165	3179	4792	523	608	1873	87
Food	477	25	5044	63	178	1	3272	280	2447	726	263	252	444	49	20	229	1
Other	460	36	1487	123	572	15	4352	222	2370	668	545	257	648	57	33	366	1
Fluor.light tubes	50	1	531	1	16	0	1189	28	357	208	13	30	254	1	2	21	0
Light bulbs	365	3	1356	59	118	2	2420	204	1708	611	100	250	604	41	13	216	0
Pieces	3185	70	35657	4790	7828	4	21038	264	31766	2268	6860	4803	18043	5089	1425	2948	255
Other	315	2	3159	212	198	0	2495	30	6655	165	549	156	1734	200	55	178	0
RUBBER																	
Balloons	301	11	9135	374	1189	0	3977	59	1750	450	344	750	1850	5474	134	159	15
Condoms	103	0	2513	52	132	1	617	16	501	158	117	25	414	65	34	42	0
Gloves	207	13	1055	114	322	0	918	36	768	789	654	76	835	28	12	202	0
Tires	181	2	775	122	260	0	1361	51	683	148	241	229	428	125	38	100	2
Other	947	14	5225	329	719	32	6066	203	4289	721	1742	519	2653	587	92	390	5
METAL																	
Bottle caps	2268	50	21569	858	2356	16	16914	362	10267	2117	1482	1088	5063	2425	444	1414	121
Cans Aerosol	649	11	1230	102	571	8	3121	171	1450	814	202	263	1017	56	43	264	0
Beverage	5032	1055	10629	1174	5262	291	47632	3066	16042	3399	1593	3995	6956	741	940	2708	231
Food	230	8	1751	96	200	14	2326	93	2422	305	206	171	554	102	43	167	8
Other	156	42	6565	53	208	1	1798	77	716	407	235	144	370	117	51	203	13
Crab/lobster traps	77	12	322	8	20	0	635	52	482	41	163	147	326	160	0	125	0
Drums Rusty	64	7	1350	14	33	0	211	11	343	56	183	35	164	37	41	39	2
New	81	0	60	2	6	0	43	0	308	5	5	3	66	1	1	4	0
Pieces	633	5	5607	1051	981	5	5598	93	4504	681	1446	587	2904	949	537	316	47
Pull tabs	1450	34	9235	382	1308	10	8162	90	3884	1141	360	1611	1459	1157	222	824	105
Wire	369	13	3762	156	339	0	1980	52	2079	292	399	503	817	440	391	237	21
Other	487	65	11362	837	1156	5	4910	152	4313	702	973	610	2227	995	1408	611	19
PAPER																	
Bags	710	9	6405	543	987	7	6129	92	3491	602	614	358	1999	303	177	520	6
Cardboard	481	22	4672	320	934	1	4791	50	3190	457	483	358	2963	494	180	497	33
Cartons	414	31	3021	277	531	4	4178	104	2557	395	364	214	1829	194	308	316	19
Cups	1019	25	5464	662	1162	4	8366	134	5218	744	681	662	3942	444	202	675	24
Newspapers	220	0	5512	245	573	5	3626	41	3982	250	256	117	1798	435	123	161	4
Pieces	3667	63	55495	3902	6403	61	32507	542	20092	2928	3188	2344	13659	5303	949	2931	388
Plates	299	11	4551	138	333	0	2031	61	4431	385	115	411	1476	161	91	137	1
Other	1251	29	13407	1171	1303	0	8297	135	3967	507	1375	306	3477	2092	416	945	0
WOOD																	
Crab/lobster traps	34	0	5285	11	31	0	198	3	311	17	184	55	355	9	1	51	0
Crates	49	9	330	11	95	0	254	11	314	69	47	135	309	11	2	25	0
Lumber	1698	36	10855	876	2538	0	13019	622	4420	1444	1937	1392	6577	781	174	885	0
Pallets	102	7	679	23	75	0	726	24	350	74	93	32	282	35	13	24	0
Other	512	3	5742	466	795	7	4936	91	2153	488	649	415	2584	712	99	345	13
CLOTH																	
Clothing	890	21	6914	640	1696	18	9048	299	3950	1045	1574	629	3356	1176	219	536	27
TOTAL ITEMS/STATE	89392	3657	845673	69487	118626	1933	854812	28827	480727	94887	88206	68179	312628	124500	24033	52730	2041

		NH	NJ	NY	NC	OH	OR	PA	PR	RI	SC	TX	VI	VA	WA	WI	NATIONAL TOTAL
PLASTIC																	
Bags	Food	1075	7052	9711	23053	26	6869	128	2979	5704	4590	16035	421	5006	3367	366	220945
	Salt	31	120	107	861	2	144	0	2476	219	229	2487	21	154	229	1	15623
	Trash	196	926	1307	3769	0	707	11	1735	585	826	3060	86	589	471	5	38595
	Other	244	2644	2928	7635	2	2134	32	1294	1691	1515	8389	269	1423	920	34	72100
Bottles	Beverage	387	1616	5967	30660	0	1074	38	3423	3424	2796	8616	251	1389	1447	121	117778
	Bleach	32	187	596	1853	0	276	5	2215	758	181	5041	54	372	146	6	21463
	Gallon	71	329	828	3153	0	423	22	2218	950	442	6532	88	430	276	15	32375
	Oil/lube	45	249	935	2657	1	185	2	4189	720	242	2257	28	473	177	14	23030
	Other	79	1188	1866	4587	0	689	22	1344	1263	688	8583	180	714	522	54	45497
Buckets		17	144	247	1040	0	148	4	598	433	183	1645	28	266	44	0	10335
Caps/lids		741	6424	8418	14984	19	5830	218	7440	4508	3576	34428	318	4173	2332	516	212852
Cigarette butts		6181	19726	20333	95057	329	26526	208	6817	5809	37676	23418	317	22160	12270	3386	940430
Cigarette lighters		94	873	1007	3110	0	654	18	521	894	918	2543	28	526	525	21	34501
Cups/utensils		492	3562	6369	7794	16	1197	56	16873	2410	3660	8226	751	1370	693	162	118597
Diapers		33	138	415	1340	0	182	1	1455	324	90	1172	42	113	216	24	12686
Fishing line		213	961	2130	2614	1	879	6	533	1046	437	3163	23	588	300	11	36124
Fishing nets		97	90	258	314	0	409	0	143	238	254	956	29	146	63	0	9496
Floats/lures		27	142	337	1810	0	620	2	144	254	189	1382	11	249	208	8	13381
Hard hats		2	6	9	21	0	7	0	202	157	6	248	0	22	4	0	1777
Light sticks		44	97	164	481	0	284	6	225	413	325	3289	41	128	75	0	16020
Pieces		2054	9985	12258	21650	81	14771	424	7354	6375	7339	41100	740	7066	3106	1184	344268
Pipe thread prot.		84	72	192	372	4	300	0	50	334	52	1667	4	68	107	1	8033
Rope		1837	1155	2230	3260	6	7199	13	943	2316	745	18659	237	1445	846	6	88862
Sheeting	Long	19	132	168	420	0	196	0	238	304	100	1673	18	61	214	2	6655
	Short	64	462	263	694	0	431	8	335	450	150	3384	8	233	284	6	13095
Six-pack holders		44	592	1609	2590	0	471	21	1565	903	634	4789	60	461	363	31	34492
Strapping bands		255	373	954	1098	6	1370	13	479	874	244	3267	72	430	457	24	22512
Straws		707	10705	15894	9253	37	1597	155	11796	3621	4632	9362	587	3573	1354	1064	191401
Syringes		4	160	338	139	0	83	5	1042	392	121	1105	4	34	87	9	8280
Tampon applicators		72	2383	2554	484	0	262	50	489	1297	113	986	28	150	126	65	20794
Toys		86	874	926	1373	0	718	34	646	581	497	3233	20	412	220	50	21770
Vegetable sacks		24	76	159	548	0	365	7	148	370	153	1056	7	54	156	0	7336
Wrist prot. rings		31	237	208	551	0	184	3	36	368	130	1053	6	87	146	6	9148
Other		710	2524	5131	6236	9	3797	81	1312	2834	3924	9966	319	1880	1433	390	100210
STYROFOAM																	
Buoys		107	87	469	846	0	388	3	145	455	188	806	20	296	164	0	16096
Cups		693	1550	4738	17498	0	2104	100	2396	2800	2534	9054	315	3136	1110	92	125008
Egg cartons		3	37	66	594	0	71	1	193	211	143	2617	35	89	65	2	8605
Fast-food cont.		63	260	1041	3830	0	578	6	584	478	576	2389	103	527	369	55	31856
Meat trays		25	125	271	1269	0	552	3	531	427	379	2684	32	345	256	12	16532
Packaging		376	723	1398	2938	1	1447	3	360	992	851	3823	34	822	506	177	44025
Pieces		2388	5354	9337	22578	7	11892	75	1836	6870	6169	21043	846	6493	2800	1069	289802
Plates		352	271	767	2239	0	193	4	1679	372	326	3066	138	174	190	12	23729
Other		239	465	1144	2303	0	1115	9	505	832	589	1736	97	548	311	27	28102

		NH	NJ	NY	NC	OH	OR	PA	PR	RI	SC	TX	VI	VA	WA	WI	NATIONAL TOTAL
GLASS																	
Bottles	Beverage	698	2456	3728	37220	1	1612	31	12893	3388	3080	10135	663	3559	3490	60	189855
	Food	30	84	285	3380	0	214	7	2673	266	220	2088	39	311	175	2	23547
	Other	97	199	450	3552	0	247	2	1222	384	335	2330	119	329	312	8	21822
Fluor.light tubes		0	2	154	236	0	62	0	151	110	24	820	2	28	70	0	4561
Light bulbs		3	20	101	913	0	121	1	274	245	175	1526	4	247	65	1	11766
Pieces		3538	3297	10623	14054	5	2434	23	10516	4110	1706	11971	779	5409	3787	923	219468
Other		372	158	653	1392	0	339	0	1805	251	260	1037	19	384	1279	12	24064
RUBBER																	
Balloons		70	715	2067	1911	4	645	38	183	439	825	1495	23	812	883	102	36164
Condoms		27	145	252	291	0	191	0	284	175	110	565	17	66	43	1	6957
Gloves		31	40	242	690	1	209	1	159	345	93	3133	11	174	77	3	11238
Tires		91	108	328	1133	1	173	0	360	309	124	434	6	108	144	4	8069
Other		377	455	1215	2468	6	783	22	813	670	768	3097	92	728	326	98	36451
METAL																	
Bottle caps		451	1510	4578	11167	5	1832	41	3996	1090	1606	6716	310	1374	2945	191	106626
Cans	Aerosol	31	50	432	2385	2	219	1	536	692	153	2185	27	282	178	3	17148
	Beverage	1659	3211	4750	31905	1	1620	92	3084	3586	6589	12549	1695	4277	3599	84	189447
	Food	27	109	417	2817	0	224	2	913	275	407	1276	133	210	87	18	15611
	Other	33	227	184	1447	0	160	2	321	125	230	836	127	104	117	12	15081
Crab/lobster traps		222	2	54	394	0	35	0	35	160	57	171	12	65	27	1	3795
Drums	Rusty	19	17	114	388	0	30	0	154	63	42	249	13	19	34	7	3739
	New	7	0	1	66	0	6	0	9	68	12	90	1	2	1	0	848
Pieces		432	528	1768	3962	3	669	8	1766	956	916	2105	181	1113	708	145	41204
Pull tabs		237	329	1371	3869	3	537	19	4556	562	494	2713	63	348	2093	42	48670
Wire		113	131	425	1536	1	468	3	509	279	448	1200	21	259	467	23	17535
Other		263	535	2609	3527	0	928	29	564	739	850	2039	139	785	427	93	44359
PAPER																	
Bags		187	533	1563	4738	0	907	21	2480	573	651	2542	29	655	598	18	38427
Cardboard		164	557	1307	3554	0	1033	8	1562	473	632	2175	65	1372	585	37	33450
Cartons		117	400	930	2470	1	387	7	1873	485	405	2145	99	524	221	15	24727
Cups		218	1008	1690	5244	5	731	34	2123	909	1065	2596	151	932	585	27	46746
Newspapers		173	558	1072	2155	5	1335	17	866	312	506	1175	46	277	521	27	26393
Pieces		1515	5604	7185	22495	30	6074	177	4237	2103	5660	7365	351	3647	3944	288	225297
Plates		42	163	697	1679	0	302	2	1544	187	298	1317	33	86	250	3	21235
Other		268	1398	2066	3965	6	2196	148	1173	619	1818	2115	79	794	1075	38	56436
WOOD																	
Crab/lobster traps		96	19	33	63	0	15	0	54	126	39	161	12	90	1	0	7254
Crates		13	27	76	165	0	33	0	133	206	70	225	6	161	25	0	2811
Lumber		554	1727	1929	7357	2	1399	24	1958	1284	3356	5914	369	3288	351	64	76830
Pallets		22	152	84	353	0	104	0	213	64	161	403	9	133	54	2	4293
Other		259	1407	1198	2365	2	676	7	556	571	1171	1643	136	787	363	45	31196
CLOTH																	
Clothing		857	791	1945	5525	14	1304	41	1964	1464	1281	4113	182	1158	615	113	53405
TOTAL ITEMS/STATE		33651	113748	184623	502387	645	129575	2605	159998	94919	126049	394637	12779	103572	69477	11538	5200741

Connecticut Sea Grant Director Ed Monahan and his daughter sort through debris in Fairfield, CT.

U.S. National Trends

Cleanup volunteers have been collecting detailed information on the types and amounts of marine debris found on U. S. beaches since 1988. By comparing this information over four years, we are able to identify areas that show positive indications of improvement. Table 5 illustrates the overall direction of the areas for which trend analysis is done. But perhaps more importantly, we are also able to pinpoint areas that show little or no significant change in the state of the marine debris problem. Unfortunately, after four years of cleanup efforts, for the most part there has been little or no significant change in the composition of marine debris. This sobering finding should be the cause for many organizations, including governmental agencies, to take a close look at laws and regulations designed to put an end to the marine debris problem. By scrutinizing these regulations, weaknesses may be discovered that have allowed the continuation of the marine debris problem at such a constant level.

Table 5. Summary of Trend Direction for U.S. Coastal Cleanup Data Analysis

Area Analyzed	% Change 1988-1991	Trend Direction
Plastics	-5.54%	↓
Galley wastes	-5.43%	↓
Bottles & associated goods	-3.52%	↓
Commercial fishing wastes	-1.08%	↓
Six-pack holders	-0.90%	↓
Operational wastes	-0.65%	↓
Recreational fishing & boating wastes	-0.19%	↓
Medical wastes	+0.07%	↑
Sewage-associated wastes	+0.15%	↑

Trends in How Many, How Much, and How Long

The army of volunteers concerned about the condition of U.S. beaches and waterways has continued to grow since 1988 (Figure 17). The approximately 47,531 individuals who joined the first national cleanup in 1988 broke new ground in the collection of detailed and specific information on the trash they encountered. This army has grown to over 130,000, a formidable force all dedicated to combating the tons of trash found on our beaches. If these volunteers were paid a minimum wage of $4.25 per hour for their three hours of cleanup efforts the cost would be a staggering $1.7 million.

The actual number of miles cleaned has increased as well from an estimated 3,518 miles in 1988 to 4,347 miles in 1991 (Figure 18). This increase in miles includes coastal areas that were not cleaned in previous years' cleanups, as well as inland waterways. This inland movement is becoming a very important aspect of the cleanup, as we realize that at least a portion of the debris on coastal beaches is making its way down these waterways to the ocean. It will require stopping this inland debris at its source to prevent it from reaching the ocean.

Figure 17. Participation in U.S. Coastal Cleanups 1988-1991

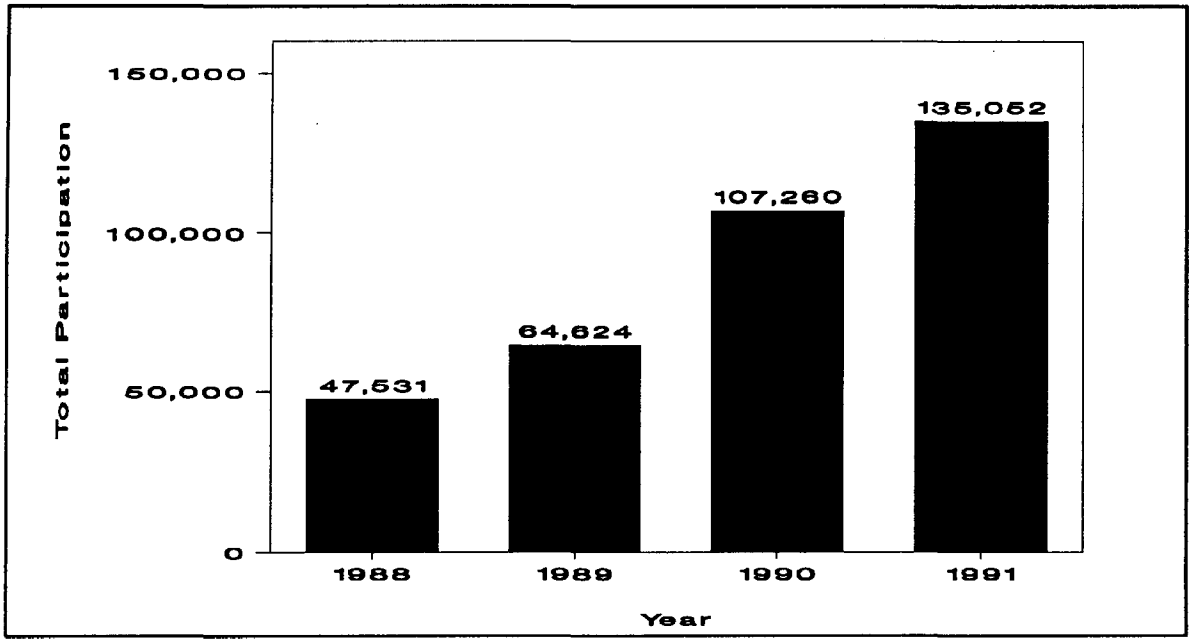
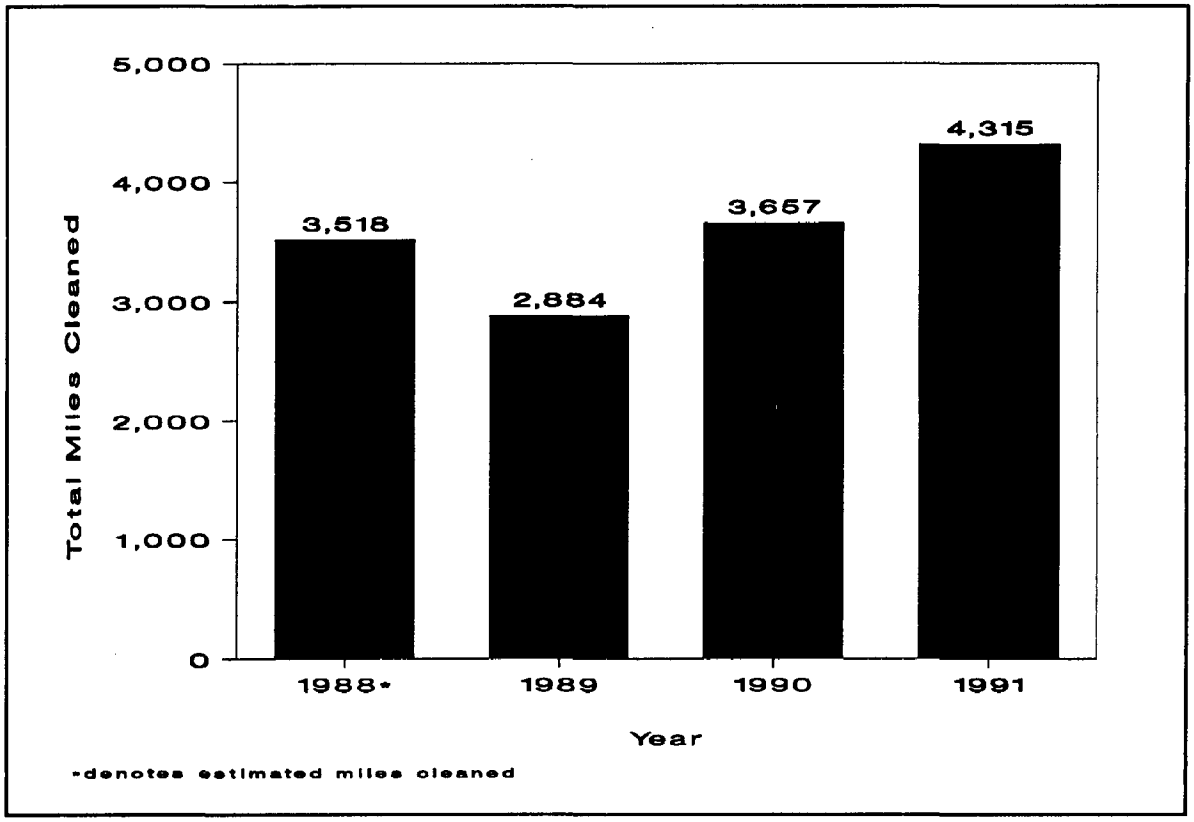
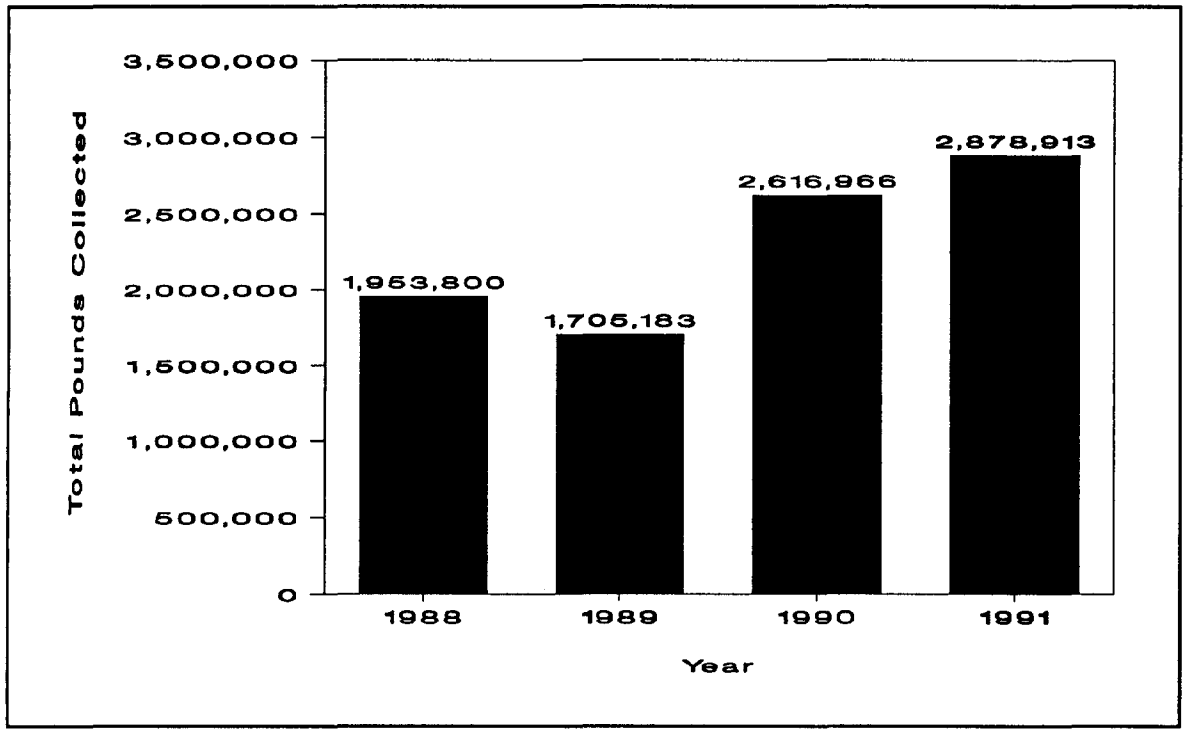


Figure 18. Miles Cleaned in U.S. Coastal Cleanups 1988-1991



As the volunteer base and the number of miles cleaned increases, so does the number of pounds of debris collected. The pounds of debris collected has grown from an estimated 1,953,800 pounds (977 tons) to a whopping 2,878,913 pounds (1,439 tons) (Figure 19). When one recalls that approximately 60% of this trash is plastic, a very light-weight substance, the enormous amount of trash that must be collected to make up these incredible poundage figures is mind-boggling. Some of this increase in debris weight is probably due the increase in volunteers and miles covered: more people covering more area collect more trash. This underscores the importance of detailed data collection, which give us not just the rough information of how much this trash weighs, but also exactly what it is, what it is composed of, and where it is coming from.

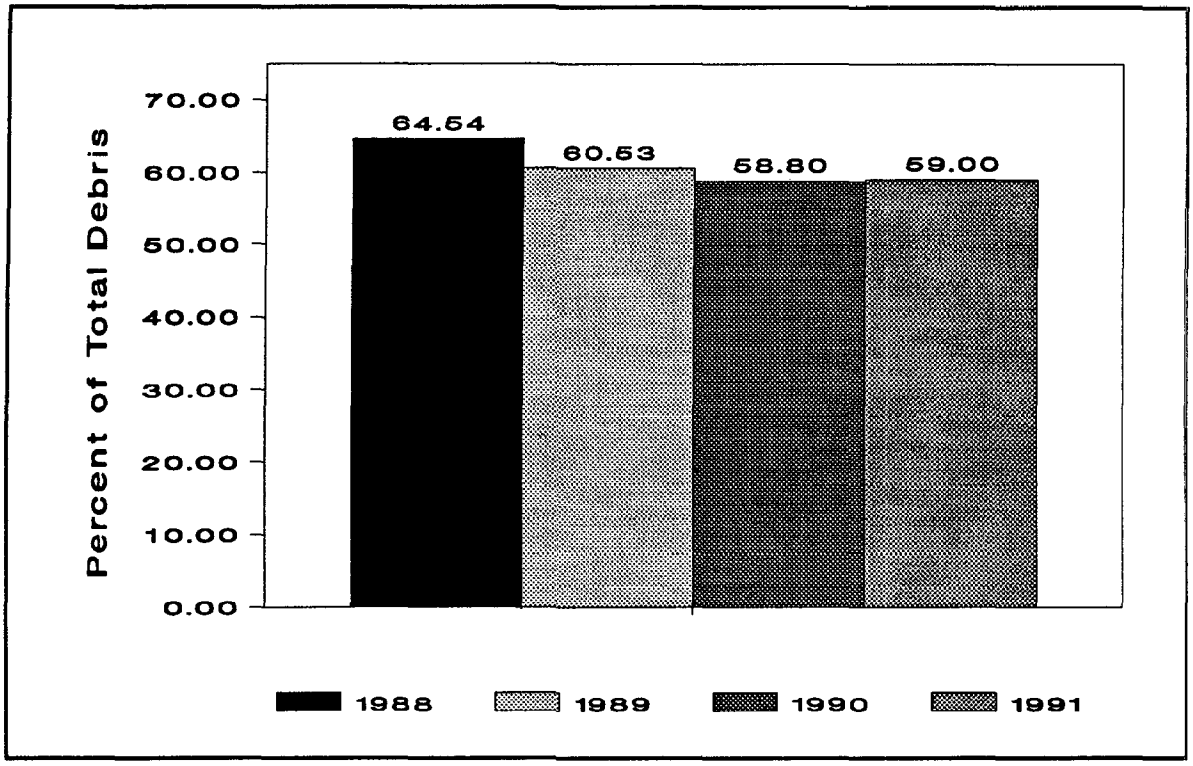
Figure 19. Pounds of Debris Collected in U.S. Coastal Cleanups 1988-1991



Trends in the Most Prevalent Type of Debris

This information has remained largely unchanged over the last four years: plastics are the number one debris problem in the marine environment. The percentage of the debris collected has experienced no significant change in the last four years (Figure 20). From more than 65% in 1988, to 59% in 1991, there seems to be a slight decrease in the percentage of debris composed of plastic. This small downward trend, while encouraging, does not reflect a significant change in the percentage of plastics on U.S. beaches. In fact, the percentage figures representing cleanups occurring after the regulations of MARPOL Annex V show relatively no change at all. This does not bode well for either the wildlife that must risk encountering this debris, nor for the boater who may encounter it around a propellor or in the engine. This lack of a decrease points to the need for looking closely at the regulations designed to keep plastics out of U.S. waterways to see where weakness may lie and where changes need to be made.

Figure 20. Trends in Plastic Debris Reported from U.S. Coastal Cleanups 1988-1991



Trends in the Dirty Dozen

The twelve items most commonly found during the U.S. cleanups have changed very little over the past four years. Plastic pieces, glass pieces, foamed plastic (Styrofoam) pieces, paper pieces, metal beverage cans, glass beverage bottles, foamed plastic cups, plastic cups, utensils, and straws, and plastic caps and lids remain among the top twelve. Plastic beverage bottles were included in the Dirty Dozen only in 1988 and have since dropped out, but remain among the top fifteen items collected. As more and more recycling programs are put in place, items such as glass beverage bottles and metal beverage cans may decrease to the point of no longer having a place of "honor" in the Dirty Dozen. Plastic trash bags and miscellaneous types of plastic bags were listed in the Dirty Dozen in 1988, but dropped off the list in 1990 when two new items, cigarette butts and plastic food bags and wrappers were added to the Beach Cleanup Data card in 1990. Since 1990, cigarette butts have skyrocketed to the number one position in the Dirty Dozen, accounting for nearly 13% of all debris collected in 1990 and 18% in 1991.

Trends in Bottles and Associated Goods

The national percentage of bottles and associated goods has remained essentially the same over the past four years, but has experienced a slight, but constant downward trend from nearly 17% in 1988 to 13% in 1991 (Figure 21). This may be due to increased recycling programs and more states instituting bottle bill legislation. The seven states participating in the cleanup that have bottle bills have all experienced a slight, but consistent, downward trend in the percentage of bottles and associated goods (Figure 22). Over the past three years, Delaware experienced slight deviations from this trend, which may be attributed in part to the fact that Delaware's bottle bill legislation exempts aluminum cans.

Figure 21. Trends in Bottles and Associated Goods Reported from U.S. Coastal Cleanups 1988-1991

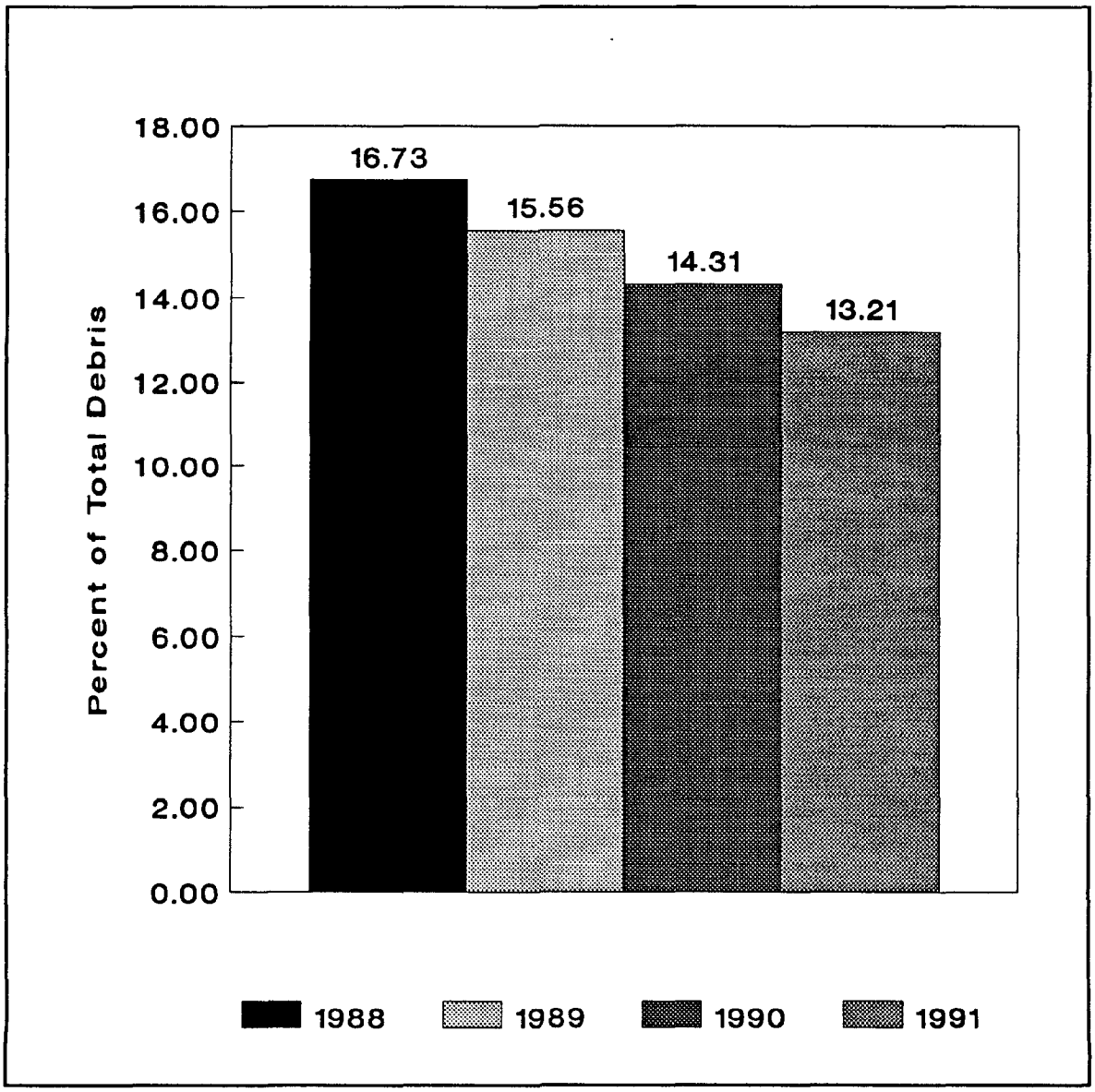
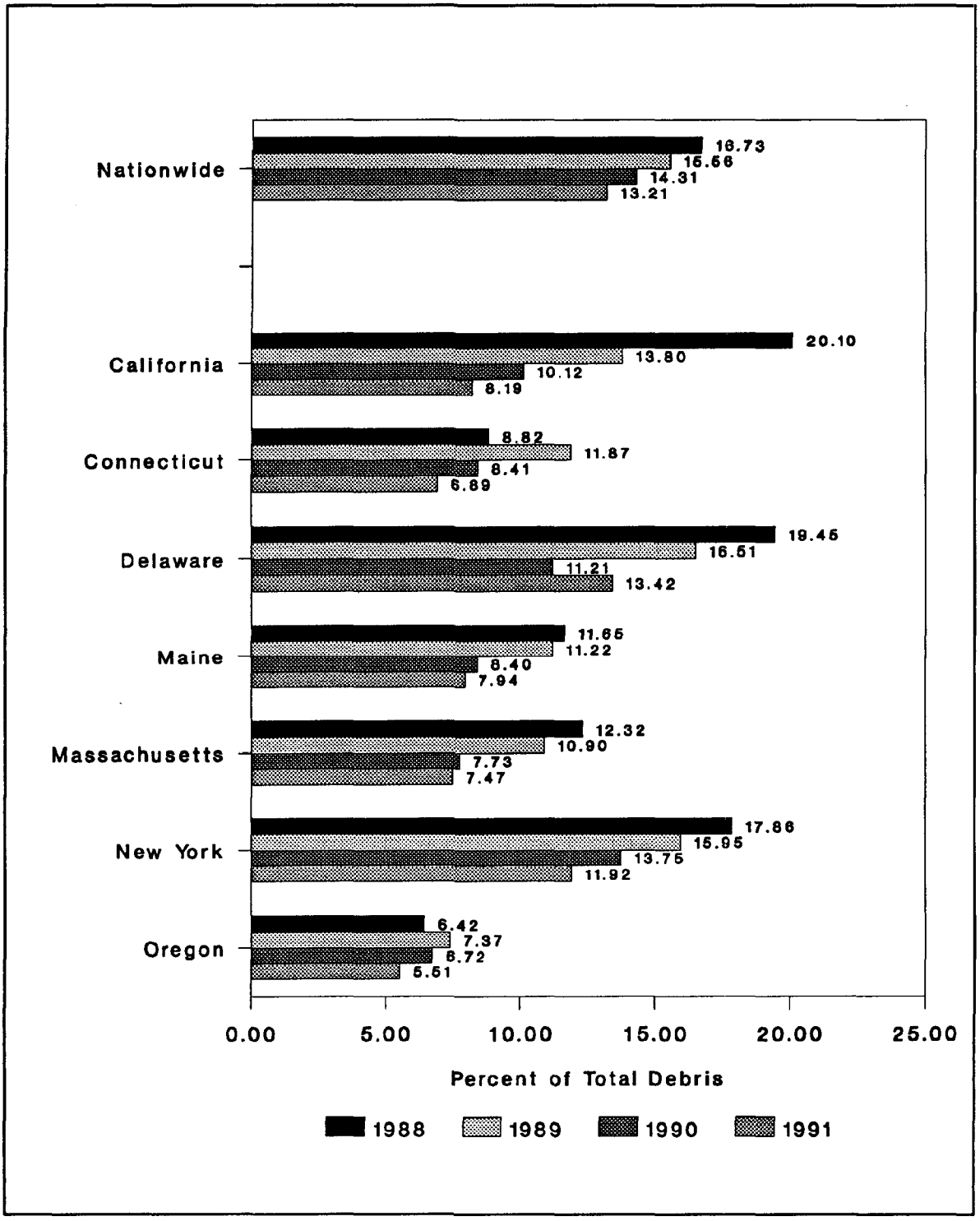


Figure 22. Trends in Bottles and Associated Goods Reported from U.S. Coastal Cleanups 1988-1991 (states *with* beverage container deposit legislation)



Trends in Six-Pack Holders

Nationally, the percentage of six-pack holders reported in 1991 has also decreased since 1988. From 1.56% of the total debris collected in 1988, to 0.66% of the 1991 total, this slight, but steady decrease is encouraging, in view of the fact that six-pack holders are an item known to entangle wildlife. As more and more states are considering enacting legislation to require degradable six-pack holders, it is interesting to look at the states with this legislation already in place to analyze its success. Fifteen states participating in the cleanup have degradable six-pack holder legislation in place. Of the ten whose degradable laws went into effect *prior* to 1988 (Figure 23) all have shown a decrease from 1988 to 1991, with only slight, one-year deviations in Alaska, California, Delaware, New York, and Rhode Island. Of the five states whose legislation went into effect in 1988 or after (Figure 24), there is again a general downward trend, though not so evident as in those states whose legislation has been in place a longer period of time.

Figure 23. Trends in Six-pack Holders Reported from U.S. Coastal Cleanups 1988-1991 (states with degradable six-pack legislation effective *prior* to the 1988 cleanup)

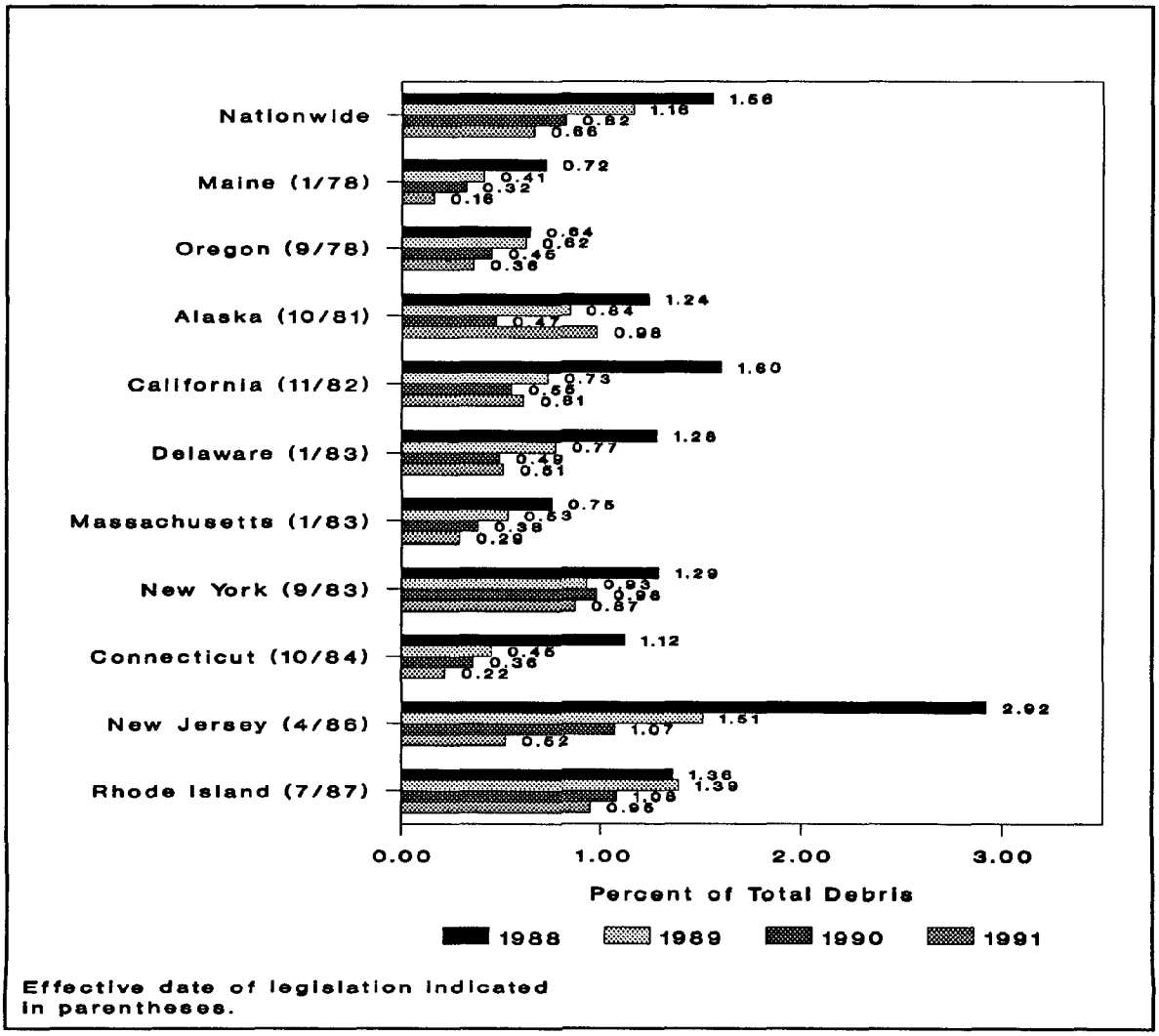
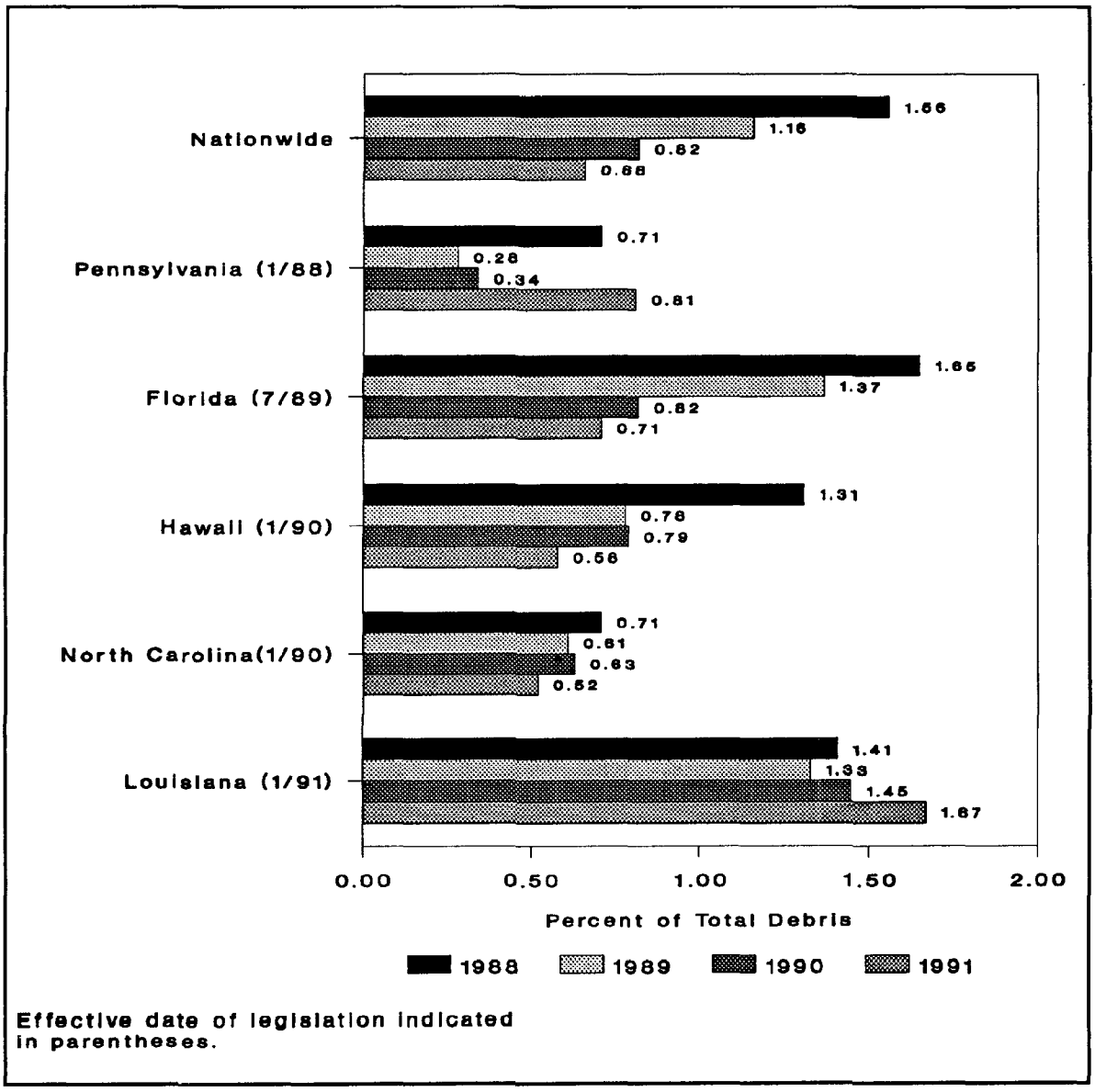


Figure 24. Trends in U.S. Six-pack Holders Reported from U.S. Coastal Cleanups 1988-1991 (states with degradable six-pack legislation effective *after* the 1988 cleanup)



Trends in Sources of Marine Debris

With the goal of stopping marine debris at its source, identifying these sources and tracking trends in the percentage of debris attributable to each is essential. As was discussed in the section entitled **U.S. National Results**, these sources are divided into ocean-based and land-based sources.

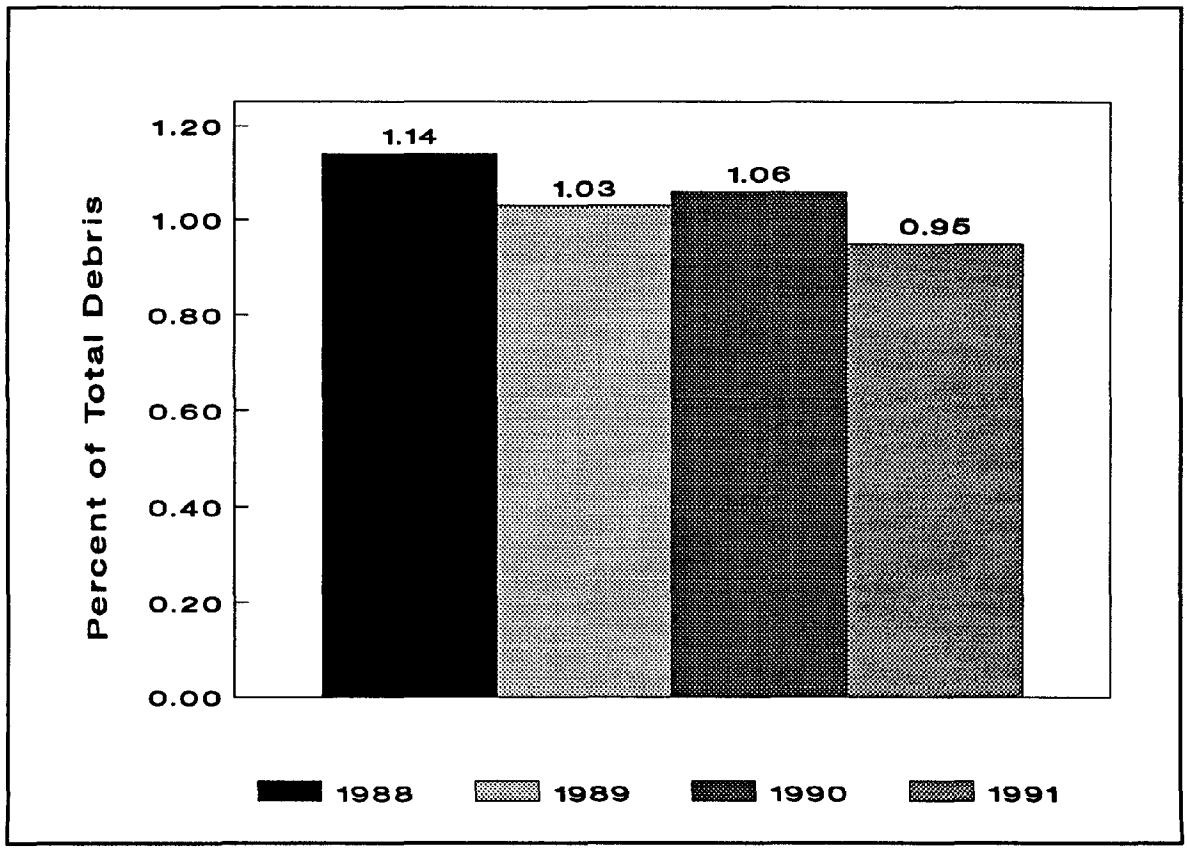
Ocean-based Sources

Trends in Recreational Fishing and Boating Wastes

The percentage of debris attributable to recreational fishing and boating activities has, for the first time in four years, dropped below 1% of the total debris collected (Figure 25). While a decrease from 1.14% in 1988 to 0.95% in 1991 is seemingly insignificant, it is important considering that monofilament fishing line, one item attributed to this group, is the number one item reported to kill marine life. In 1991 alone, volunteers reported 38 separate incidents of wildlife entangled in monofilament. Any decrease in the percentage of this type of debris, however slight, is therefore encouraging and will hopefully result in fewer incidents of entanglement reported in future cleanups. Part of this decrease may be attributed to increased efforts to recycle monofilament line, particularly by Berkley, a well-known fishing tackle manufacturer. North Carolina cleanup coordinators, in response to the relatively high percentage of recreational fishing and boating wastes on North Carolina beaches, are setting an example for other states by launching an educational campaign aimed at informing recreational fishermen and boaters of the potential hazards caused by the illegal dumping of plastic debris.

Geographically, areas with a consistently high percentage of this type of debris over the past four years include the mid-Atlantic, the Gulf of Mexico, particularly the states of Louisiana and Texas, and the northern west coast areas of Alaska and Oregon.

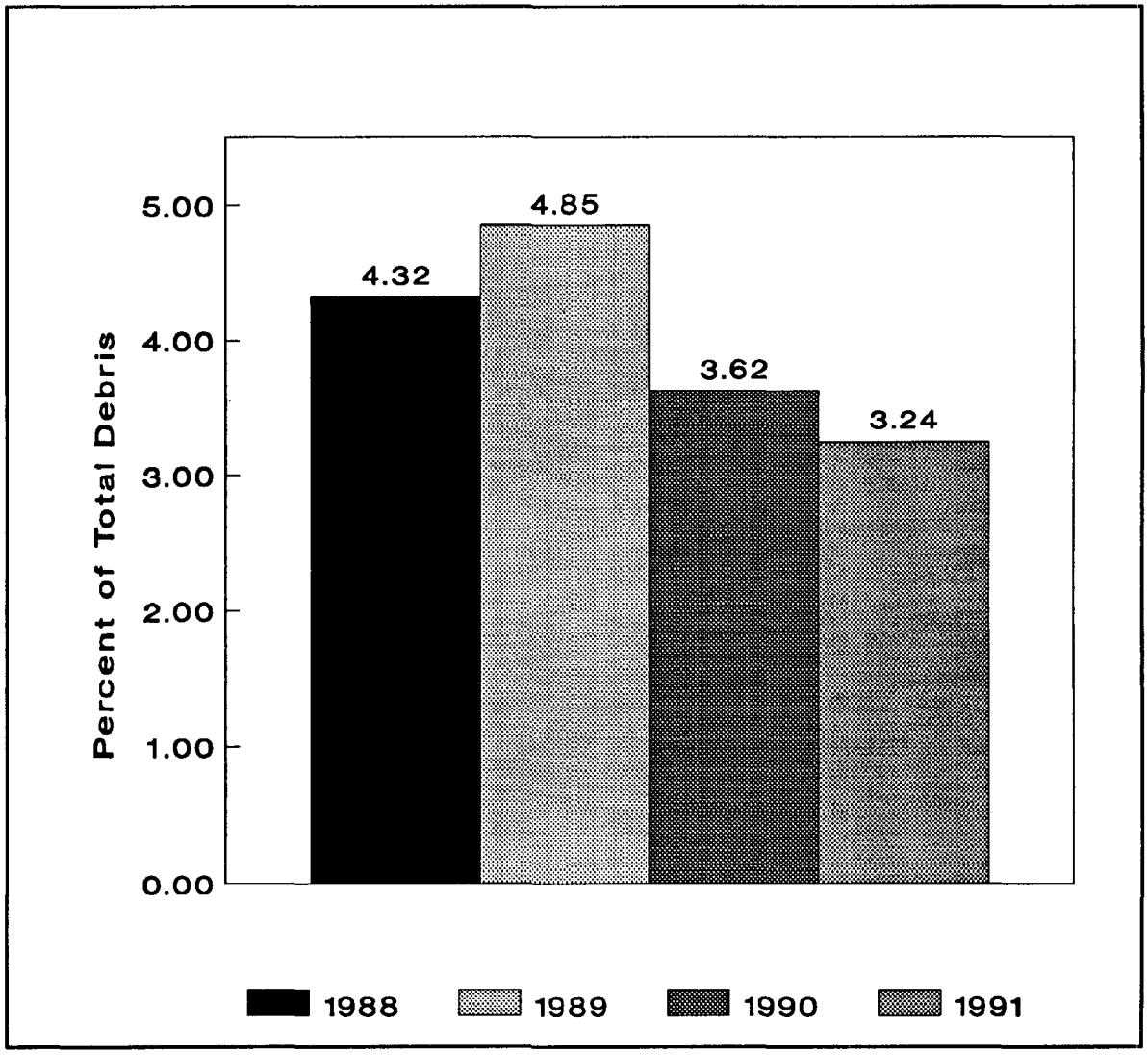
Figure 25. Trends in Recreational Fishing and Boating Wastes Reported from U.S. Coastal Cleanups 1988-1991



Trends in Commercial Fishing Wastes

Overall, the national percentage of commercial fishing gear has shown a slight, but erratic, downward trend (Figure 26). Although the 1991 percentage (3.24%) is almost a percentage point lower than the 1988 figure (4.32%), there is no steady decrease indicated. With netting from commercial fishing sources being the second most common item reported during the cleanup to entangle wildlife, this lack of a decrease demonstrates the need for increased educational activities targeting commercial fishermen about the perils of their discarded gear and about the laws regulating disposal of this gear. In addition, the amount of gear accidentally lost and the problems it causes needs to be addressed. The three regions which have continued to show a relatively high percentage of commercial fishing debris over the last four years are New England, the Gulf of Mexico, and the Pacific northwest, all of which support a variety of commercial fisheries.

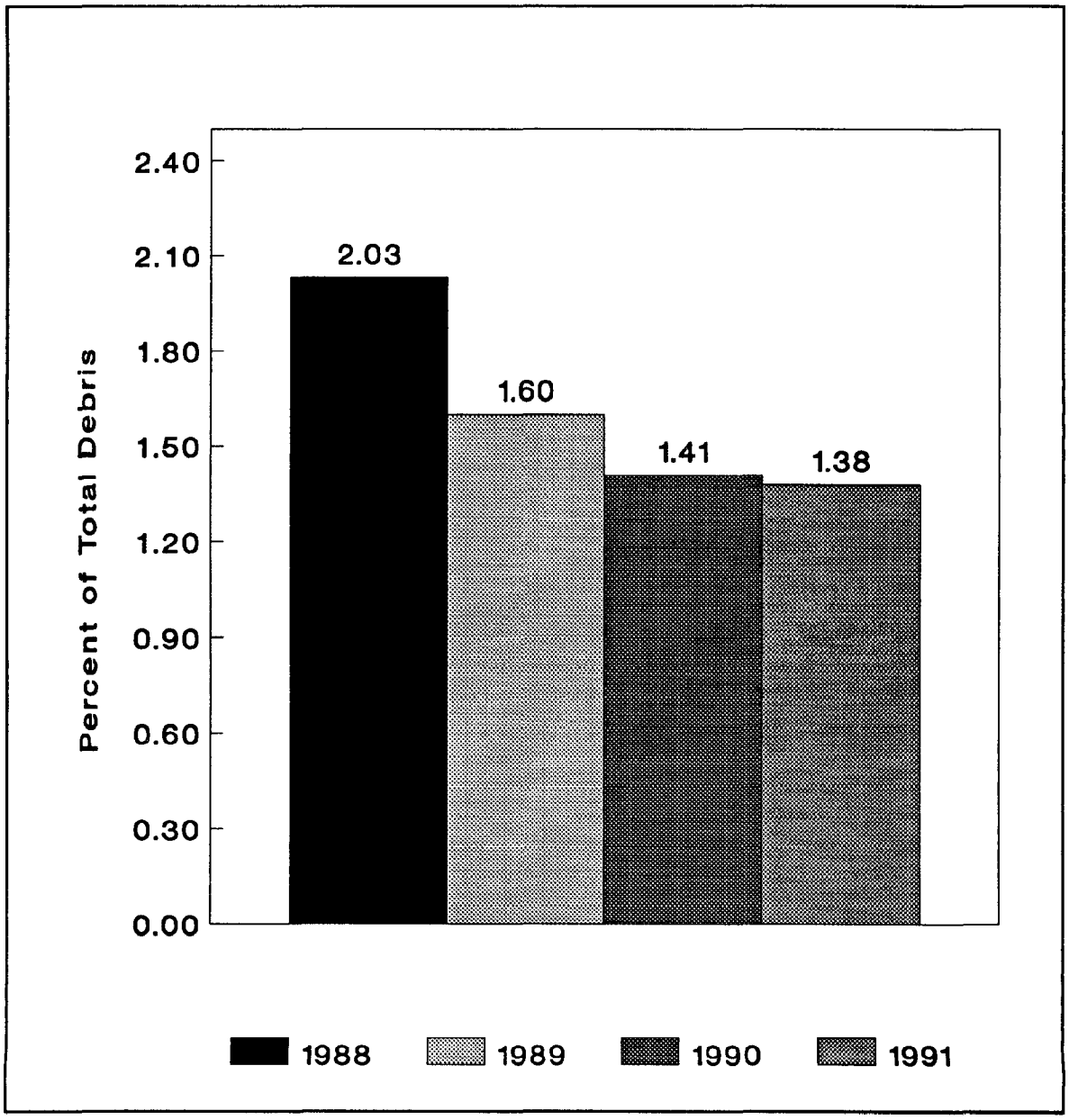
Figure 26. Trends in Commercial Fishing Wastes Reported from U.S. Coastal Cleanups 1988-1991



Trends in Operational Wastes

The national percentage of operational wastes, such as plastic strapping bands and wooden crates, has experienced a slow, but steady decline since 1988 (Figure 27). From a high of 2.03% in 1988 to 1.38% in 1991, this trend, however, is too close to indicate any significant improvement in the percentage of this type of debris. Again, the areas of New England, the Gulf of Mexico, and the Pacific northwest have reported consistently high percentages of this type of debris.

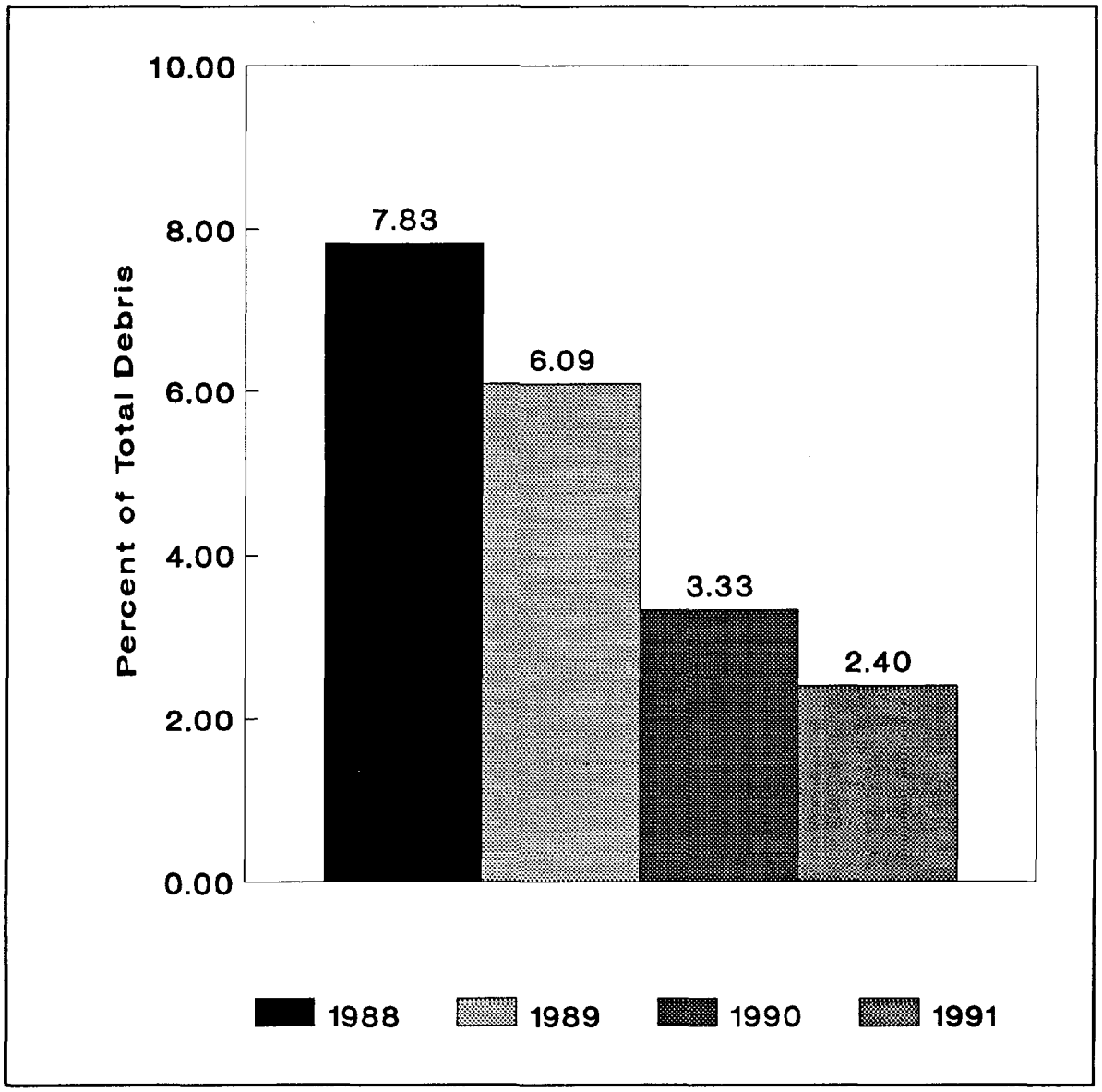
Figure 27. Trends in Operational Wastes Reported from U.S. Coastal Cleanups 1988-1991



Trends in Galley-type Wastes

Perhaps the one true area of improvement in ocean-based sources of marine debris is in the percentage of galley-type wastes (Figure 28). The 1991 percentage of 2.40% is a full *five percentage points* lower than the 1988 figure of 7.83%. This is a very encouraging sign that there may be increasing efforts to hold this type of trash on ocean-going vessels until a port is reached and it can be properly off-loaded. Since 1988, the states bordering the Gulf of Mexico have reported higher than national percentages of galley wastes, indicating that, despite the downward trend, ships' galleys continue to be a source debris in the Gulf.

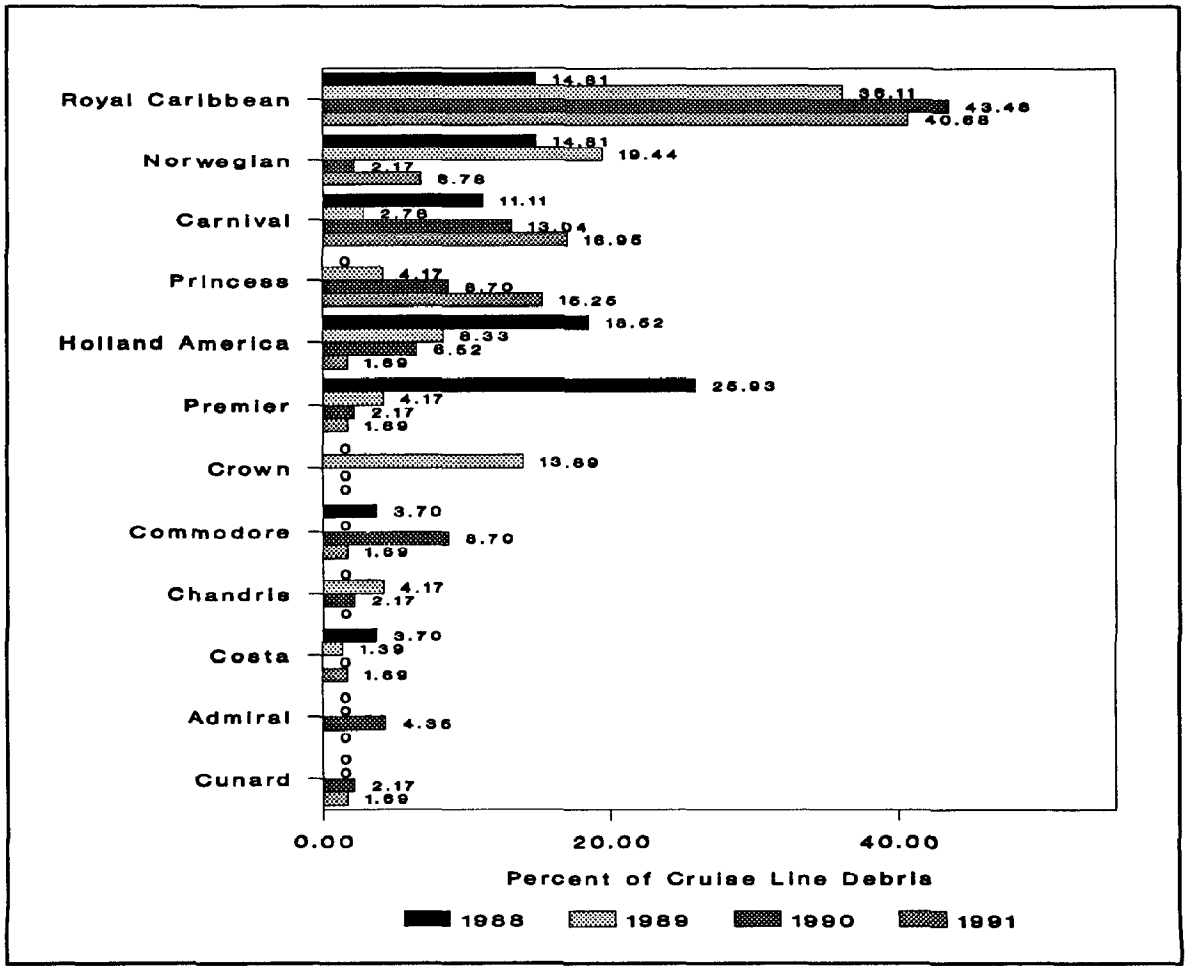
Figure 28. Trends in Galley Wastes Reported from U.S. Coastal Cleanups 1988-1991



Trends in Passenger Cruise Line Debris

In the past four years, volunteers have been diligently recording specific and detailed information about the debris they collect. Even the first data collection efforts in 1988 pointed to a rather obvious source of debris: passenger cruise lines. Company and ship names and logos embossed on items such as plastic shampoo bottles and cocktail glasses helped to point the finger at specific cruise line culprits. The cruise lines identified in 1988 as the major sources of cruise line debris remain the major offenders of 1991. Figure 29 shows the top twelve cruise lines reported as sources of debris from 1988 through 1991. Royal Caribbean continues to lead the way with over 40% of the debris identifiable to cruise lines traceable to Royal Caribbean. Norwegian and Carnival have been well-represented by their trash, while Princess seems to be headed in the wrong direction, from an optimistic low of 0% in 1988 to a disturbing 15.25% of identifiable cruise line debris. Other cruise lines whose debris was found by volunteers include Royal, Europa, Exeter, Discovery, Massachusetts Bay, Ocean, Pacquet, Scandinavian, Sea Escape, Skyward, the "Spirit of Charleston", Sundance, and Windjammer. With the increase in citizen awareness of these sources and their willingness to assist CMC in documenting any incident they witness, it will be interesting to view how public pressure will influence the amount of cruise line trash reported on our beaches in the future.

Figure 29. Trends in Cruise Line Debris Reported from U.S. Coastal Cleanups 1988-1991



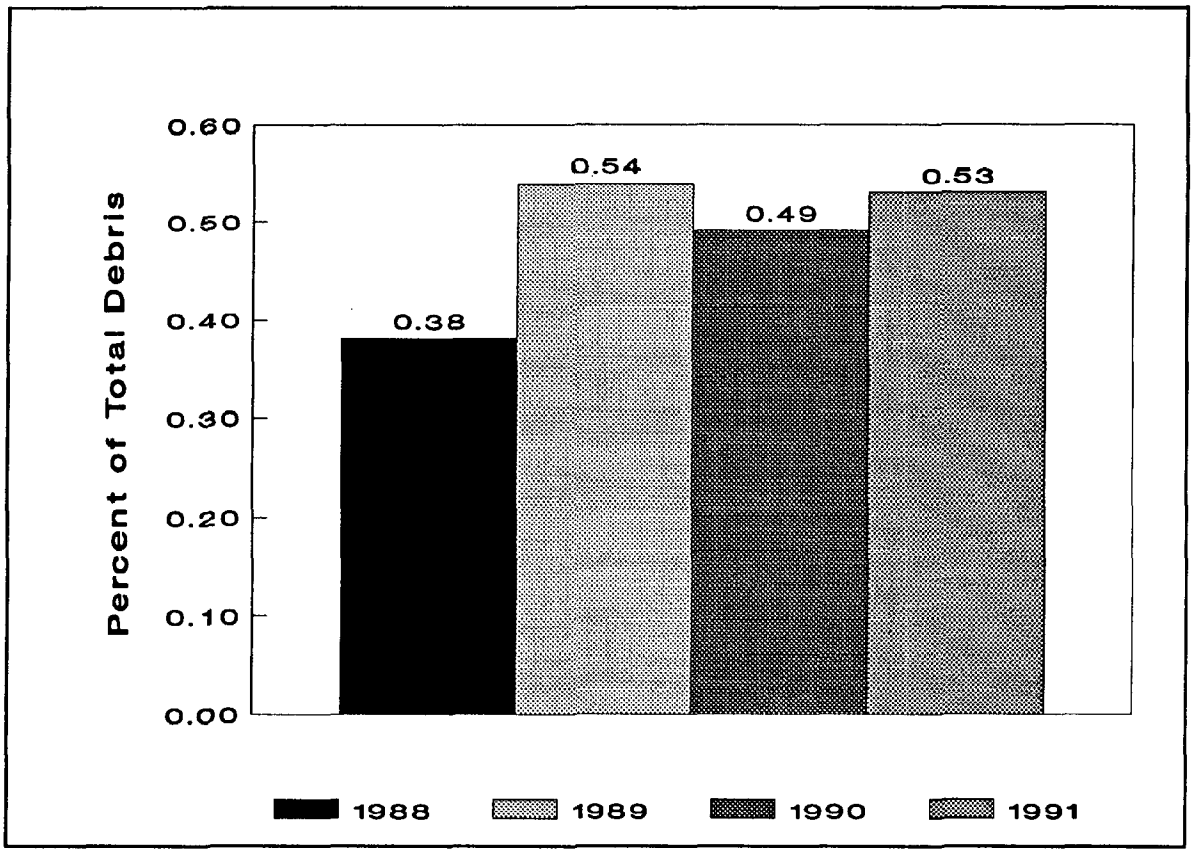
Land-based Sources

Trends in Sewage-associated Wastes

With 1992 designated as the Year of Clean Water, and with the Clean Water Act up for revision and reauthorization, attention will be drawn to the condition of the nation's sewage systems and the problems still arising from them. It appears that, after four years of data collection and analysis on the types of floatable wastes emanating from sewage systems, that there is no improvement in the way these systems handle wastes. In fact, in contrast to all ocean sources of debris, this form of land-based debris actually showed a slight *increase* (Figure 30). From 0.38% in 1988 to 0.53% in 1991, the number of sewage-associated wastes and the problems they may be indicating could be worsening. It is apparent that the provisions in the Clean Water Act may need radical revision in order to adequately combat this problem. Even if this legislation is strengthened, it will take time for these improvements to be realized. Therefore, educational efforts geared toward furthering the awareness and understanding of the problems caused by inadequate sewage are the first immediate step in reducing the amount of wastes from this source of debris.

As might be expected, the New York/New Jersey area, as well as the northeast areas of Massachusetts and Rhode Island, have historically reported high percentages of sewage-associated wastes, principally due to the antiquated sewage treatment systems in the older cities of the northeast.

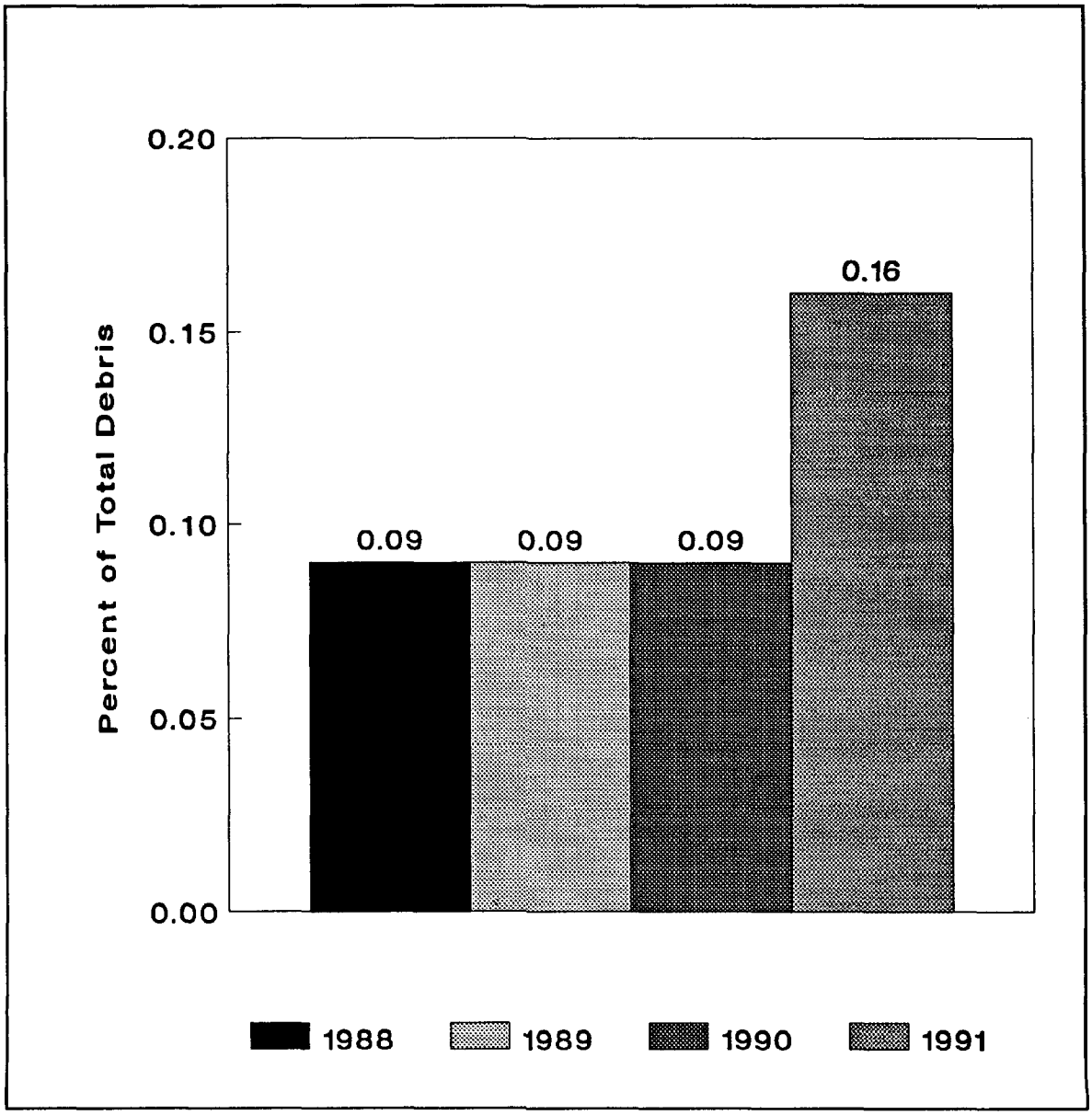
Figure 30. Trends in Sewage-associated Wastes Reported from U.S. Coastal Cleanups 1988-1991



Trends in Medical Wastes

While the finding of any medical wastes on the beach is cause for concern, this type of debris still accounts for merely 0.16% of the total debris collected (Figure 31). Concentrated medical waste wash-ups continue to be isolated incidents. It is believed that much of the debris reported as medical waste is actually finding its way to the beach through faulty or inadequate sewage systems or through storm drains. As Congress discusses revising and strengthening the Clean Water Act in 1992, it will be interesting to see the result of these changes and how or if the percentage of medical waste is affected in future cleanup analysis.

Figure 31. Trends in Medical Wastes Reported from U.S. Coastal Cleanups 1988-1991

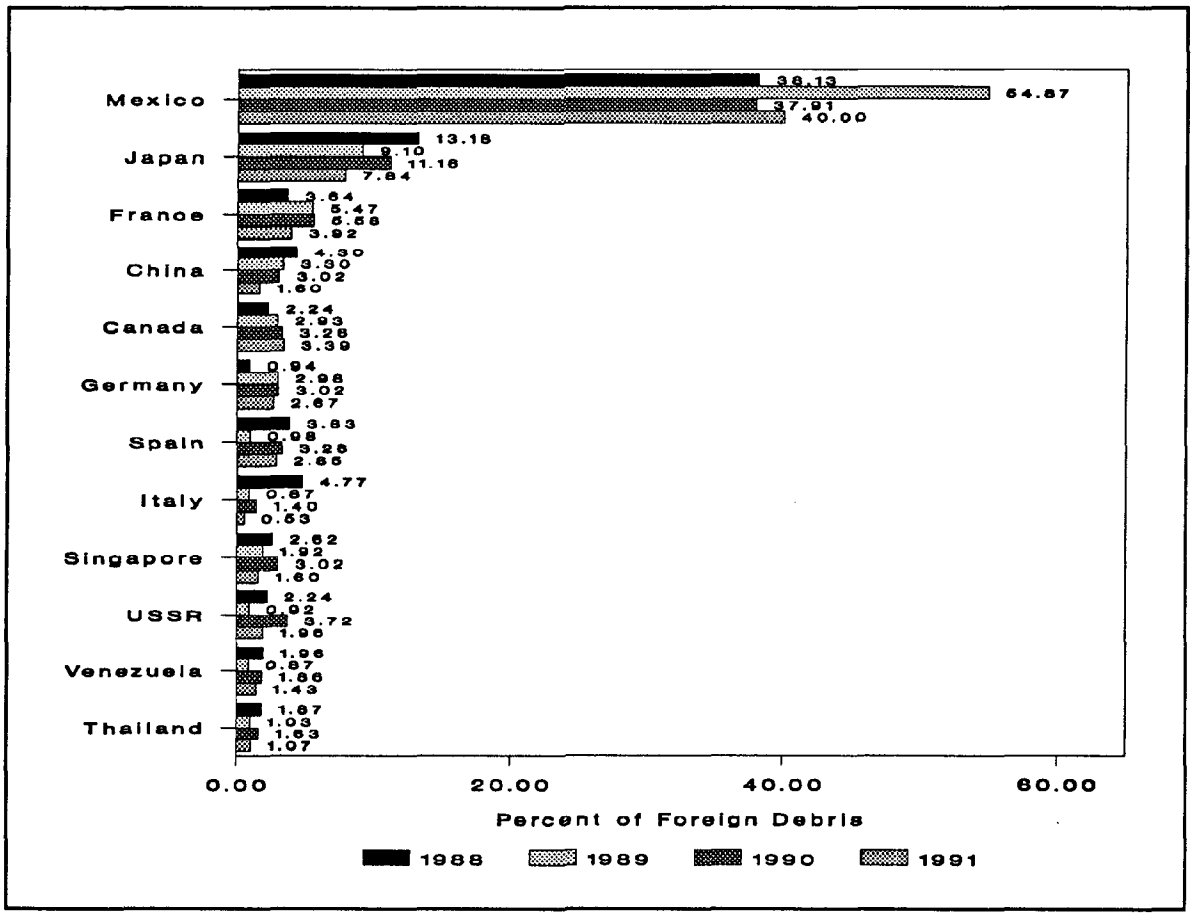


Trends in Foreign Sources of Marine Debris

The United States alone is not totally responsible for the trash found on our beaches. The contribution of foreign countries to the U.S. debris total has been constant throughout the past four years. During the 1991 cleanup in the United States, 47 different countries were represented by their debris. The countries with consistently high percentages of foreign debris reported include Mexico, Japan, France, China, and Canada. The twelve countries whose debris was reported most often over the past four years are listed in Figure 32. While debris from Mexico and Canada may travel from the coast to U.S. beaches, it is also interesting to note that three out of the top five countries (Mexico, China, and Canada) are *not* signatory to Annex V of the MARPOL treaty. Mexico, by far, leads the list, with as much as 54% of the foreign debris collected traceable to Mexico as its source. Texas bears the brunt of these "foreign imports" and it is clear that the influx of debris from Mexican land-based sources must be addressed before the Special Area designation bestowed upon the Gulf of Mexico can hope to have any effect.

The variety of countries represented in the cleanup by their debris underscores the need for global participation in stemming the flow of marine debris. It is not enough that one or two areas work diligently on this problem. All areas of the world are connected by the oceans and we must all work together to get this problem out of our own and each other's backyards.

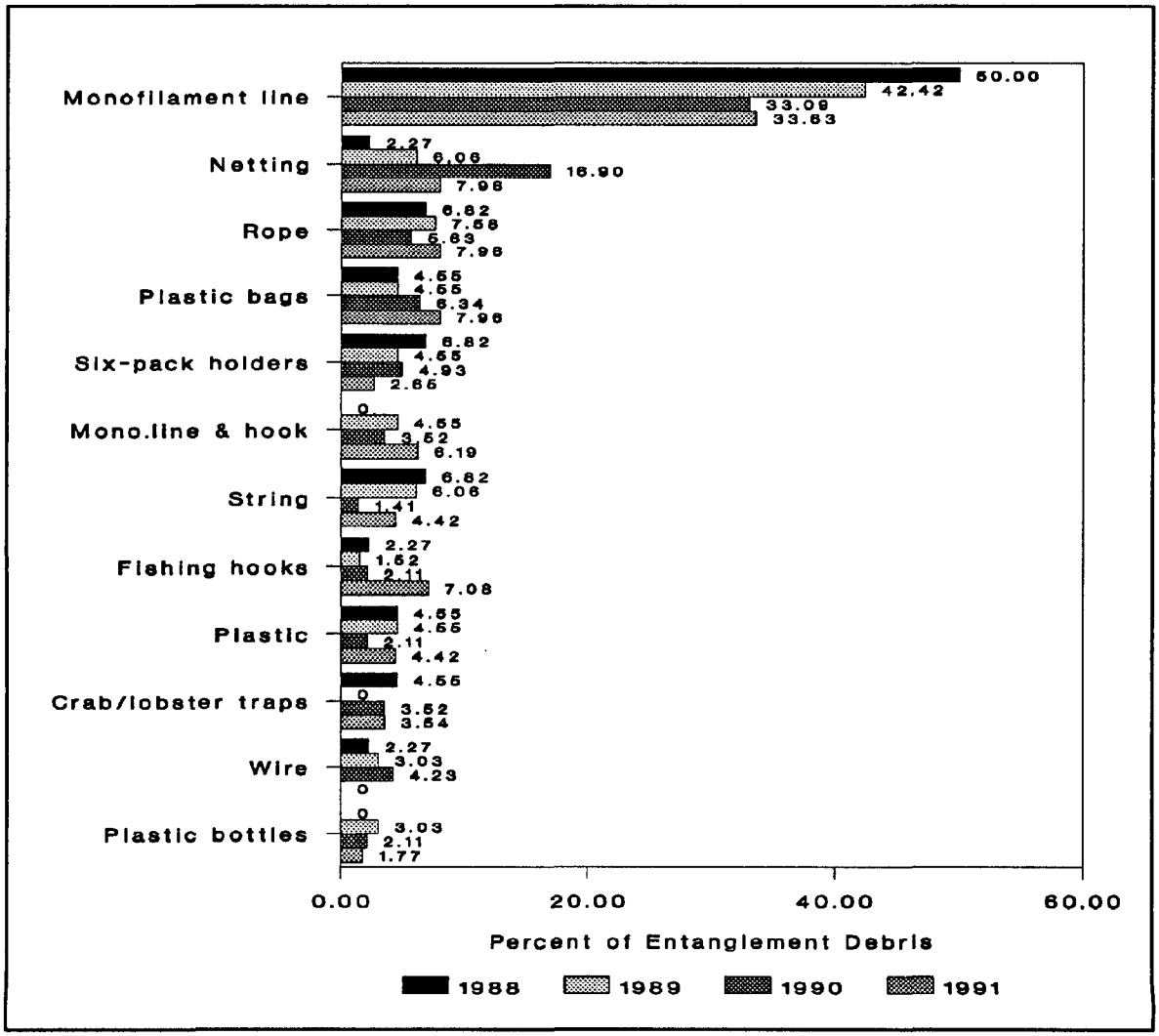
Figure 32. Trends in Foreign Debris Reported from U.S. Coastal Cleanups 1988-1991



Trends in the Impact of Marine Debris on Wildlife

Marine debris, particularly plastics, continue to pose a serious hazard to wildlife. Figure 33 illustrates the top twelve entanglement items reported over the past four years. Other items reported include plastic strapping bands, glass bottles, metal cans, cloth, plastic milk jug rings, cassette tape, plastic tape, plastic sheeting, vegetable sacks, balloon ribbon, balloons, and duct tape. In 1991, 38 cases (34%) of reported wildlife entanglements occurred due to encounters with monofilament fishing line. In 1988 this number was 22 (50%), meaning that half of all wildlife entanglement reported was due to monofilament fishing line. Hence, monofilament fishing line remains the number one hazard to wildlife. Plastic netting, plastic rope, plastic bags, and plastic six-pack holders continue to take their toll on wildlife as well. It is imperative that efforts by interest groups, as well as manufacturers, be initiated to educate marine user groups specifically about the perils of improperly discarded fishing line, net, rope, bags, and six-pack holders.

Figure 33. Trends in Debris-related Wildlife Entanglement Reported from U.S. Coastal Cleanups 1988-1991



An abundance of plastic collected from Cyprus beaches during the 1991 cleanup.

How Many, How Much, How Long?

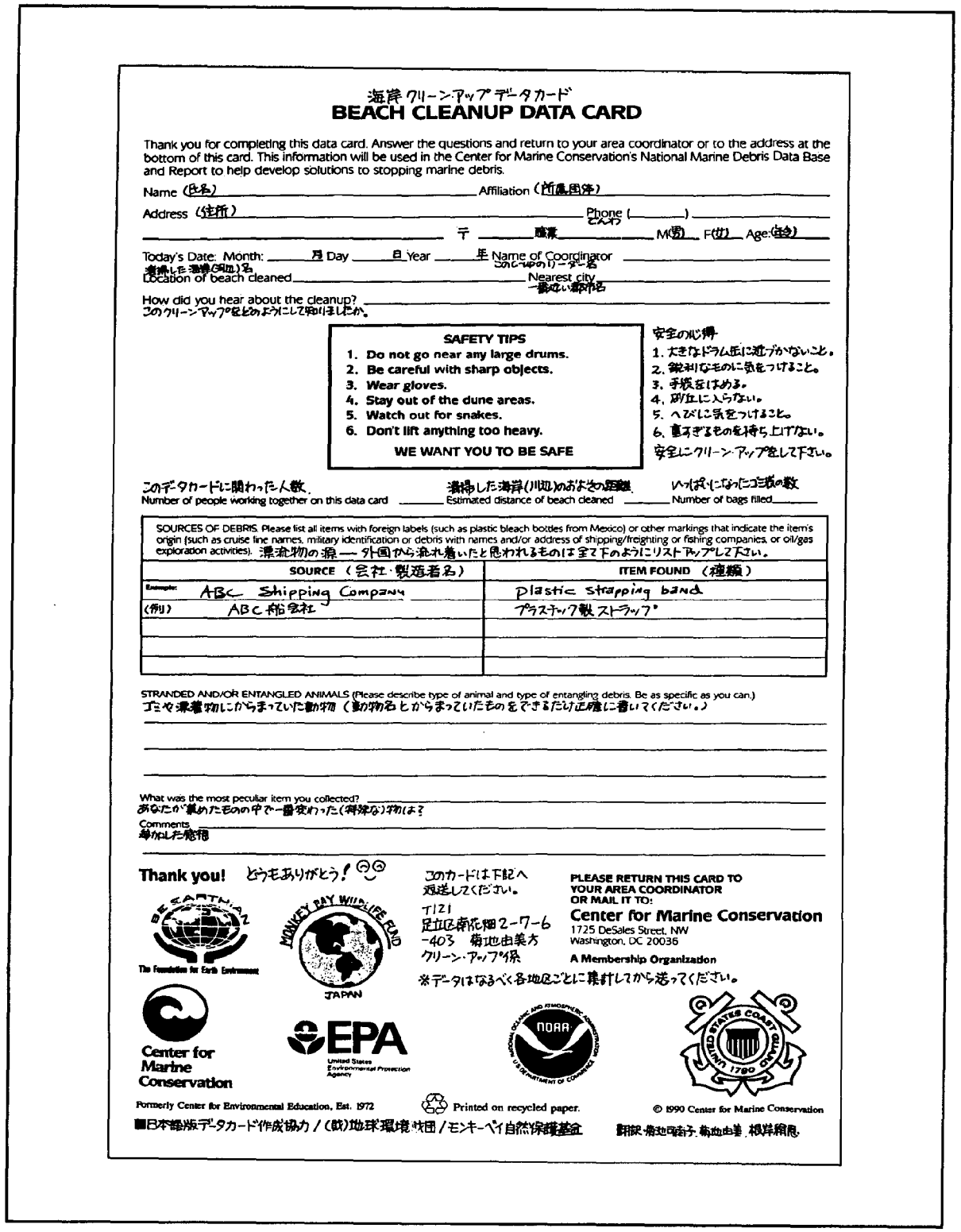
The 1991 International Coastal Cleanup was by far the largest coastal cleanup effort ever coordinated by CMC. A record number 145,950 volunteers spread over 13 countries on four continents, collected 3,706,076 pounds (1,853 tons) from 4,743 miles of coastal and inland waterway. A breakdown of these totals by each participating country is found in Table 6. Of the thirteen participating countries, Cyprus, England, Greece, Japan, the Netherlands Antilles, Norway, and the United States are signatory to Annex V of the MARPOL Treaty.

Table 6. Country-by-Country Breakdown of 1991 International Coastal Cleanup Totals

COUNTRY	NUMBER OF VOLUNTEERS	POUNDS COLLECTED	MILES OF BEACH CLEANED
BRITISH VIRGIN ISLANDS	32	1,000	1
CANADA	2,737	31,911	106
CUBA	17	320	1
CYPRUS	140	7,000	1
ENGLAND	47	4,002	12
GREECE	3,000	10,250	46
ISRAEL	1,500	600,000	42
JAPAN	6,600	90,000	150
MEXICO	265	1,440	6
NETHERLANDS ANTILLES	21	8,000	1
NORWAY	1,000	20,000	11
UNITED STATES	130,152	2,873,913	4,347
VENEZUELA	439	53,240	19
INTERNATIONAL TOTAL	**145,950**	**3,706,076**	**4,743**

But these volunteers did more than just collect the trash they found. An amazing 19,992 Beach Cleanup Data Cards were returned to CMC to be analyzed and compiled into this report. In addition to the English version of the data card (Figure 4), a Japanese version (Figure 34), a Hebrew version (Figure 35), and two Spanish versions, one for use in Mexico (Figure 36) and one for use in Puerto Rico, have been developed for use by volunteers all over the world. Both the Japanese version and the Hebrew card were the results of the translation efforts of Japan's cleanup coordinator, Yumi Kikuchi, and Israel's cleanup coordinator, Ellik Adler. The extra efforts of these individuals to make the cleanup possible in their areas deserve special recognition.

Figure 34. Data Card Used by 1991 International Coastal Cleanup Volunteers in Japan (front)



海岸クリーンアップデータカード
BEACH CLEANUP DATA CARD

Thank you for completing this data card. Answer the questions and return to your area coordinator or to the address at the bottom of this card. This information will be used in the Center for Marine Conservation's National Marine Debris Data Base and Report to help develop solutions to stopping marine debris.

Name (氏名) _____ Affiliation (所属団体) _____

Address (住所) _____ Phone (電話) (　　) _____

_____ 〒 _____ 職業 _____ M(男) F(女) Age:(年令) _____

Today's Date: Month: _____ 月 Day _____ 日 Year _____ 年 Name of Coordinator このグループのリーダー名 _____

Location of beach cleaned 清掃した海岸(河辺)名 _____ Nearest city 一番近い都市名 _____

How did you hear about the cleanup? このクリーンアップをどのようにして知りましたか。 _____

SAFETY TIPS
1. **Do not go near any large drums.**
2. **Be careful with sharp objects.**
3. **Wear gloves.**
4. **Stay out of the dune areas.**
5. **Watch out for snakes.**
6. **Don't lift anything too heavy.**

WE WANT YOU TO BE SAFE

安全の心得
1. 大きなドラム缶に近づかないこと。
2. 鋭利なものに気をつけること。
3. 手袋をはめる。
4. 砂丘に入らない。
5. へびに気をつけること。
6. 重すぎるものを持ち上げない。
安全にクリーンアップをして下さい。

このデータカードに関わった人数 Number of people working together on this data card _____ 清掃した海岸(川辺)のおよその距離 Estimated distance of beach cleaned _____ いっぱいになったゴミ袋の数 Number of bags filled _____

SOURCES OF DEBRIS. Please list all items with foreign labels (such as plastic bleach bottles from Mexico) or other markings that indicate the item's origin (such as cruise line names, military identification or debris with names and/or address of shipping/freighting or fishing companies, or oil/gas exploration activities). 漂流物の源 — 外国から流れ着いたと思われるものは全て下のようにリストアップして下さい。

SOURCE (会社・製造者名)	ITEM FOUND (種類)
Example: ABC Shipping Company	Plastic strapping band
(例) ABC船会社	プラスチック製ストラップ

STRANDED AND/OR ENTANGLED ANIMALS (Please describe type of animal and type of entangling debris. Be as specific as you can.)
ゴミや漂着物にからまっていた動物 (動物名とからまっていたものをできるだけ正確に書いてください。)

_____

_____

_____

What was the most peculiar item you collected? あなたが集めたものの中で一番変わった(特殊な)物は? _____

Comments 参加した感想 _____

Thank you! どうもありがとう! ☺

このカードは下記へ
返送してください。

〒121
足立区南花畑2-7-6
-403 菊地由美方
クリーン・アップ係

PLEASE RETURN THIS CARD TO YOUR AREA COORDINATOR OR MAIL IT TO:
Center for Marine Conservation
1725 DeSales Street, NW
Washington, DC 20036
A Membership Organization

※データはなるべく各地区ごとに集計してから送ってください。

The Foundation for Earth Environment

MONKEY BAY WILDLIFE FUND JAPAN

Center for Marine Conservation

EPA United States Environmental Protection Agency

NOAA

UNITED STATES COAST GUARD 1790

Formerly Center for Environmental Education, Est. 1972

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翻訳・菊地由美子, 菊地由美, 根岸絹恵

Figure 34. Data Card Used by 1991 International Coastal Cleanup Volunteers in Japan (back)

ITEMS COLLECTED

You may find it helpful to work with a buddy as you clean the beach, one of you picking up trash and the other taking notes. An easy way to keep track of the items you find is by making tick marks. The box is for total items; see sample below.

Example: (例) egg cartons (タマゴの容器) 正正正一 TOTAL 16

cups (カップ) 正正正正一 TOTAL 22

PLASTIC (プラスチック・ビニール)

	Total number of items		Total number of items
bags (袋)		fishing nets (網)	
food bags/wrappers (食品用・包装用)		hard hats (ビニール帽)	
trash (ゴミ袋)		light sticks (網についているふしぎな棒)	
salt (塩袋)		pieces (破片)	
other bags (その他ビニール袋)		pipe thread protector	
bottles: (プラボトル)		rope (ロープ)	
beverage, soda (ソフトドリンク)		sheeting:	
bleach, cleaner (漂白剤・クリーナー)		longer than 2 feet (60cm以上)	
milk/water gal jugs (牛乳・水類)		2 feet or shorter (60cm以下)	
oil, lube (油類)		6-pack holders (缶をまとめるビニール製の輪)	
other bottles (その他のプラボトル)		strapping bands (ビニールのひも)	
buckets (カゴ)		straws (ストロー)	
caps, lids (ふた)		syringes (注射器, 針)	
cigarette filters (タバコのフィルター)		tampon applicators (タンポンのアプリケーター)	
cigarette lighters (ライター)		toys (玩具)	
cups, utensils (カップ・食品類)		vegetable sacks (野菜包装用)	
diapers (紙おむつ)		"wrist protection" rings (放護保護用リング)	
fishing line (釣糸)		other plastic (specify) (その他具体的に)	
fishing lures, floats (釣のルアー・浮球)			

STYROFOAM® (発泡スチロール)
(or other plastic foam)

buoys (ブイ)		packaging material (その他の容器)	
cups (カップ)		pieces (かけら・破片)	
egg cartons (タマゴの容器)		plates (皿)	
fast food containers (ハンバーガー等の容器)		other Styrofoam® (specify) (その他具体的に)	
meat trays (食品トレイ)			

FOLD ALONG THIS LINE

GLASS (ガラス)

bottles/jars (ビン)		fluorescent light tubes (蛍光灯)	
beverage bottles (飲料用)		light bulbs (電球)	
food jars (食品用)		pieces (かけら・破片)	
other bottles/jars (その他のビン容器)		other glass (specify) (その他具体的に)	

RUBBER (ゴム)

balloons (風船)		tires (タイヤ)	
condoms (コンドーム)		other rubber (specify) (その他具体的に)	
gloves (ゴム手袋)			

METAL (金属)

bottle caps (ビン等のふた)		55 gallon drums: (廃棄物の入ったドラム缶)	
cans (缶)		rusty (さびついているもの)	
aerosol (スプレー缶)		new (新しいもの)	
beverage (飲料缶)		pieces (破片)	
food (食品缶)		pull tabs (プルタブ)	
other (その他)		wire (ワイヤー)	
crab/fish traps (釣り具)		other metal (specify) (その他具体的に)	

PAPER (紙)

bags (紙袋)		newspapers/magazines (新聞・雑誌)	
cardboard (ボール紙)		pieces (紙切れ)	
cartons (ダンボール)		plates (紙皿)	
cups (紙コップ)		other paper (specify) (その他具体的に)	

WOOD (木)
(leave driftwood on the beach)

crab/lobster traps (ロブスター捕りのわなかご)		pallets (運搬台用)	
crates (木箱)		other wood (specify) (その他具体的に)	
lumber pieces (材木)			

CLOTH (布)

clothing/pieces (服・その他)

Remember to turn the card over and fill out your name and address and to record sources and entangled wildlife!

Figure 35. Data Card Used by 1991 International Coastal Cleanup Volunteers in Israel (front)

מבצע ניקוי חופים – טופס נתונים

אנו מודים לך על השתתפותך במבצע ניקוי החופים.
כדי שנוכל להפיק את מירב התועלת מהמבצע, אנו מבקשים ממך למלא טופס זה תוך כדי איסוף האשפה. המידע שיאסף מטפסים אלה יסייע לנו בחיפוש אחר הדרך הטובה למניעת זיהום החוף באשפה. אנא, ענה על השאלות ובצע ספירת פריטי האשפה בהתאם להנחיות.
כדאי לבצע את הניקוי בקבוצות של שניים או שלושה כאשר אחד עורך את הרישום והשאר ממלאים את השקית בפריטי אשפה.

שם _____ גיל _____ עובד/לומד ב- _____

כתובת _____ _____ _____ _____
ישוב רחוב מס' מיקוד טלפון

הנחיות בטיחות

1. הישמר מפריטים חדים
2. השתמש בכפפות
3. אל תרים פריטים כבדים
4. הישמר מבעלי חיים ארסיים
5. נעל נעליים וחבוש כובע

תאריך הניקוי _____ שם האחראי לניקוי _____

שם החוף _____ הישוב הקרוב לחוף _____

מספר האנשים שהשתתפו במילוי טופס זה _____ אורך החוף שנוקה _____

מספר שקיות אשפה שמולאו _____

אם נתקלת בבעלי חיים (חיים או מתים) שהסתובבו בפריטי אשפה אנא ציין אילו בעלי חיים ובאיזה סוג אשפה הסתבכו

_____

_____

מהו הפריט המוזר ביותר שמצאת ? _____

_____

הערות _____

_____

אנו מודים לך על שיתוף הפעולה !

אנא מסור את הטופס לאחראי לניקוי או שלח אותו לפי הכתובת:

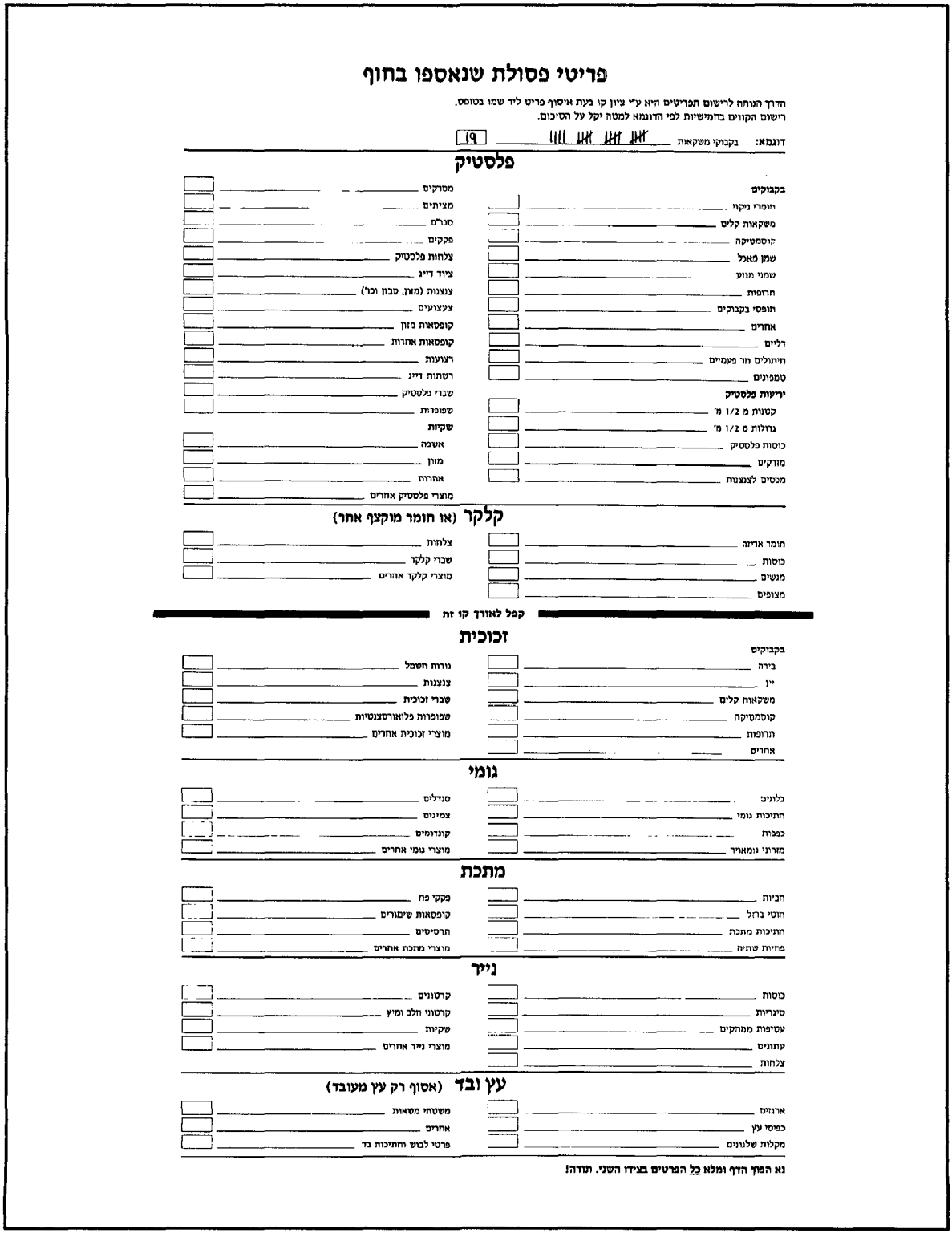
אגף ים וחופים
המשרד לאיכות הסביבה
ת.ד. 6234
ירושלים 91061

עזרה – נשמור על חופינו נקיים !

המשרד לאיכות הסביבה

חקר ימים ואגמים

Figure 35. Data Card Used by 1991 International Coastal Cleanup Volunteers in Israel (back)



פריטי פסולת שנאספו בחוף

הדרך הנוחה לרישום תפריטים היא ע"י ציון קו בעת איסוף פריט ליד שמו בטופס.
רישום הקודים בחמישיות לפי הדוגמא למטה יקל על הסיכום.

דוגמא: בקבוקי משקאות 19

פלסטיק

בקבוקים
- יוגורט ניקוי
- משקאות קלים
- קוסמטיקה
- שמן מאכל
- שמני מנוע
- חרופות
- חופסי בקבוקים
- אחרים
- דליים
- חיתולים חד פעמיים
- טמפונים

יריעות פלסטיק
- קטנות מ 1/2 מ'
- גדולות מ 1/2 מ'
- כוסות פלסטיק
- מזרקים
- מכסים לצנצנות
- מסרקים
- מציתים
- סכו"ם
- פקקים
- צלחות פלסטיק
- ציוד דיג
- צנצנות (מזון, טבון וכו')
- צעצועים
- קופסאות מזון
- קופסאות אחרות
- רצועות
- רשתות דיג
- שברי פלסטיק
- שפופרות

שקיות
- אשפה
- מזון
- אחרות
- מוצרי פלסטיק אחרים

קלקר (או חומר מוקצף אחר)

- תומר אריזה
- כוסות
- מנשים
- מצופים
- צלחות
- שברי קלקר
- מוצרי קלקר אחרים

קפל לאורך קו זה

זכוכית

בקבוקים
- בירה
- יין
- משקאות קלים
- קוסמטיקה
- תרופות
- אחרים
- נורות חשמל
- צנצנות
- שברי זכוכית
- שפופרות פלואורסצנטיות
- מוצרי זכוכית אחרים

גומי

- בלונים
- חתיכות גומי
- כפפות
- מזרני נומאריר
- סנדלים
- צמיגים
- קונדומים
- מוצרי גומי אחרים

מתכת

- חביות
- חוטי ברזל
- חתיכות מתכת
- פחיות שתיה
- פקקי פח
- קופסאות שימורים
- תרסיסים
- מוצרי מתכת אחרים

נייר

- כוסות
- סיגריות
- עטיפות ממתקים
- עתונים
- צלחות
- קרטונים
- קרטוני חלב ומיץ
- שקיות
- מוצרי נייר אחרים

עץ ובד (אסוף רק עץ מעובד)

- ארגזים
- כפיסי עץ
- מקלות שלטונים
- משטחי משאות
- אחרים
- פרטי לבוש וחתיכות בד

נא הפוך הדף ומלא כל הפרטים בצידו השני. תודה!

Figure 36. Data Card Used by 1991 International Coastal Cleanup Volunteers in Mexico (front)

TARJETA DE DATOS PARA LA LIMPIEZA DE PLAYAS

Gracias por rellenar esta tarjeta de datos. Conteste las preguntas y devuélvala al coordinador de su área o envíela a la dirección que se encuentra al fin de esta tarjeta. Esta información se utilizará en la Sede Nacional de Datos sobre Desperdicios Marinos del Centro de Educación Ambiental con objeto de ayudar a desarrollar soluciones para acabar con los desperdicios marinos.

Nombre _____ Afilicación _____

Dirección _____ Ocupación _____ Teléfono _____

Ciudad _____ Estado _____ Zona Postal _____ M ___ F ___ Edad: _____

La fecha de hoy: Mes _____ Día _____ Año _____ Nombre del Coordinador _____

Ubicación de la playa donde se hizo la limpieza _____ Ciudad más próxima _____

¿Cómo se enteró del proyecto de la limpieza de playas? _____

Número de personas trabajando juntas en esta tarjeta de datos _____

Aproximada distancia de la playa aseada _____

Número de bolsas que se llenaron _____

CONSEJOS DE PRECAUCIÓN

1. **No se acerque a ningún tambor de tamaño grande.**
2. **Tenga cuidado con objetos afilados.**
3. **Use guantes.**
4. **Mántengase fuera de áreas donde haya dunas.**
5. **Tenga cuidado con las serpientes.**
6. **No levante nada demasiado pesado.**

QUEREMOS QUE USTED ESTÉ A SALVO

IDENTIFICACIÓN DE DESPERIDICIOS. Por favor hacer una lista de todos los productos con etiquetas extranjeras é marcas de identificación que indiquen lugar de origen (tales como Lineas dos Cruceros, Barcos Mercantes o direcciones de Compañias de Carga, Compañias de Aceite, Compañias de Pecas, etc.).

ORIGEN	ARTÍCULO RECOGIDO
Exemplo: ABC Carga Compañia	Botella de plastico

ANIMALES DESAMPARADOS Y/O ENREDADOS (Por favor describa el tipo del animal y el tipo de desperdicio que contribuyó al enredo.)

_____

_____

_____

¿Qué fue el articulo más raro que se recogió? _____

Comentarios _____

_____

POR FAVOR DEVUELVA ESTA TARJETA AL COORDINADOR DE SU ÁREA O ENVÍELA A: **Center for Marine Conservation**
1725 DeSales Street, NW
Washington, DC 20036
A Membership Organization

¡Gracias!

Center for Marine Conservation

EPA United States Environmental Protection Agency

NOAA

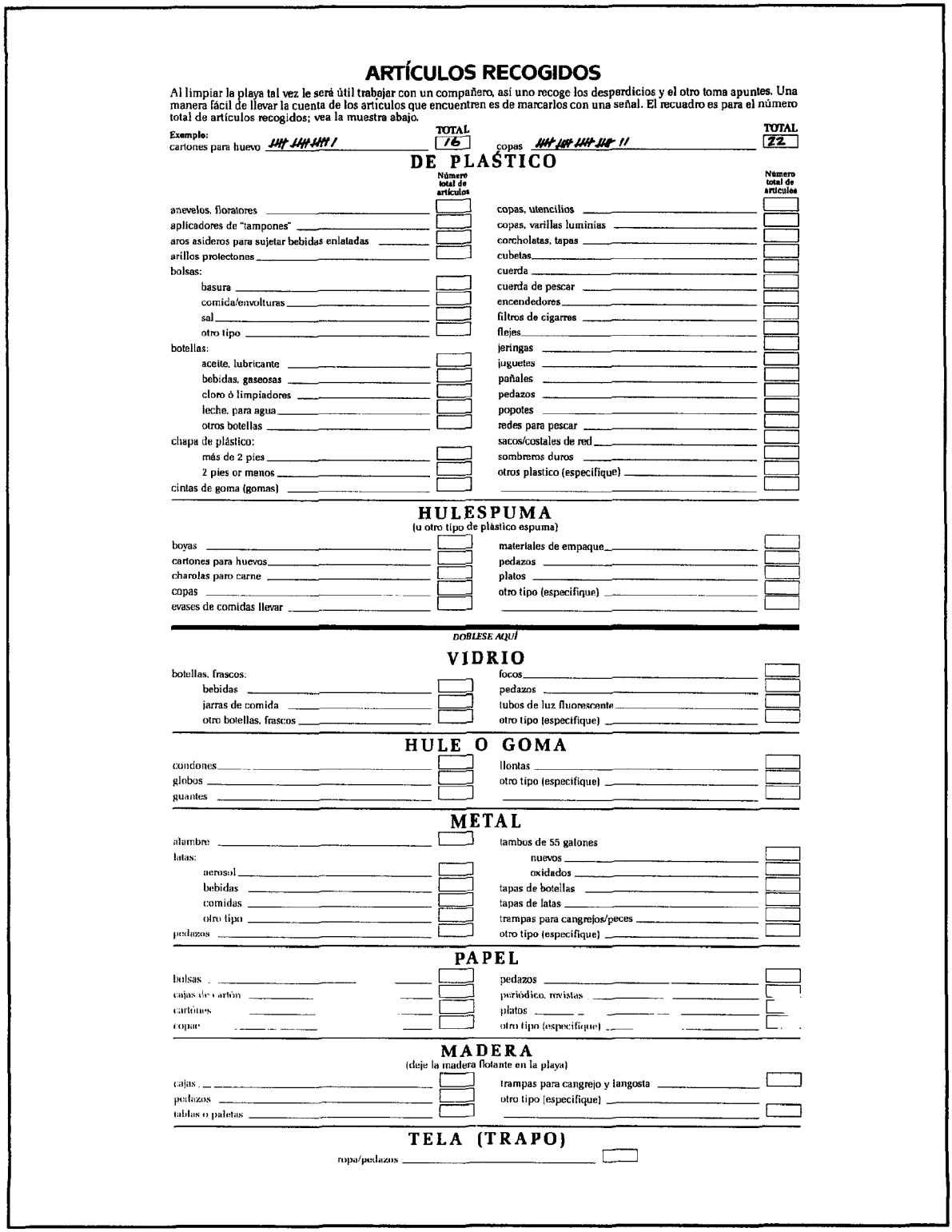
United States Coast Guard 1790

Formerly Center for Environmental Education, Est. 1972

Printed on recycled paper.

© 1991 Center for Marine Conservation
MX

Figure 36. Data Card Used by 1991 International Coastal Cleanup Volunteers in Mexico (back)



ARTÍCULOS RECOGIDOS

Al limpiar la playa tal vez le será útil trabajar con un compañero, así uno recoge los desperdicios y el otro toma apuntes. Una manera fácil de llevar la cuenta de los artículos que encuentren es de marcarlos con una señal. El recuadro es para el número total de artículos recogidos; vea la muestra abajo.

Exemplo:
cartones para huevo //// //// //// / — TOTAL 16
copas //// //// //// //// // — TOTAL 22

DE PLASTICO

Número total de artículos

- anevelos, floratores
- aplicadores de "tampones"
- aros asideros para sujetar bebidas enlatadas
- arillos protectores
- bolsas:
  - basura
  - comida/envolturas
  - sal
  - otro tipo
- botellas:
  - aceite, lubricante
  - bebidas, gaseosas
  - cloro ó limpiadores
  - leche, para agua
  - otros botellas
- chapa de plástico:
  - más de 2 pies
  - 2 pies or menos
- cintas de goma (gomas)
- copas, utencilios
- copas, varillas luminias
- corcholatas, tapas
- cubetas
- cuerda
- cuerda de pescar
- encendedores
- filtros de cigarros
- flejes
- jeringas
- juguetes
- pañales
- pedazos
- popotes
- redes para pescar
- sacos/costales de red
- sombreros duros
- otros plastico (especifique)

HULESPUMA
(u otro tipo de plástico espuma)

- boyas
- cartones para huevos
- charolas paro carne
- copas
- evases de comidas llevar
- materiales de empaque
- pedazos
- platos
- otro tipo (especifique)

DOBLESE AQUÍ

VIDRIO

- botellas, frascos:
  - bebidas
  - jarras de comida
  - otro botellas, frascos
- focos
- pedazos
- tubos de luz fluorescente
- otro tipo (especifique)

HULE O GOMA

- condones
- globos
- guantes
- llontas
- otro tipo (especifique)

METAL

- alambre
- latas:
  - aerosol
  - bebidas
  - comidas
  - otro tipo
- pedazos
- tambos de 55 galones
  - nuevos
  - oxidados
- tapas de botellas
- tapas de latas
- trampas para cangrejos/peces
- otro tipo (especifique)

PAPEL

- bolsas
- cajas de cartón
- cartones
- copas
- pedazos
- periódico, revistas
- platos
- otro tipo (especifique)

MADERA
(deje la madera flotante en la playa)

- cajas
- pedazos
- tablas o paletas
- trampas para cangrejo y langosta
- otro tipo (especifique)

TELA (TRAPO)

- ropa/pedazos

What is the Most Prevalent Type of International Debris?

During the 1991 International Coastal Cleanup, volunteers using the specialized Beach Cleanup Data Card developed by CMC detailed 5,677,793 individual debris items (Table 7). These items are broken down into eight composition categories: plastic, glass, foamed plastic (Styrofoam), rubber, paper, metal, wood, and cloth. Because the United States cleanup makes up the largest portion of the international effort, overall percentages will closely resemble those reported for the U.S. results alone. It is interesting, however, to compare percentages between countries.

Plastics accounted for 59% of the total debris collected internationally (Figure 37). Canada, England, Japan, and Mexico all reported a higher percentage of plastics than the international figure (Figure 38). In all areas, with the exception of Cuba, plastics made up the highest percentage of debris. This supports previous findings that plastics are indeed the number one problem in the marine environment, a problem that is obviously not specific to any one part of the world.

Figure 37. Percent Composition of Debris Reported During 1991 International Coastal Cleanups

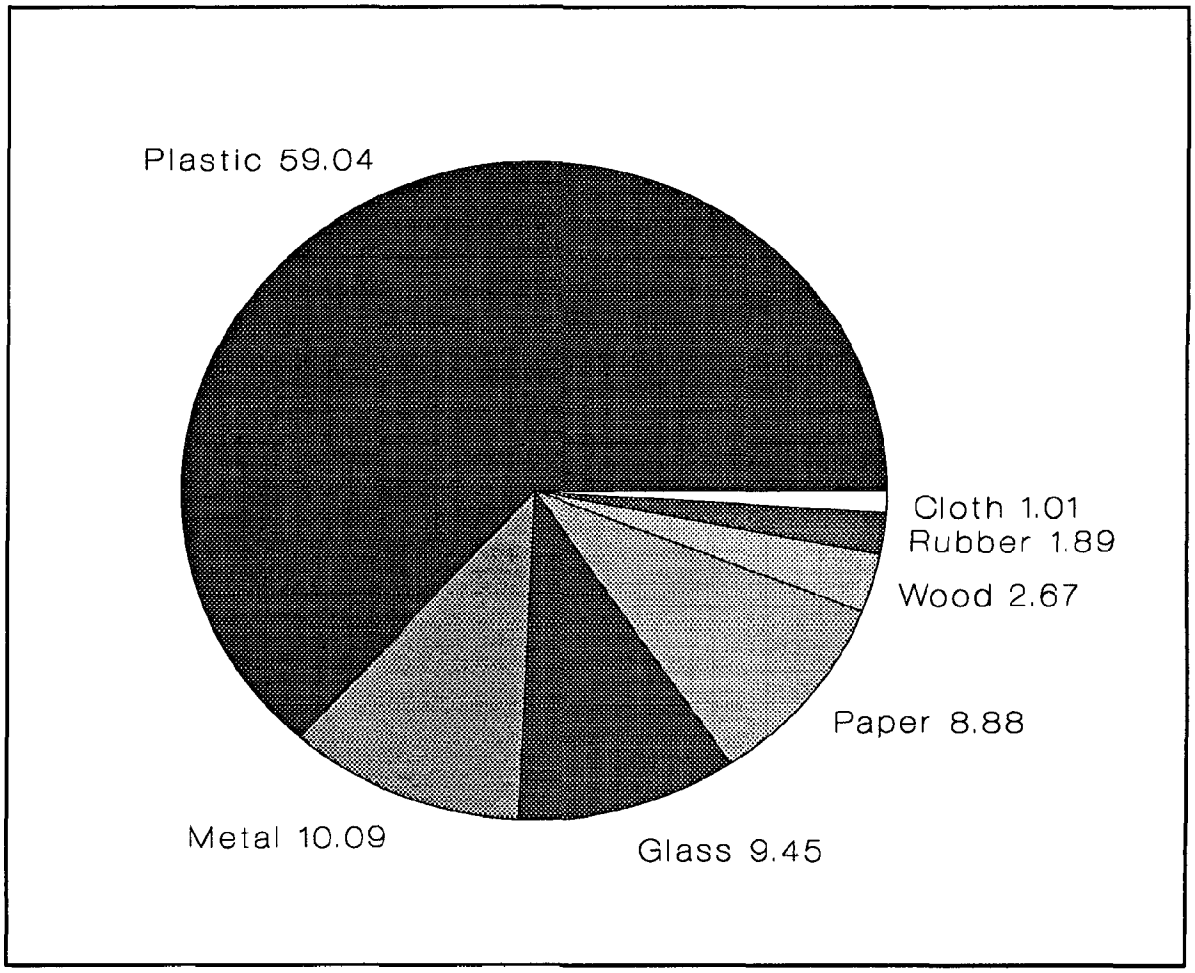


Table 7. Total Number of Debris Items Collected During 1991 International Coastal Cleanups

PLASTIC	
Bags:	
food	240,095
salt	17,070
trash	48,088
other	92,930
Bottles:	
beverage	130,334
bleach	25,392
milk/water	35,841
oil/lube	27,636
other	50,881
Buckets	11,294
Caps/lids	231,738
Cigarette butts	967,873
Cigarette lighters	37,610
Cups/utensils	126,847
Diapers	13,162
Fishing line	36,840
Fishing nets	11,235
Floats/lures	14,122
Hard hats	2,679
Light sticks	17,598
Pieces	375,260
Pipe thread protector	8,186
Rope	106,752
Sheeting:	
longer than 2 feet	8,004
2 feet or shorter	17,525
Six-pack holders	35,623
Strapping bands	30,282
Straws	194,790
Syringes	8,487
Tampon applicators	22,440
Toys	24,033
Vegetable sacks	8,073
Write protection rings	9,290
Other	112,285
STYROFOAM	
Buoys	17,359
Cups	129,421
Egg cartons	8,867
Fast-food containers	33,063
Meat trays	19,888
Packaging	53,340
Pieces	330,325
Plates	25,878
Other	30,099
GLASS	
Bottles:	
beverage	209,297
food	26,413
other	23,609
Fluorescent light tubes	4,648
Light bulbs	12,195
Pieces	235,284
Other	24,886
RUBBER	
Balloons	37,197
Condoms	7,143
Gloves	11,989
Tires	8,792
Other	42,124
METAL	
Bottle caps	116,322
Cans:	
aerosol	19,743
beverage	215,504
food	19,885
other	18,125
Crab/lobster traps	4,099
55 gallon drums:	
rusty	4,237
new	866
Pieces	46,858
Pull tabs	54,141
Wire	19,426
Other	53,571
PAPER	
Bags	42,186
Cardboard	35,118
Cartons	26,130
Cups	48,746
Newspapers	28,388
Pieces	239,533
Plates	22,886
Other	61,350
WOOD	
Crab/lobster traps	7,482
Crates	3,359
Lumber	97,248
Pallets	5,299
Other	38,112
CLOTH (clothing pieces)	57,067

TOTAL - 5,677,793

The British Virgin Islands, Cuba, Cyprus, the Netherlands Antilles, and Venezuela all had high percentages of bottles and associated goods (Figure 39), due to the large numbers of metal bottle caps and metal beverages, which accounts for the lower percentage of plastic in these countries.

Figure 38. Plastic Debris Reported from 1991 International Coastal Cleanups

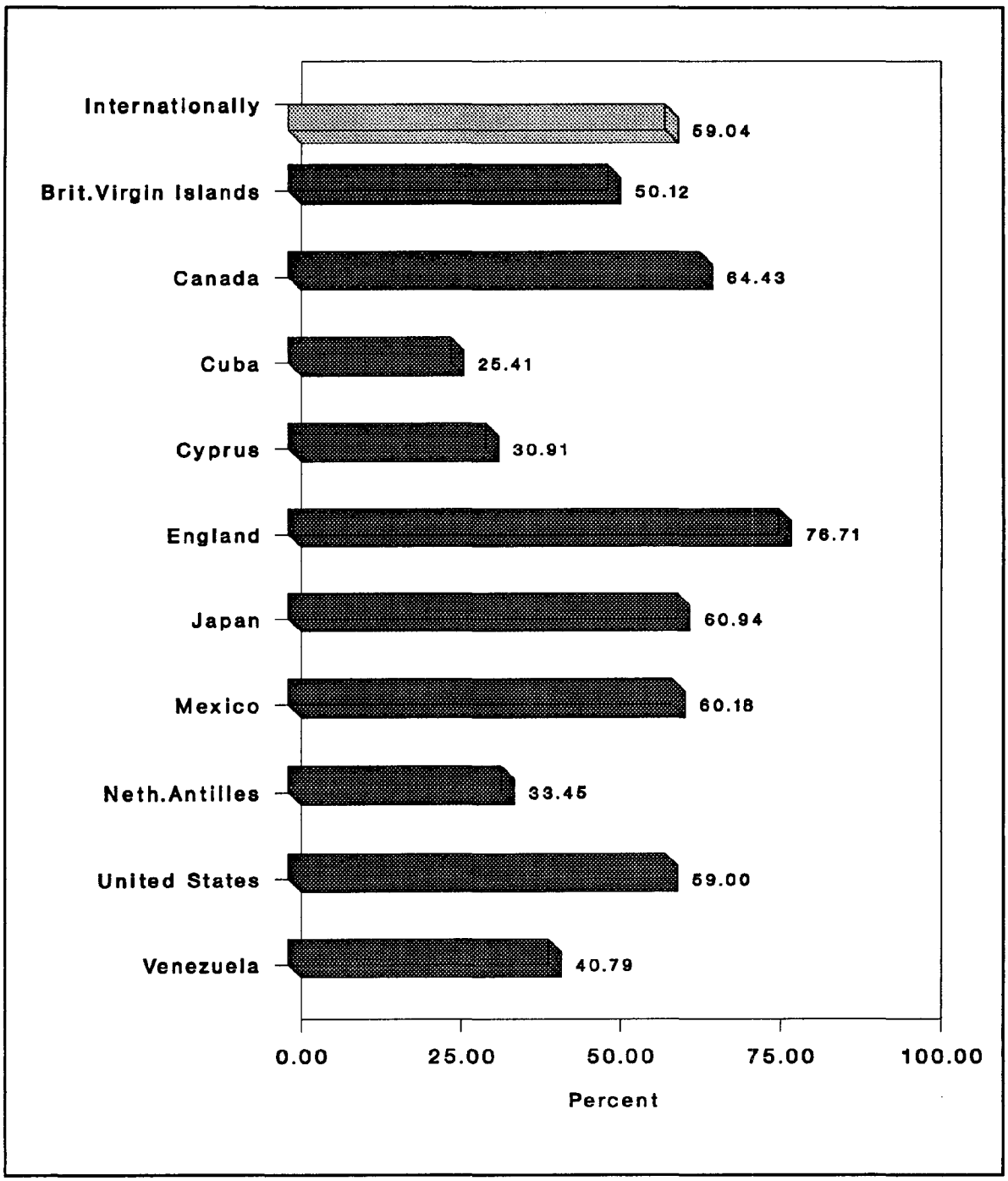
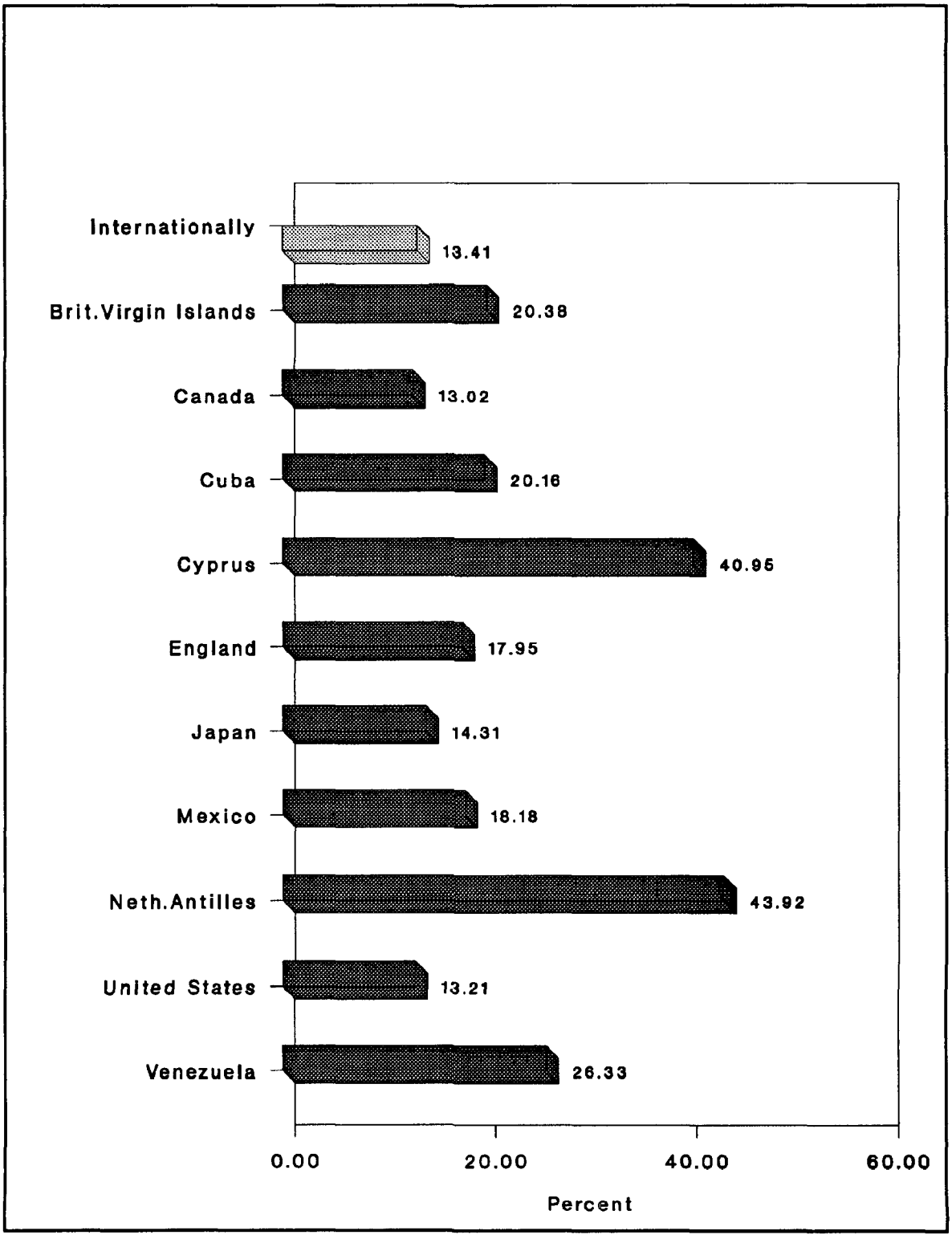


Figure 39. Bottles and Associated Goods Reported from 1991 International Coastal Cleanups



The International Dirty Dozen

The twelve most commonly found debris items, or the "Dirty Dozen" accounted for over 61% of the trash collected. Cigarette butts were by far the most abundant debris item recorded, accounting for over 17% of the total debris. By removing these twelve items from international beaches, we would see a reduction of approximately two-thirds of the debris now reported. While the International Dirty Dozen provides an overview of the trash collected, it is important that each participating country scrutinize their data to determine specific problem areas that should be addressed.

Rank	Debris Item	Total Number Reported	Percent of Total Debris Collected
1.	cigarette butts	967,873	17.05
2.	plastic pieces	375,260	6.61
3.	foamed plastic pieces	330,325	5.82
4.	plastic food bags/wrappers	240,095	4.23
5.	paper pieces	239,533	4.22
6.	glass pieces	235,284	4.14
7.	plastic caps/lids	231,738	4.08
8.	metal beverage cans	215,504	3.80
9.	glass beverage bottles	209,297	3.69
10.	plastic straws	194,790	3.43
11.	plastic beverage bottles	130,334	2.30
12.	foamed plastic cups	129,421	2.30
	TOTAL	3,499,454	61.63

The above litter items are often associated with litter generated by beach visitors. Another possibility is that this is street litter that has been washed into inland waterways and has been carried to coastal areas. Additional items commonly reported by volunteers internationally include:

13.	plastic cups/utensils	126,847
14.	metal bottle caps	116,322
15.	plastic rope	106,752
16.	lumber pieces	97,248
17.	miscellaneous plastic bags	92,930
18.	clothing pieces	57,067
19.	metal pull tabs	54,141
20.	foamed plastic packaging	53,340

Bottles and Associated Goods

Internationally, the percentage of debris items categorized as bottles and associated goods was 13.41% (Figure 39). Bottles and associated goods include items such as plastic and glass beverage bottles, metal beverage cans, metal bottle caps and pull tabs, and plastic six-pack holders. The areas with a higher percentage of this type of debris than the international figure were the British Virgin Islands, Cuba, Cyprus, England, Japan, Mexico, the Netherlands Antilles, and Venezuela. Of these countries, Cyprus and the Netherlands Antilles were almost *four times higher* than the international figure. The only countries with comparatively low amounts were the United States and Canada.

Sources of International Marine Debris

The sources of marine debris are as many and varied as the debris itself. As in the U.S. national analysis, these sources are broken down into two major groups: 1) ocean-based debris, which includes wastes from recreational fishing and boating activities, commercial fishing vessels, operational wastes from merchant and cargo vessels and oil/gas activities, and galley wastes from ships' kitchens or galleys; and 2) land-based debris, which includes sewage and medical wastes. Table 8 lists the numbers and percentages of items included in each category.

Table 8. Categories and Quantities of Indicator Items Reported from 1991 International Coastal Cleanups

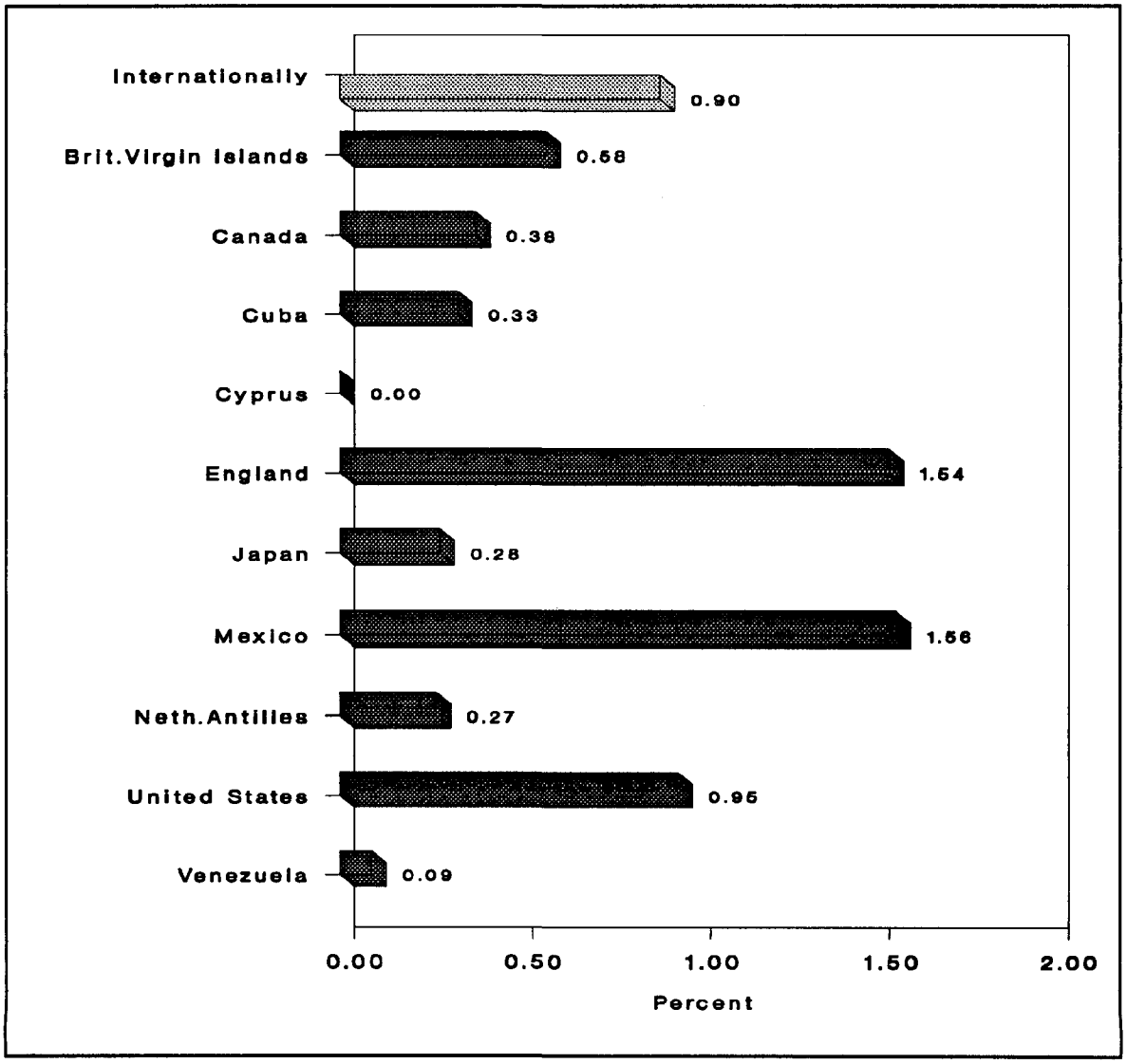
Category	Indicator Items	Total Number Reported
Recreational Fishing/ Boating Wastes	plastic fishing line	36,840
	plastic floats and lures	14,122
		50,962 (0.90%)
Commercial Fishing Wastes	plastic rope	106,752
	plastic light sticks	17,598
	foamed plastic buoys	17,359
	plastic salt bags	17,070
	rubber gloves	11,989
	plastic fishing nets	11,235
	wooden crab/lobster traps	7,483
	metal crab/fish traps	4,099
		193,585 (3.41%)
Operational Wastes	plastic strapping bands	30,282
	glass light bulbs	12,195
	write-protection rings	9,290
	plastic pipe thread protectors	8,186
	plastic sheeting longer than 2 feet	8,004
	wooden pallets	5,299
	fluorescent light tubes	4,648
	wooden crates	3,359
	plastic hard hats	2,679
		83,942 (1.48%)
Galley Wastes	plastic trash bags	48,088
	plastic milk/water gallon jugs	35,841
	plastic bleach/cleaner bottles	25,392
	foamed plastic meat trays	19,888
	foamed plastic egg cartons	8,867
	vegetable sacks	8,073
		146,149 (2.57%)
Sewage-Associated Wastes	plastic tampon applicators	22,440
	rubber condoms	7,143
		29,583 (0.52%)
Medical Waste	plastic syringes	**8,487 (0.15%)**
Total Number of Indicator Items		**512,708 (9.03%)**

Ocean-Based Sources of International Marine Debris

Recreational Fishing and Boating Wastes

Two items listed on the Beach Cleanup Data Card are classified as wastes from recreational fishing and boating activities: monofilament fishing line and plastic fishing floats and lures. Of the total debris collected, less than 1% was composed of these two items (Figure 40). England, Mexico, and the United States all reported a higher percentage of this type of debris than the international figure. While these percentages may seem small in relation to other types of debris, the items in this category, specifically monofilament fishing line, present a major hazard to marine wildlife, as well as other marine user groups. It is imperative that all regions of the world work to keep these types of debris out of global waterways.

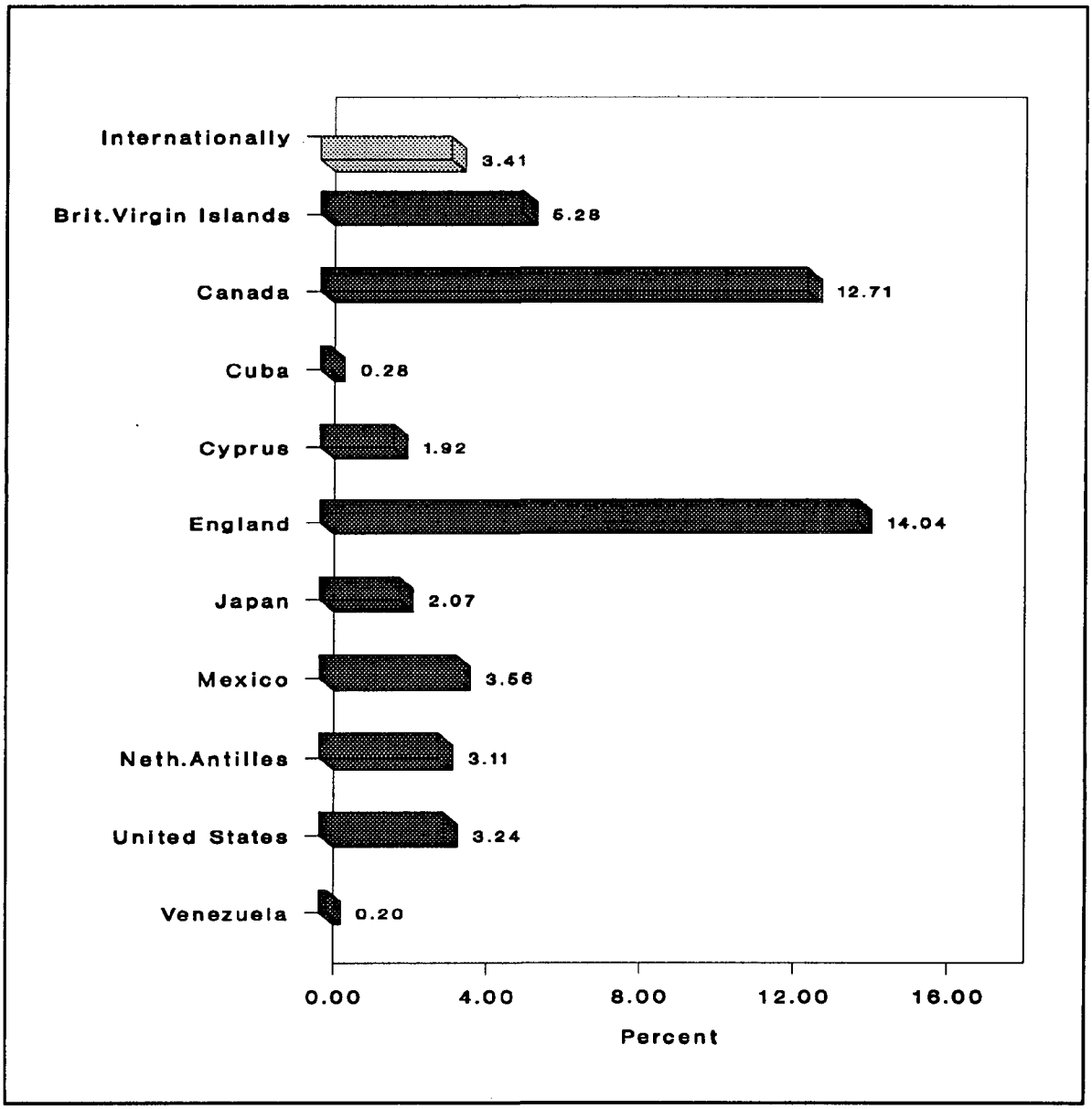
Figure 40. Recreational Fishing and Boating Wastes Reported from 1991 International Coastal Cleanups



Commercial Fishing Wastes

Internationally, approximately 3.5% of the debris reported consisted of items associated with the commercial fishing industry (Figure 41). These items include plastic rope, plastic light sticks, plastic fishing nets, plastic salt bags, foamed plastic buoys, rubber gloves, and metal and wooden crab/lobster traps. Countries that reported a percentage of this debris higher than the international percentage include the British Virgin Islands, Canada, England, and, to a lesser extent, Mexico. As in the case of recreational fishing and boating debris, while the percentage of total debris may seem negligible, carelessly discarded plastic netting and rope present potentially deadly threats to marine wildlife.

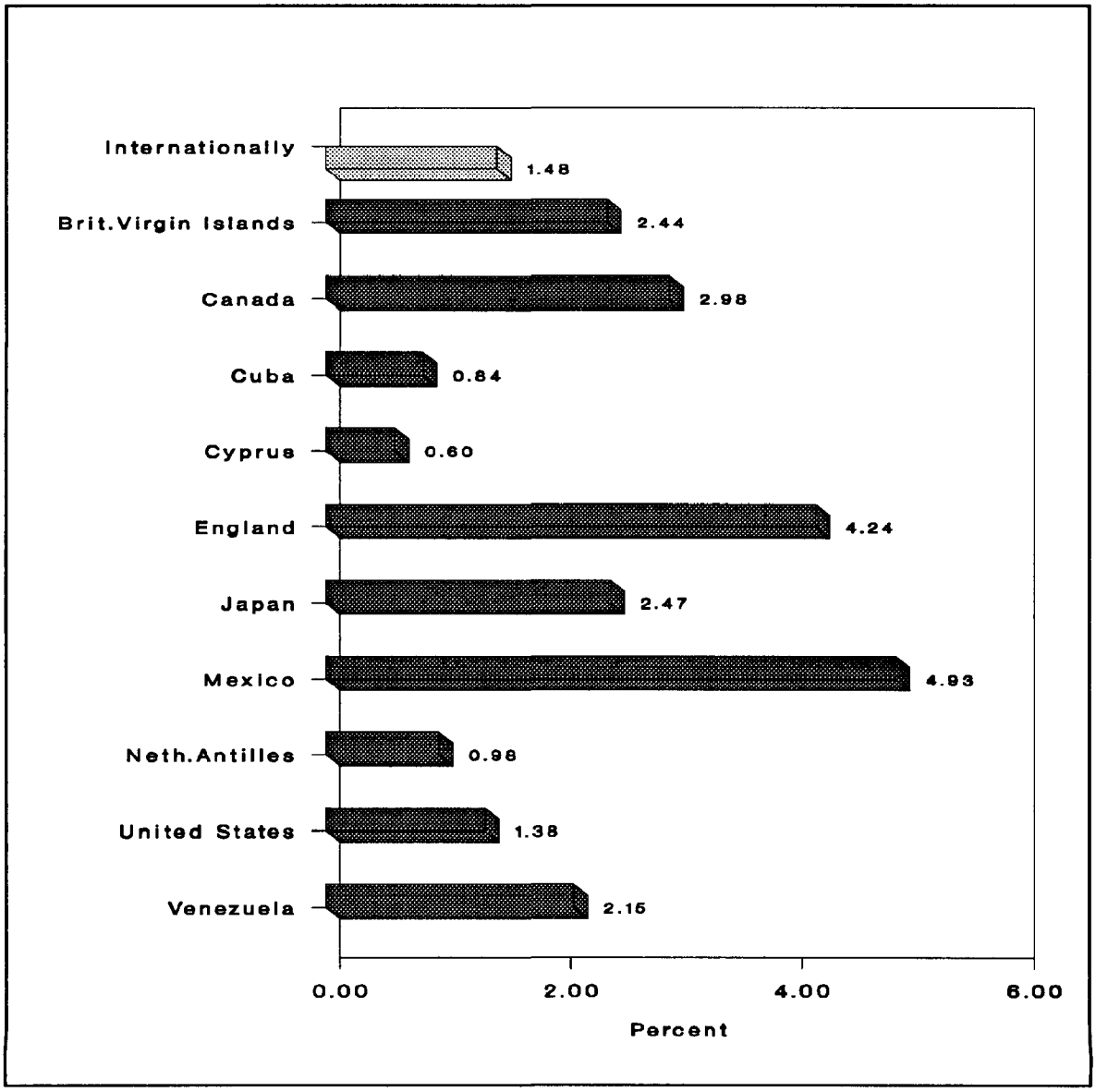
Figure 41. Commercial Fishing Wastes Reported from 1991 International Coastal Cleanups



Operational Wastes

Of the total debris collected during the 1991 International Coastal Cleanup, approximately 1.5% were wastes generated by offshore petroleum activities and items used on cargo vessels, including plastic strapping bands, plastic sheeting longer than 2 feet, plastic pipe thread protectors, plastic write-protection rings, plastic hard hats, glass light bulbs, fluorescent glass light tubes, and wooden crates and pallets. Several countries reported percentages higher than 1.5%, specifically the British Virgin Islands, Canada, England, Japan, Mexico, and Venezuela (Figure 42). Canada's percentage was twice as high as the international figure, while England and Mexico had percentages of operational debris *three times as high* as the international figure.

Figure 42. Operational Wastes Reported from 1991 International Coastal Cleanups

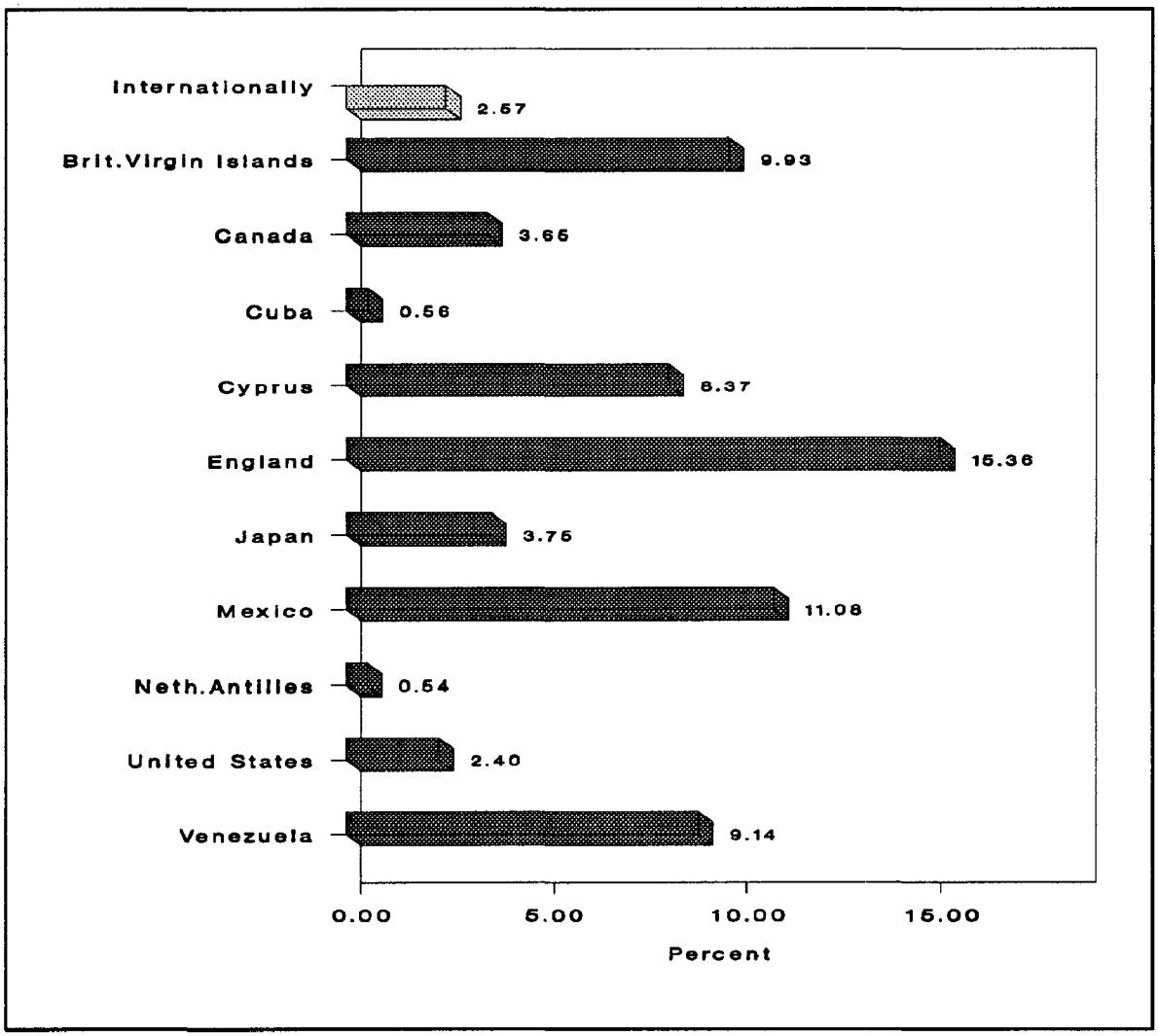


Galley-type Wastes

Wastes attributed to ships' galleys accounted for approximately 2.6% of the total debris collected internationally (Figure 43). Items in this source category include plastic trash bags, plastic milk and water jugs, plastic bleach/cleaner bottles, plastic vegetable sacks, and foamed plastic egg cartons and meat trays. The British Virgin Islands, Canada, Cyprus, England, Japan, Mexico, and Venezuela all had percentages of galley wastes higher than 2.6%. Substantially higher percentages were found in the British Virgin Islands, Cyprus, Venezuela (all three times higher); Mexico (four times higher); and England (five times higher).

Ocean-based sources seem to be a major source of debris in several geographic areas. England and Mexico were consistently higher than the international figure in all four categories of ocean-based debris, while the British Virgin Islands and Canada were higher in three of the four categories.

Figure 43. Galley-type Wastes Reported from 1991 International Coastal Cleanups

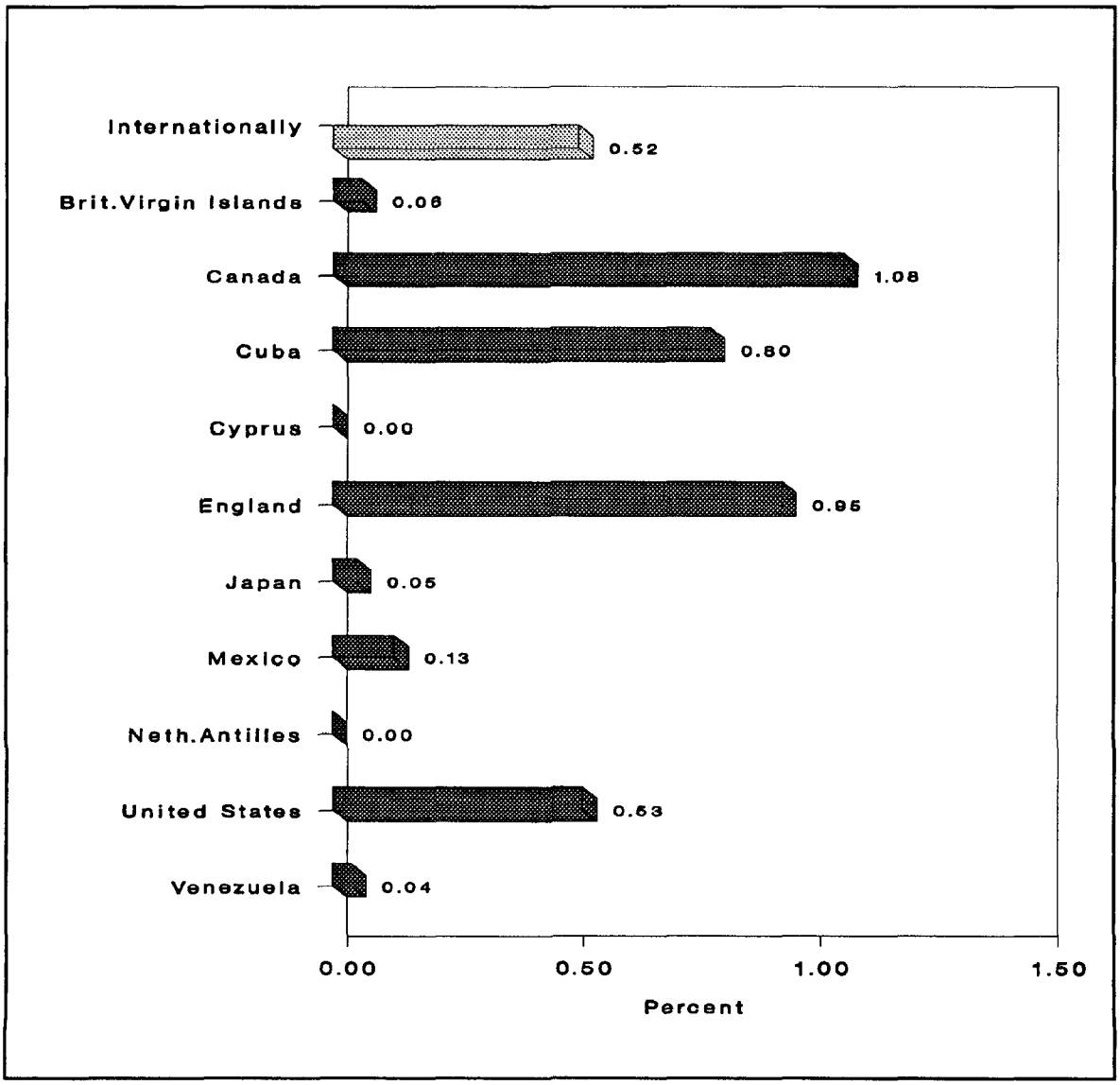


Land-based Sources of International Marine Debris

Sewage-associated Wastes

Sewage-associated wastes in the 1991 International Coastal Cleanup accounted for 0.5% of all trash collected (Figure 44). Four countries, Canada, Cuba, England, and the United States, had percentages of sewage-associated wastes (plastic tampon applicators and condoms) higher than the international figure. Canada and England had percentages almost twice as high as the international percentage. Since most of these floatable items are being transported through inadequate or non-existent sewage treatment systems, a variety of liquid and solid wastes are apparently also being discharged into area waterways as well.

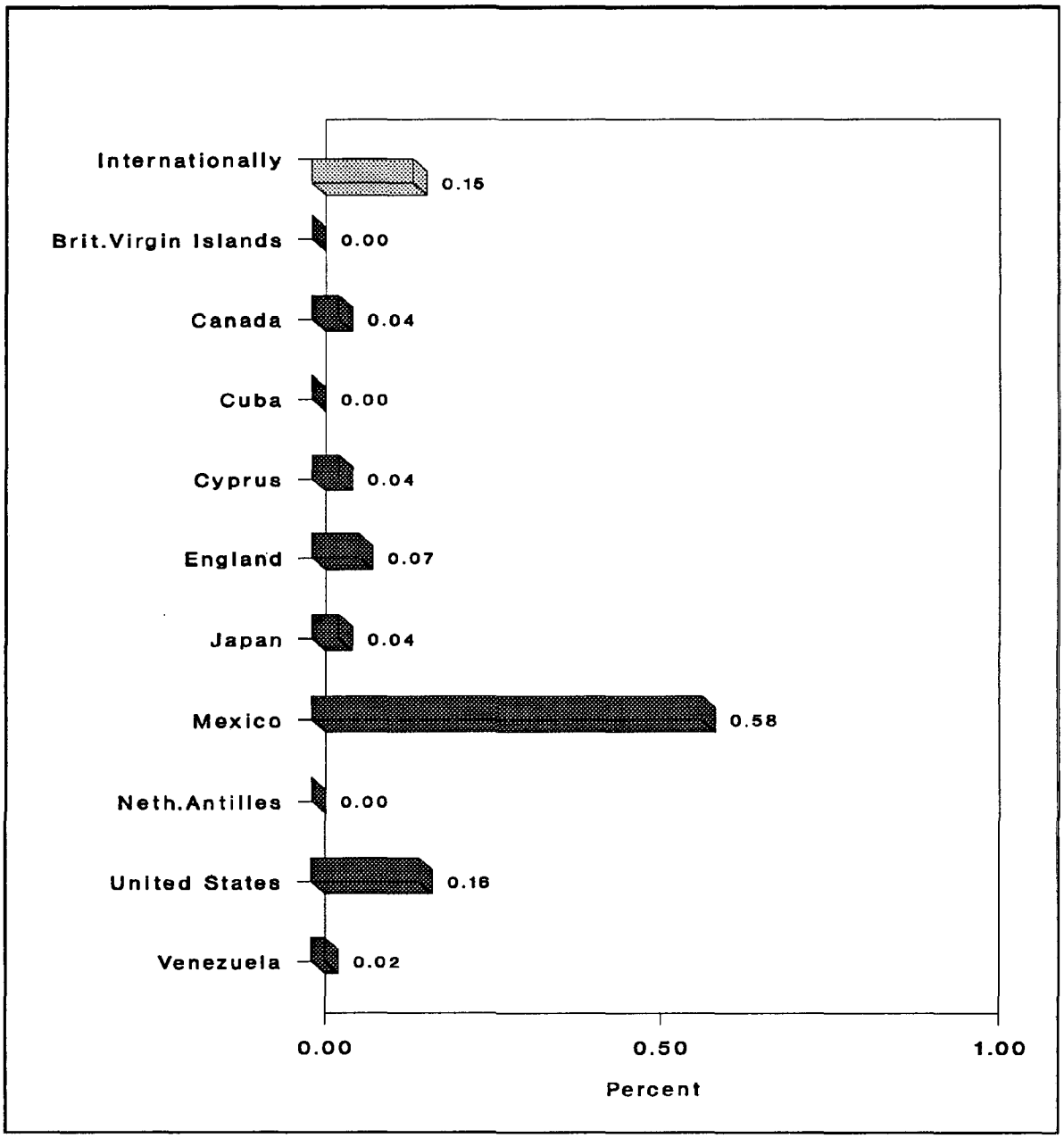
Figure 44. Sewage-associated Wastes Reported from 1991 International Coastal Cleanups



Medical Wastes

Medical wastes, as indicated by the reports of plastic syringes, accounted for only 0.15% of the total debris collected (Figure 45). The U. S. percentage was essentially equal to the international figure), while Mexico was over *three times higher* than the overall international percentage. It is interesting to note that the Caribbean countries participating in the cleanup—the British Virgin Islands, Cuba, and the Netherlands Antilles—reported *no* medical wastes on their beaches.

Figure 45. Medical Wastes Reported from 1991 International Coastal Cleanups



Foreign Sources of International Marine Debris

While it is extremely important that countries work together to clean up the trash found on the world's beaches, it is even more important that these countries are not sources of this trash. Forty-two countries were identified during the cleanup as sources of foreign debris (see Appendix 4 for a detailed listing of these findings). Of these 42 countries, only 21 are signatory to Annex V of the International MARPOL treaty, which bans the dumping of plastics into the ocean. These countries are listed below:

Australia
Belgium
Ecuador
Egypt
France
Germany
Greece
Jamaica
Japan
Iceland
Italy
Korea
Netherlands
Norway
Panama
Spain
Switzerland
United Kingdom
United States
USSR
Yugoslavia

If a vessel from any of these countries dumps any type of plastic into the ocean, or in the territorial waters of a country that is signatory, they are in violation of the international treaty.

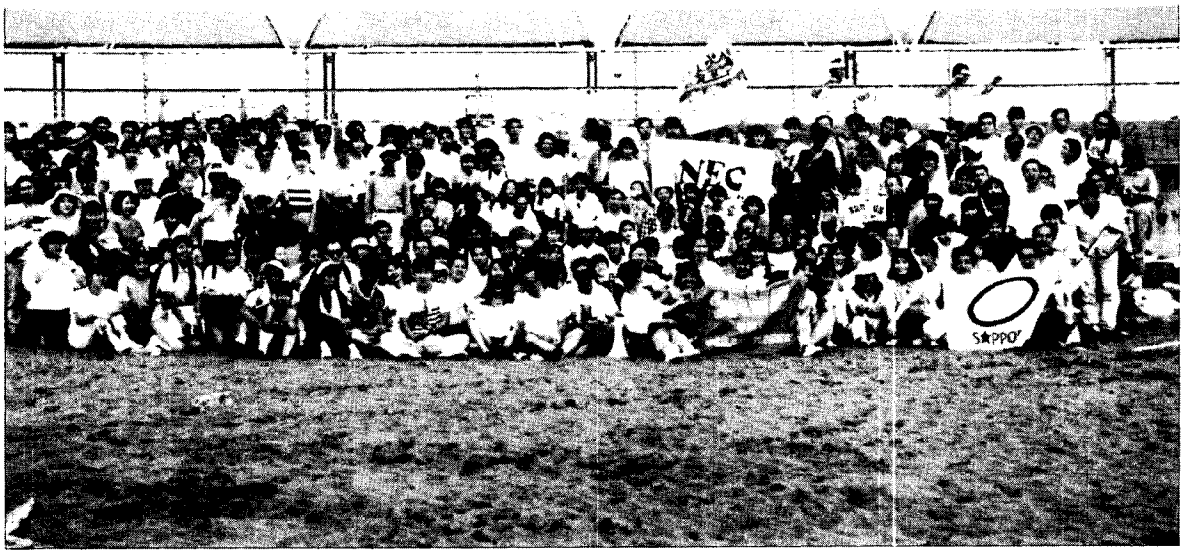
International Marine Debris Impacts on Wildlife

The problems of wildlife becoming entangled in marine debris are not limited to any specific part of the world. Volunteers in the United States reported 111 cases of wildlife impacted by marine debris. (A detailed listing of these incidents can be found in the **U.S. National Results** section, Table 4.) But the United States was not the only country reporting wildlife entanglement. In Nova Scotia, Canada, volunteers reported a dead duck entangled in monofilament fishing line, while in Japan a fish was found entangled in plastic netting. While this does not seem to be a great number of reports, it is important to remember that many international cleanups were fairly small, first-time events. As the cleanups grow and more people become aware of the hazards marine debris poses to wildlife, volunteers will become more alert to entanglement incidents and report them on the beach cleanup data card.

1991 International Coastal Cleanup
Raw Data Summary

		British V.I.	Canada	Cuba	Cyprus	England	Japan	Mexico	Netherland Antilles	United States	Venezuela	INTERNATIONAL TOTAL
PLASTIC												
Bags	Food	0	3984	13	78	0	12981	49	19	220945	2026	240095
	Salt	3	482	0	0	14	912	11	14	15623	11	17070
	Trash	97	902	0	35	296	4118	147	0	38595	3898	48088
	Other	66	1880	25	0	182	16188	78	1	72100	2410	92930
Bottles	Beverage	89	4398	35	88	178	4501	132	19	117778	3116	130334
	Bleach	43	2010	0	69	67	1561	96	6	21463	77	25392
	Gallon	14	1592	3	102	49	810	81	0	32375	815	35841
	Oil/lube	20	3971	0	40	23	287	75	4	23030	186	27636
	Other	13	1608	23	50	66	2906	166	3	45497	549	50881
Buckets		13	497	0	1	18	370	59	1	10335	0	11294
Caps/lids		51	8899	219	0	86	6264	41	36	212852	3290	231738
Cigarette butts		0	2703	61	20	0	23768	22	110	940430	759	967873
Cigarette lighters		2	433	0	0	5	2650	2	0	34501	17	37610
Cups/utensils		118	1993	17	165	52	3455	63	179	118597	2208	126847
Diapers		0	72	0	42	16	123	12	1	12686	210	13162
Fishing line		8	240	7	0	30	349	46	2	36124	34	36840
Fishing nets		15	1024	2	2	104	562	27	3	9496	0	11235
Floats/lures		2	327	0	0	12	382	2	3	13381	13	14122
Hard hats		2	63	0	2	1	779	54	1	1777	0	2679
Light sticks		1	64	0	0	6	1481	12	1	16020	13	17598
Pieces		23	8301	108	10	185	21071	204	3	344268	1087	375260
Pipe thread prot.		1	34	0	0	0	118	0	0	8033	0	8186
Rope		50	15532	2	38	247	1898	46	36	88862	41	106752
Sheeting	Long	2	1043	0	0	42	239	4	8	6655	11	8004
	Short	6	3556	0	0	4	827	10	10	13095	17	17525
Six-pack holders		7	596	2	0	44	148	80	13	34492	241	35623
Strapping bands		6	2858	10	0	57	4589	25	4	22512	221	30282
Straws		0	670	0	0	0	2599	56	64	191401	0	194790
Syringes		0	67	0	1	2	110	18	0	8280	9	8487
Tampon applicators		1	1504	8	0	25	87	0	0	20794	21	22440
Toys		0	389	2	40	8	1810	10	0	21770	4	24033
Vegetable sacks		4	97	0	0	4	627	0	4	7336	1	8073
Wrist prot. rings		0	87	1	0	0	11	38	5	9148	0	9290
Other		62	4911	0	0	22	6822	64	21	100210	173	112285
STYROFOAM												
Buoys		15	1077	1	0	1	163	4	2	16096	0	17359
Cups		28	2833	0	0	90	1434	7	20	125008	1	129421
Egg cartons		2	113	0	1	2	116	15	0	8605	13	8867
Fast food cont.		18	546	0	0	16	595	0	24	31856	8	33063
Meat trays		11	746	9	2	2	2550	3	0	16532	33	19888
Packaging		0	4685	3	0	0	4361	9	30	44025	227	53340
Pieces		63	8457	15	0	141	31571	54	30	289802	192	330325
Plates		0	437	2	0	0	1570	28	5	23729	107	25878
Other		7	1582	21	0	1	367	14	5	28102	0	30099

		British V.I.	Canada	Cuba	Cyprus	England	Japan	Mexico	Netherland Antilles	United States	Venezuela	INTERNATIONAL TOTAL
GLASS												
Bottles	Beverage	125	5709	57	135	80	6527	168	118	189855	6523	209297
	Food	9	332	0	39	26	638	29	0	23547	1793	26413
	Other	14	237	0	0	1	1020	0	11	21822	504	23609
Fluor.light tubes		5	9	0	1	2	65	5	0	4561	0	4648
Light bulbs		16	110	0	12	8	233	4	0	11766	46	12195
Pieces		47	7124	272	10	23	7060	100	24	219468	1156	235284
Other		29	493	0	0	0	243	15	0	24064	42	24886
RUBBER												
Balloons		0	611	0	3	1	396	21	1	36164	0	37197
Condoms		0	116	9	0	1	56	4	0	6957	0	7143
Gloves		2	498	1	8	12	185	10	0	11238	35	11989
Tires		34	265	15	16	29	313	36	1	8069	14	8792
Other		14	3664	24	17	25	1863	49	12	36451	5	42124
METAL												
Bottle caps		25	3642	277	150	54	3550	83	546	106626	1369	116322
Cans	Aerosol	20	895	0	100	33	1456	52	0	17148	39	19743
	Beverage	103	4721	37	650	134	17590	65	95	189447	2662	215504
	Food	9	380	5	33	11	1209	10	4	15611	2613	19885
	Other	25	481	1	0	28	586	15	1	15081	1907	18125
Crab/lobster traps		1	102	0	0	0	196	0	1	3795	4	4099
Drums	Rusty	10	98	4	3	2	372	1	6	3739	2	4237
	New	0	1	0	0	0	17	0	0	848	0	866
Pieces		17	3870	104	10	7	1365	60	36	41204	185	46858
Pull tabs		2	393	23	0	1	4982	33	15	48670	22	54141
Wire		3	1123	103	1	14	531	75	21	17535	20	19426
Other		18	4139	0	0	4	5017	2	32	44359	0	53571
PAPER												
Bags		34	438	108	130	2	749	34	1	38427	2263	42186
Cardboard		17	1127	23	0	3	390	18	37	33450	53	35118
Cartons		14	850	64	50	22	313	20	5	24727	65	26130
Cups		14	463	2	105	1	1110	13	8	46746	284	48746
Newspapers		4	435	106	66	4	724	15	0	26393	641	28388
Pieces		56	3193	116	70	18	5156	41	35	225297	5551	239533
Plates		0	50	0	20	0	1569	0	12	21235	0	22886
Other		7	1139	101	1	0	3571	18	13	56436	64	61350
WOOD												
Crab/lobster traps		4	215	0	0	0	9	0	0	7254	0	7482
Crates		2	181	7	0	5	331	21	0	2811	1	3359
Lumber		54	2479	33	0	39	15936	185	62	76830	1630	97248
Pallets		8	67	0	0	1	72	1	0	4293	857	5299
Other		88	740	0	61	1	6024	0	1	31196	1	38112
CLOTH												
Clothing		29	1814	57	21	45	1093	19	50	53405	534	57067
TOTAL ITEMS/COUNTRY		1722	149467	2138	2498	2735	260647	3086	1835	5200741	52924	5677793



Volunteers at Japan's cleanup on Kugenumo Kaigan Beach.

DETAILED STATE/COUNTRY ANALYSIS

The first step in tackling the debris problem is often taken at a regional or local level. The following detailed analysis of each state or country participating provides the information neccesary for each state or country to begin targeting debris sources that are predominant in their area.

Each state/country section begins with results of the 1991 cleanup, giving the number of volunteers participating, the miles of beach and waterway cleaned, and the total pounds of trash collected. Following this is a description of the cleanup.

The pie graph, *Percent Composition of Debris* illustrates the seven composition categories of debris and the percentage of the total debris that each makes up. The "Dirty Dozen" lists the twelve most commonly reported items for each area's cleanup. The bar graph, *Major Types and Sources of Beach Debris,* depicts the percentage of total debris that is either a specific type of debris (e.g., bottles and associated goods) or is attributed to a specific source (e.g., commercial fishing activities). *Major Characteristics of Debris in Each Zone* provides very localized information on each zone for which data analysis was done. *Traceable Debris Reported* lists any debris with identifying markings, where this debris was found, and what the markings were. *Foreign Debris Reported* lists any debris which has markings indicating its source as a country different from the country in which it was found. The section on *Stranded and/or Entangled Wildlife* details incidents of wildlife entanglement encountered by volunteers. The list of *Most Peculiar Debris Items Reported* is a listing of items which volunteers found were the most peculiar of any they collected.

The bar graphs in the section *Trends in Major Types and Sources of Beach Debris* track the percentages of the debris categories listed under *Major Types and Sources of Beach Debris.* All areas that have collected data during the cleanup for at least three years will have trends in each category indicated. This analysis was not done for areas that have two years or less of data, since this amount of information is not sufficient to indicate any type of trend.

Each state/country section closes with the name, address, and telephone of each cleanup coordinator and the anticipated date of their 1992 cleanup.

Three young Alabamians have a bright idea to "Get The Trash Out Of The Splash" during Alabama's cleanup.

ALABAMA

September 21, 1991
3,848 Volunteers
80 Miles Cleaned
36,000 Pounds of Debris Collected
424 Data Cards

Coordinated by: Phillip Hinesley
Alabama Department of Economic
and Community Affairs
Coastal Programs Office
10936-B U.S. HWY 98
Fairhope, AL 36532
(205) 928-3625

John Marshall
Alabama Department of
Environmental Management
Mobile Field Office
2204 Perimeter Road
Mobile, AL 36615
(205) 479-2336

The 1991 Alabama Coastal Cleanup exceeded all expectations. Alabama's fourth annual cleanup, held on September 21, enlisted 3,848 volunteers who collected 18 tons of debris from 80 miles of beach. New areas added to this year's cleanup included the Weeks Bay National Estuarine Research Reserve, West Mobile Bay, and the Fowl River area. This contributed to participation by the largest number of volunteers ever to join in an Alabama Coastal Cleanup.

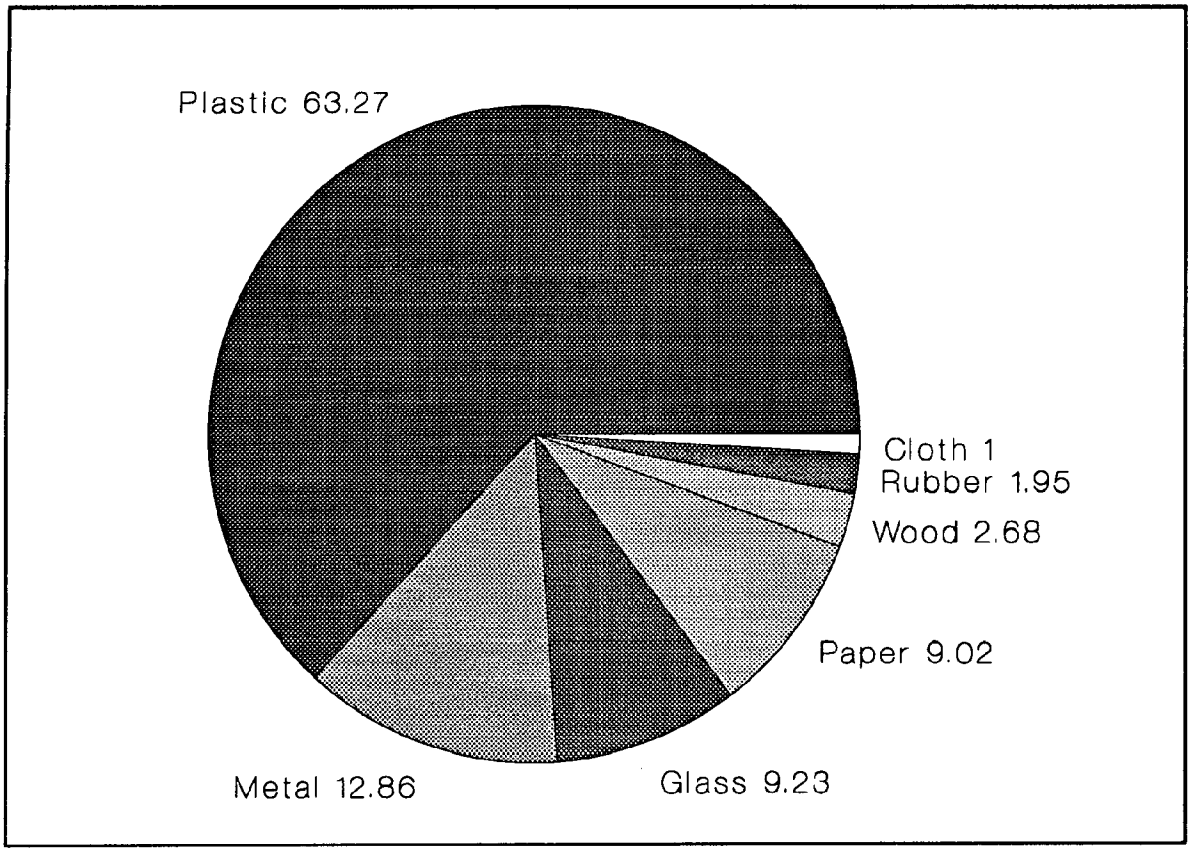
The greatest success, however, was the dramatic drop in the weight of trash collected. The amount decreased by 52% compared to 1990 beach cleanup figures. We hope that this reduction can be attributed to the continued efforts to educate the public to the hazards of marine debris.

The 1991 cleanup saw recycling instituted. With the help of recycling trucks, over one-half ton of aluminum, glass, and plastic was recycled from Alabama shores.

The participation and support of volunteers, corporate sponsors, the Center for Marine Conservation, and numerous government agencies helped make the cleanup a success. The continued cooperation of such diverse groups will insure a cleaner and healthier environment in Alabama for years to come.

Phillip Hinesley
John Marshall

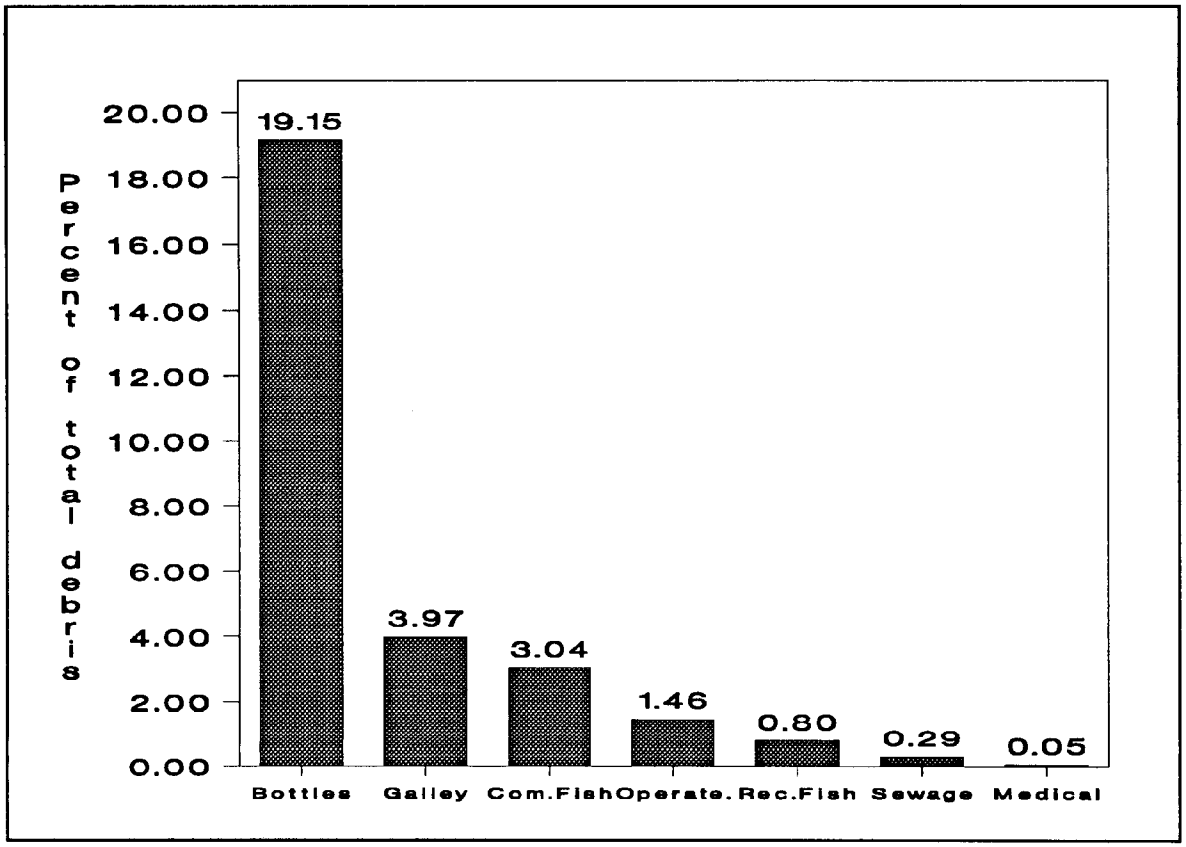
PERCENT COMPOSITION OF ALABAMA'S BEACH DEBRIS:



ALABAMA'S 1991 DIRTY DOZEN

	Total Number Reported	Percent of Total Debris Reported
1. Cigarette butts	11,397	12.74
2. Plastic pieces	6,143	6.87
3. Metal beverage cans	5,032	5.62
4. Plastic caps/lids	4,109	4.59
5. Plastic beverage bottles	4,100	4.58
6. Foamed plastic pieces	4,008	4.48
7. Paper pieces	3,667	4.10
8. Glass beverage bottles	3,395	3.79
9. Glass pieces	3,185	3.56
10. Plastic food bags/wrappers	2,922	3.26
11. Foamed plastic cups	2,392	2.67
12. Metal bottle caps	2,268	2.53
Total	**52,618**	**58.86**

MAJOR TYPES AND SOURCES OF ALABAMA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
West Mobile Bay	71.79	Plastic beverage bottles
Fairhope	57.90	Cigarette butts
Weeks Bay	50.78	Plastic beverage bottles
Dauphin Island	59.38	Cigarette butts
Fort Morgan	68.96	Cigarette butts
Gulf Shores	62.45	Cigarette butts
Gulf State Park	75.37	Cigarette butts
Romar Beach	70.43	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
West Mobile Bay	dairy milk case	Acadia Dairy
	2x4 piece of plastic	Burke
Dauphin Island	plastic jug	Veritas Petroleum Services
	plastic lid	Bennett Industries
	rusty drum	Unitone Marine Chemicals
	"For Sale" signs	Smith Pickett
Gulf State Park	certified TX oyster tag	United Shrimp
Romar Beach	plastic cups	Pink Pony Pub

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Dauphin Island	USSR	soft drink can	
Fort Morgan	"Oriental"	plastic oil container	Oriental writing
Romar Beach	Mexico	plastic bleach bottles	
	Thailand	plastic water bottles	

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other reports
Seagull with legs tied in string	5 dead fish
Crabs in crab trap	4 dead seagulls
Bird with plastic ring on feet	3 dead stingrays
	3 dead crabs
	2 dead cats
	2 dead lobsters
	1 dead baby shark
	1 dead catfish

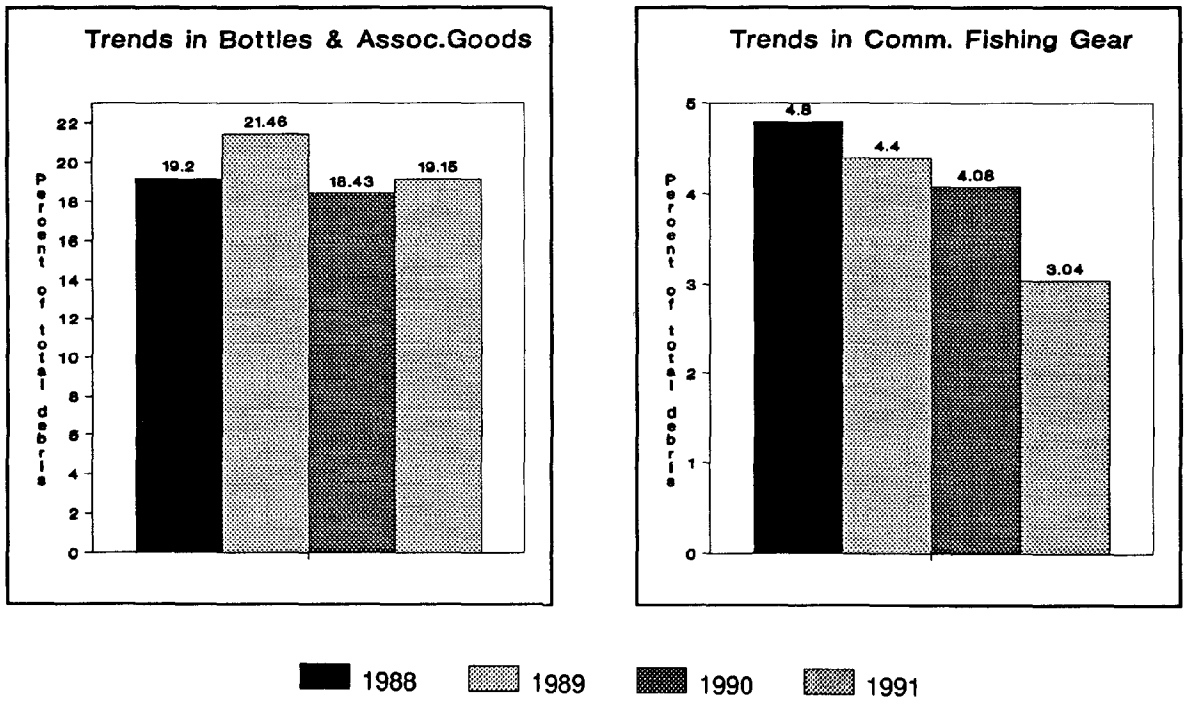
MOST PECULIAR DEBRIS ITEMS REPORTED:

Fairhope	light fixture, toilet bowl, medicine vile
Weeks Bay	basketball, Christmas ornaments
Dauphin Island	clothes hangers, old Holiday Inn key, pacifier, pornographic magazine, "Alabama" tape, book bag, large bra, childrens contest sign, large LP tank, V-8 engine block, front hull of boat decal, #224997, Sept. 91, leather strap, hubcap, rubber boot, air conditioner filter, stern of a boat, flea collar, arm of a chair, dart, shovel, baby shoe, commode parts, double kitchen sink, 10 full bottles of beer, windshield wiper, cassette tape, Volvo key, plastic laundry basket, fan blade, ice container, wallet with drivers license, plastic bowling pin, valve from old radio, large knife, lipstick, dime

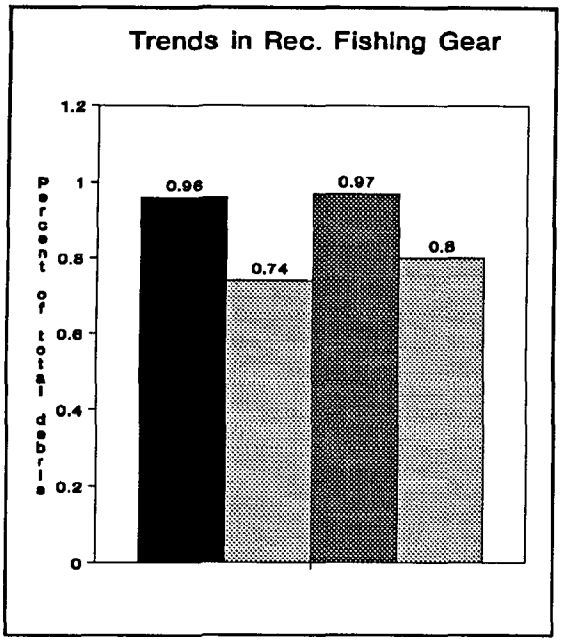
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

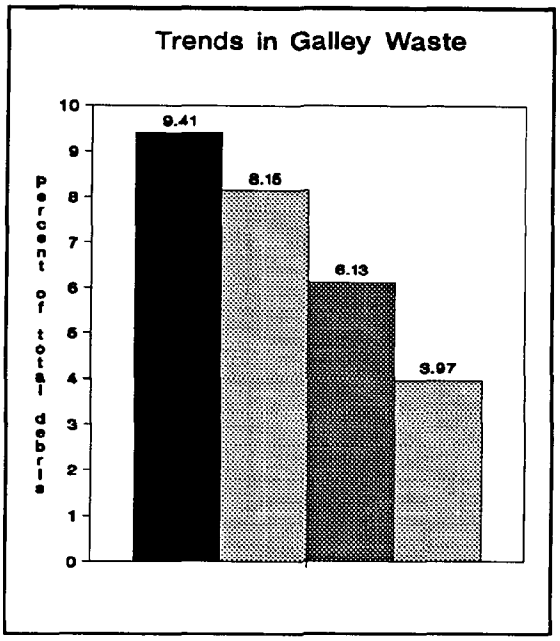
Fort Morgan	toilet seat, automobile bumper, old refrigerator, broken TV, chinese shoe, full can of gasoline, rawhide chew, baby nipple, volley ball net, shoulder pads, full bottle of olives, doll's arm, baby's car seat, can of gasket sealer, 6-pack of full beer bottles
Gulf Shores	air mattress, vial of medication, dust masks, caulking gun, Easter egg, firehose, license plate, dental floss
Gulf State Park	Christmas tree, cork screw, marble
Romar Beach	bikini top, full box of cigarettes, plastic poker chips, firehose, panties, boxer shorts, pill dispenser, propane tank, penny, Navy aviation training sign, hypodermic needle in case

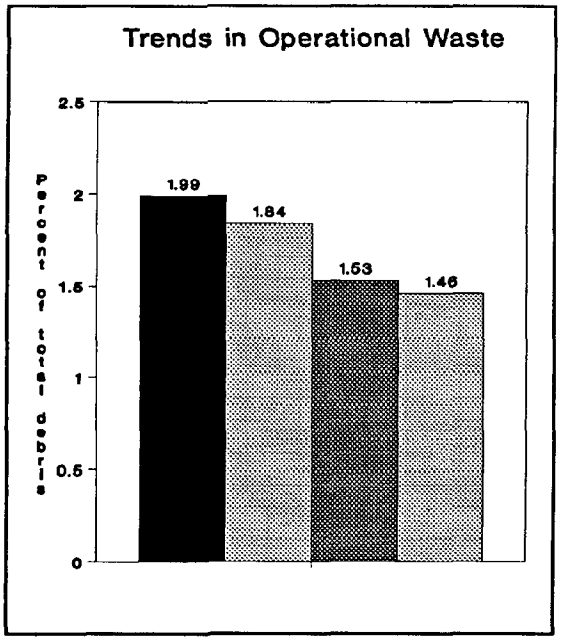
TRENDS IN MAJOR TYPES AND SOURCES OF ALABAMA'S BEACH DEBRIS:

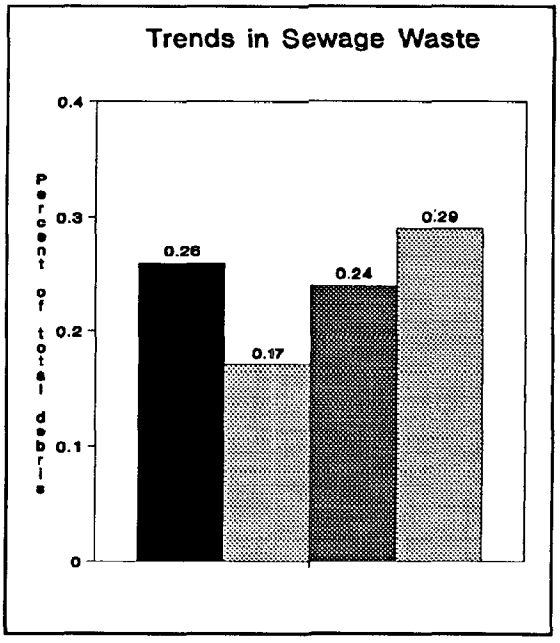


TRENDS IN MAJOR TYPES AND SOURCES OF ALABAMA'S BEACH DEBRIS: (cont.)

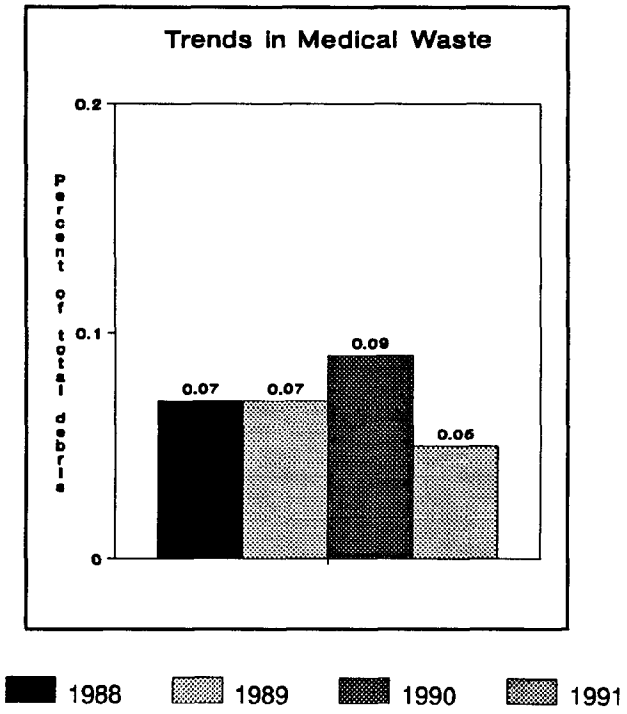








TRENDS IN MAJOR TYPES AND SOURCES OF ALABAMA'S BEACH DEBRIS: (cont.)



FOR INFORMATION ON
ALABAMA'S 1992 COASTAL CLEANUP CONTACT:

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OR

John Marshall
Alabama Department of Environmental Management
Mobile Field Office
2204 Perimeter Road
Mobile, AL 36615
(205) 479-2336

CLEANUP DATE: September 19, 1992

ALASKA

September 28, 1991
70 Volunteers
4 Miles Cleaned
2,200 Pounds of Debris Collected
28 Data Cards

Coordinated by: D. Lynn Mickleson
P. O. Box 4387
Kodiak, AK 99615
(907) 486-5522

Kodiak citizens mounted a Herculean effort in the first annual Kodiak Beach Cleanup Day on September 28. Seventy volunteers braved 30 knot winds and rain measuring 2 1/2 inches, which is the eighth most rainy day on record. Far from the gently sloping beaches and balmy weather of California, the Gulf of Mexico and the East Coast, where many other beach cleanups took place, the craggy Alaskan coastline presented a different challenge.

Numerous groups participated including the Lions Club, Rotary Club, Audubon Society, Kiwan's, U.S. Navy, Coast Guard, and Bridge Clubs, as well as various individuals and students from the high school and main elementary school. The Kodiak Chamber of Commerce and Litter Committee commended the groups for all their energetic and creative collection efforts.

Fishermen were asked to take note that bringing trash back to shore will greatly help with the marine debris problem. If space is limited on a vessel, there are many trash compactors available for ocean-going vessels.

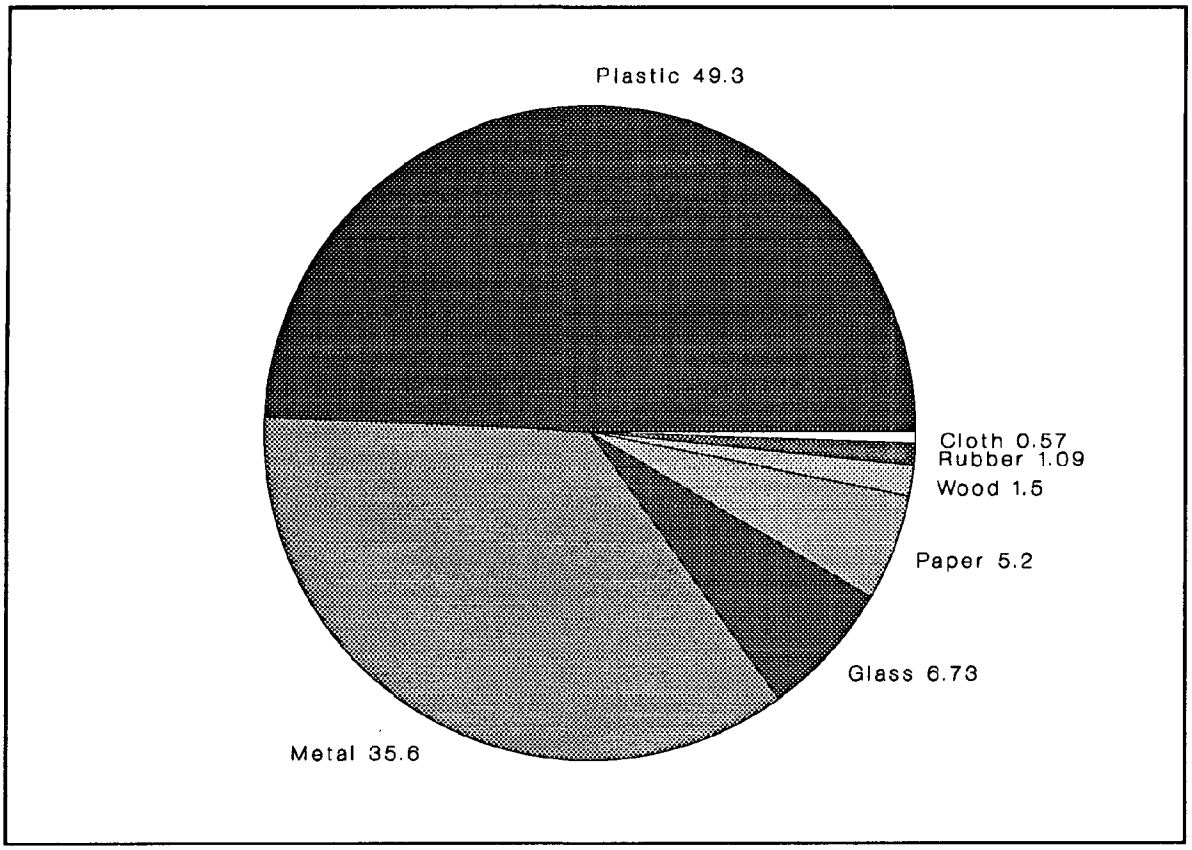
Aluminum beverage cans and plastic rope of all sizes were among the most commonly found items. These were joined by plastic bags, plastic lids and caps, and strapping bands. Some of the more unusual items were a car muffler at Kalsin Beach, a glass bottle with a message at the Buskin River, syringes at Gibson Cove, men's underwear at Spruce Cape, a garden hose at Mayflower, rubber sandals at Holiday Beach, a bathtub on Near Island, and an undetonated phosphorous flare at Buskin Beach.

The Litter Committee would like to thank all who participated in this first annual Kodiak Beach Cleanup especially Kodiak Sanitation, the City of Kodiak, and ports and harbor facilities for providing the pick-up services and spaces.

Next year maybe the sun will shine.

D. Lynn Mickleson

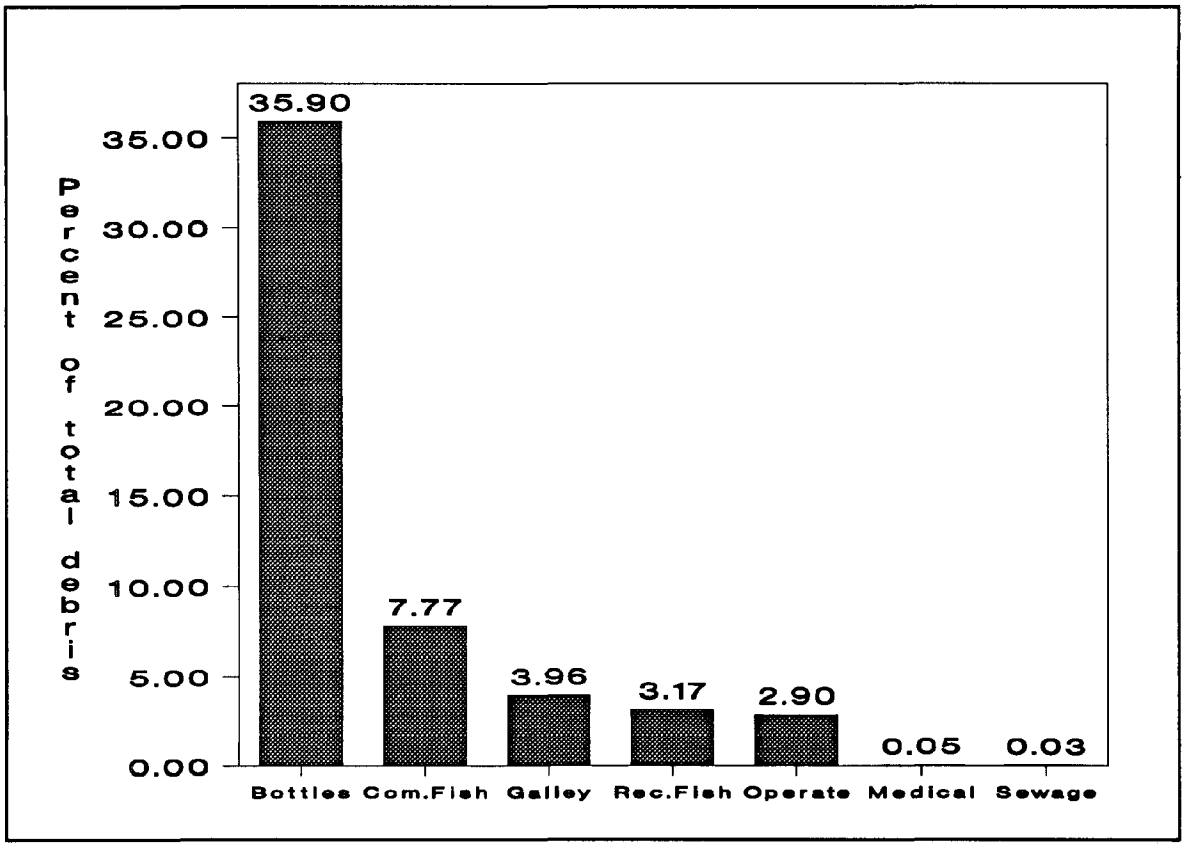
PERCENT COMPOSITION OF ALASKA'S BEACH DEBRIS:



ALASKA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Metal beverage cans	1,055	28.84
2. Plastic rope	214	5.85
3. Plastic caps and lids	172	4.70
4. Glass beverage bottles	109	2.98
5. Plastic food bags/wrappers	92	2.51
6. Plastic pieces	88	2.40
7. Plastic trash bags	86	2.35
8. Foamed plastic cups and	80	2.18
foamed plastic pieces	80	2.18
9. Glass pieces	70	1.91
10. Plastic fishing nets	65	1.77
11. Paper pieces	63	1.72
12. Cigarette butts	56	1.53
Total	**2,568**	**60.97**

MAJOR TYPES AND SOURCES OF ALASKA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS:

Data was collected for one zone, in Kodiak Alaska.

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Kodiak	large box top	Sweeney Fisheries, Nova Scotia

FOREIGN DEBRIS ITEMS REPORTED:

None reported

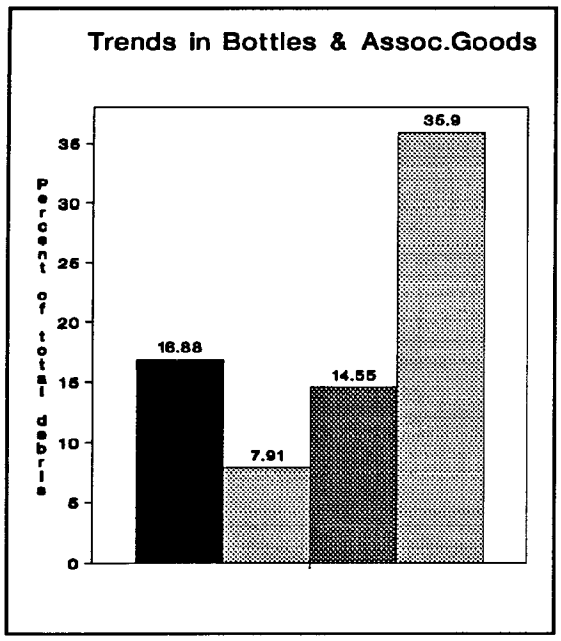
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

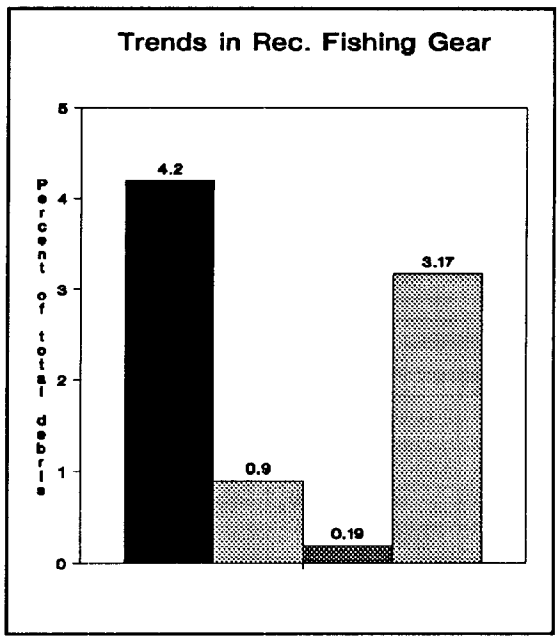
Debris Related	Other reports
None reported	2 dead seagulls

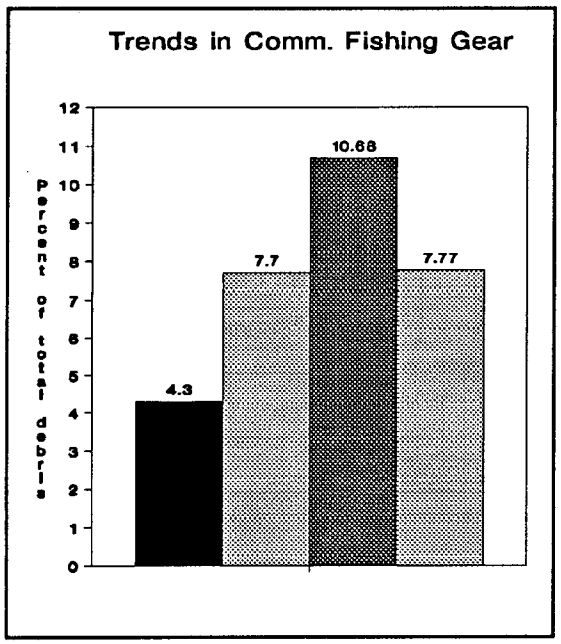
MOST PECULIAR DEBRIS ITEMS REPORTED:

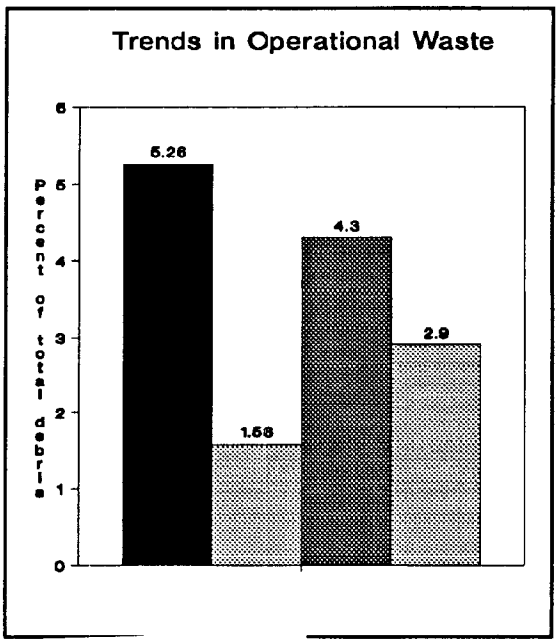
Kodiak Full tub of Cool Whip, glass bottle with a message in it, garden hose, car muffler

TRENDS IN MAJOR TYPES AND SOURCES OF ALASKA'S BEACH DEBRIS:

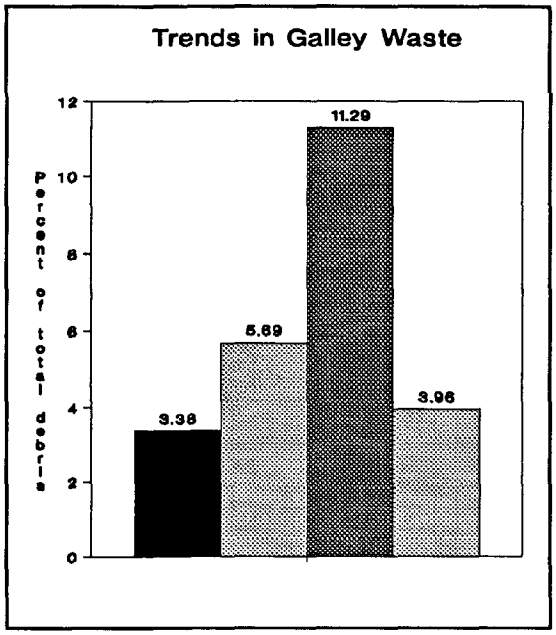


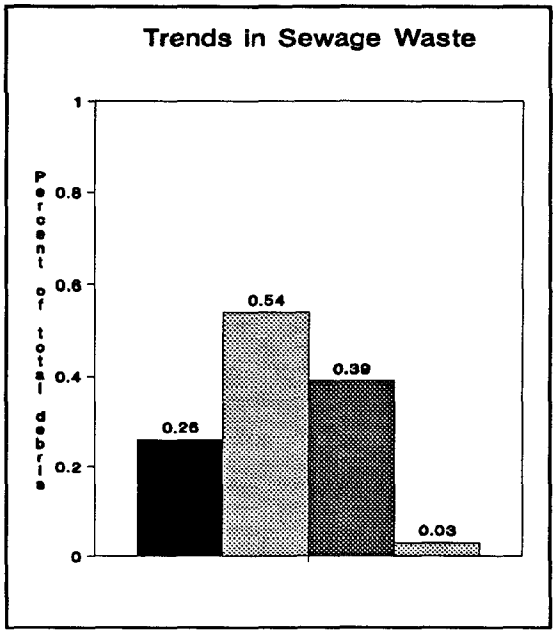


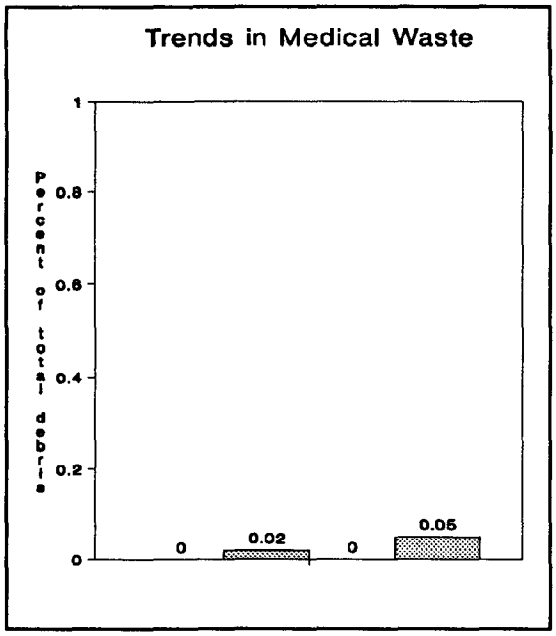




1988 1989 1990 1991







FOR INFORMATION ON ALASKA'S 1991 COASTAL CLEANUP CONTACT:

D. Lynn Mickleson
P. O. Box 4387
Kodiak, AK 99615
(907) 486-5522

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

Mickey helps start them out right young on a San Mateo County beach.

CALIFORNIA

September 21, 1991
29,337 Volunteers
438 Miles Cleaned
328,844 Pounds of Debris Collected
2,893 Data Cards

Coordinated by: Jack Liebster
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105
(415) 904-5200

Data collection by: Maria Brown
Center for Marine Conservation
312 Sutter St., Suite 606
San Francisco, CA 94108
(415) 391-6204

It looks like California's Coastal Cleanup Day volunteers set a new world's record for the biggest state beach cleanup yet--nearly 30,000 people (almost double last year's total) picked up a total of 328,844 pounds of litter and debris from the shoreline, including 34,000 pounds that was recycled. With over 330 sites - a hundred more than last year - the 1991 cleanup also covered a larger area of California than ever before. In addition to the state's coastline, it extended to include the San Francisco Bay and Delta, the Sacramento and American River systems, and Lake Tahoe. By emphasizing that the problem is not only trash left on the beach or thrown from ships, but is also litter and pollutants that wash down from city streets and storm drains, the cleanup helped raise awareness of "non-point source pollution," and how each of us can help protect the health of our oceans in our own neighborhoods.

This remarkable outpouring of public concern and commitment is a tribute to an innovative collaboration of business - especially Lucky Stores, our first statewide corporate sponsor - government, the media, schools, our county coordinators, beach managers, group leaders, and a wonderful, diverse array of service and citizen groups and individuals.

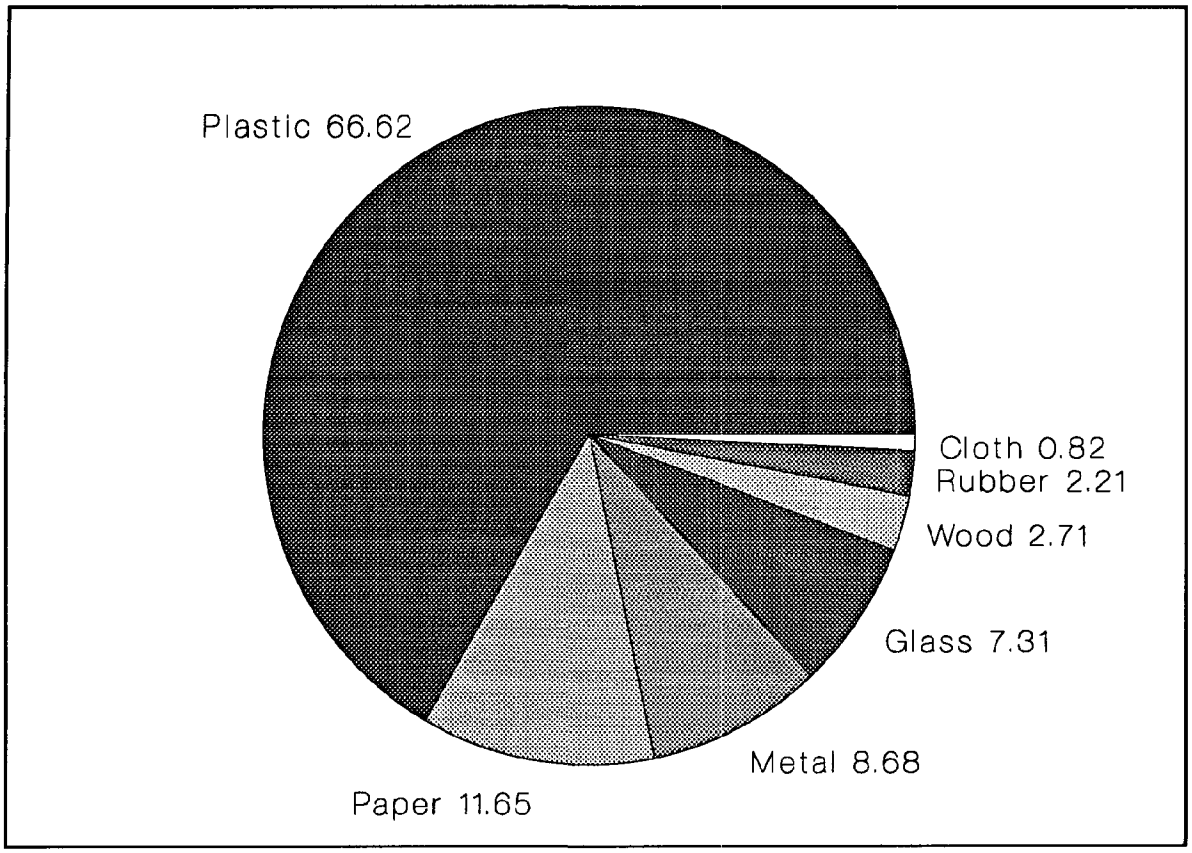
It is encouraging to note that the average amount of trash found per person dropped by 39% from 18 pounds down to 11 pounds. We hope this is a sign that we're beginning to turn the tide of trash, but there is still far to go. The highest weight totals came from mudflats and marshes, where volunteers pulled out junked car parts, discarded furniture, and more than 1300 old tires, most of which were recycled.

In its seventh year, the cleanup was increasingly important in recruiting participants for our year-round Adopt-A-Beach program, which focuses on everyday, long term solutions to the litter, marine debris, and ocean pollution problems. That message will continue to spread on the 30,000 Adopt-A-Beach canvas bags provided to Cleanup Day volunteers by Lucky Stores. Proclaiming "The Coast Is Clear and I Helped," the bags act as "mini-billboards" at the market, while simultaneously providing a way out of the "paper or plastic" dilemma. Half a million Adopt-A-Beach car litter bags were also distributed by Lucky Stores.

This commitment to public education and awareness, also exemplified by our Adopt-A-Beach Curriculum and our Directory of Coastal and Marine Educational Resources, helped California's program win another crop of awards in 1991, including the Take Pride in America and Keep America Beautiful Awards.

Jack Liebster

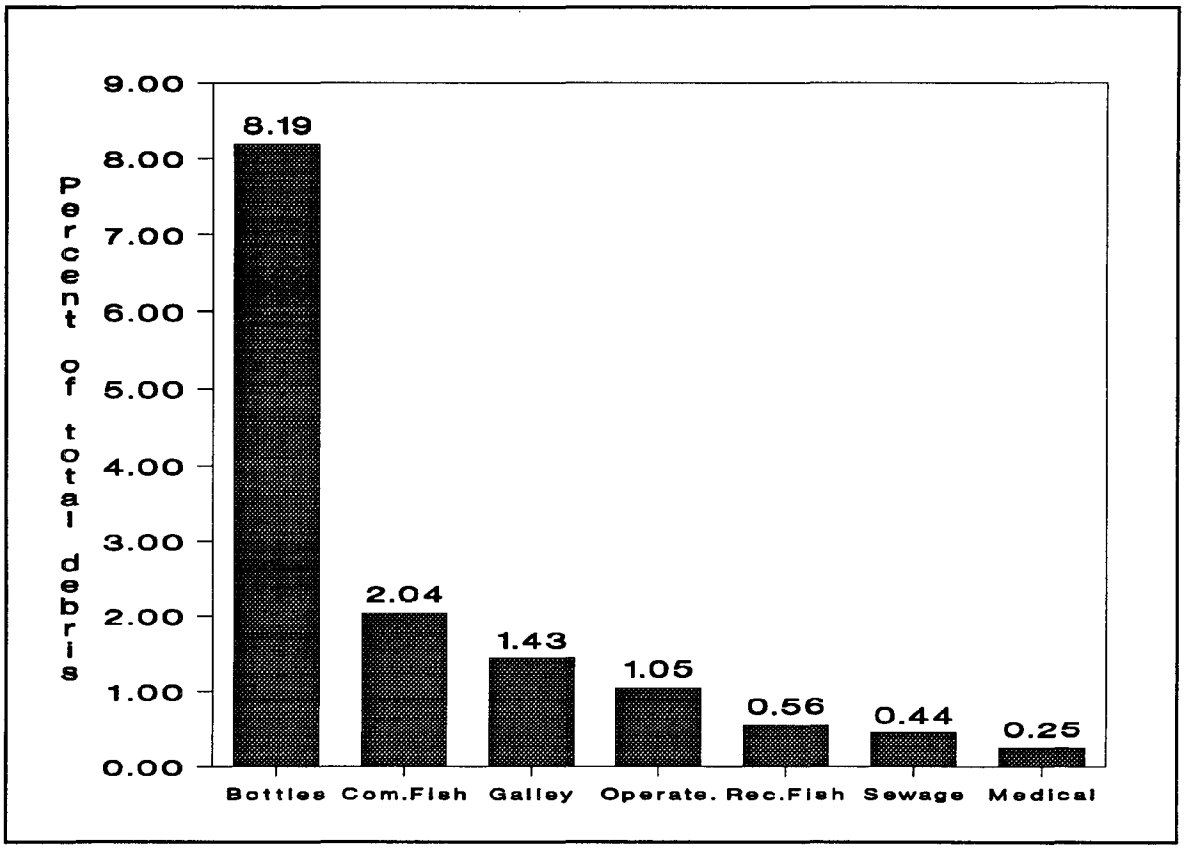
PERCENT COMPOSITION OF CALIFORNIA'S BEACH DEBRIS:



CALIFORNIA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	222,510	26.31
2. Foamed plastic pieces	65,206	7.71
3. Paper pieces	55,495	6.56
4. Plastic pieces	45,812	5.41
5. Plastic food bags/wrappers	38,923	4.60
6. Glass pieces	35,657	4.21
7. Plastic caps and lids	27,941	3.30
8. Plastic straws	25,241	2.98
9. Metal bottle caps	21,569	2.55
10. Foamed plastic cups	15,906	1.88
11. Glass beverage bottles	14,614	1.72
12. Plastic cups and utensils	12,240	1.44
Total	**581,114**	**68.71**

MAJOR TYPES AND SOURCES OF CALIFORNIA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Del Norte	63.58	Cigarette butts
Humboldt	55.44	Cigarette butts
Mendocino	76.84	Cigarette butts
Sonoma	62.50	Cigarette butts
Lake Tahoe	58.56	Cigarette butts
Sacramento	44.58	Paper pieces
Solano	50.97	Glass pieces
Contra Costa	53.47	Cigarette butts
Marin	71.35	Foamed plastic pieces
Alameda	79.11	Plastic food bags/wrappers
San Francisco	57.68	Cigarette butts
San Mateo (Oceanside)	60.67	Cigarette butts
San Mateo (Bayside)	58.31	Cigarette butts
South San Francisco Bay	69.87	Foamed plastic pieces
Santa Cruz	61.76	Cigarette butts
Monterey	58.61	Cigarette butts
San Luis Obispo	72.70	Cigarette butts

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE: (cont.)

Santa Barbara	58.53	Cigarette butts
Ventura	63.44	Cigarette butts
Los Angeles	72.21	Cigarette butts
Orange	71.99	Cigarette butts
San Diego	69.45	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Humboldt	wooden fish crate	Caito Fisheries Inc.
	prescription bottle	Gail Hunt, Dr. Wieland, Red Cross Pharmacy
Contra Costa	metal strip	Dow
	plastic sign	Dress For Less
	packing slip	McGrath Steel Co.
	computer printout paper	Southern Pacific
	plastic bag	Trvit & White Lumber
San Francisco	bait bag	Anglers Choice
	toothpick	Bally's Reno
	band	NB Salmon code #3411008
	shampoo bottle	Princess Cruise Lines
	balloons	San Francisco Sheriff's Dept.
Santa Cruz	balloon	Chinca Guadalupe
Ventura	work hat	Gaviota Offshore Oil
	balloon	Longo Toyota
Los Angeles	newsletter	Adopt-A-Beach
	balloon	Churches Chicken
	baggage tag	Korean Air
	balloon	John Wayne Airport
	drink bill	Jonathan Club
	balloons	Longo Toyota
	balloon	Northwest Airlines
	plastic	Oceanic U.S. Patent 3844281
	plastic bag	Pacific Supermarket
	balloons	Radio Algeria 930am
	receipt	Santa Monica Beach Hotel
	plastic bottle	Sheraton Hotel
Orange	halibut rig	Jed Welsh Fishing Equipment
	napkin	Newport Beach (714) 499-4841
	plastic bag	Water Gremlin Fishing Tackle
San Diego	rental agreement	CP Inc. #7921134061
	flyer	Midas Annual Picnic
	plastic cup	Norwegian Cruises
	shampoo container	Princess Cruises
	mailing envelope	Radiation Detection Company
	plastic strapping	Rotex
	cups	Sea World
	shampoo bottle	Sundance Cruises

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
San Francisco	Canada	plastic bottles	
	Japan	candy wrapper	
San Mateo (Oceanside)	Asia	bleach bottle	
		dish soap bottles	
	Hong Kong	drink box	Vita Soy
Santa Cruz	Guadalupe	balloon	Chinca Guadalupe
	Vietnam	newspaper	
San Luis Obispo	Japan	plastic bag	Prosweat
	"Spanish"	AA batteries	
Los Angeles	Japan	label	Shonan toy
	Mexico	candy wrapper	
Orange	Japan	food packaging	
	Korea	whiskey bottle	
San Diego	Japan	metal aerosol can	
	Mexico	orange "pica" pack	
		plastic containers	
		plastic bags	
		shoes/toothbrushes	
		styrofoam bottles	
		plastic syringes	
	Germany	candy wrapper	
	Taiwan	aerosol can	insecticide

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Seagull with a hook and lure in beak	94 dead birds
Dead bird with fishing line around leg	68 dead seagulls
Seagull entangled in fishing line	17 dead cormorants
Dead bird strangled by tag tape	8 dead sea lions
Bird in sock	6 dead ducks
Cat with six pack holder around the tail	5 dead fish
Bird entangled in yellow strapping bands	3 dead pelicans
Gull entangled in nylon rope	3 dead cats
Dead seagull with hook in its throat	2 stranded murres
Dead bird wrapped in fishing line	2 dead dogs
5 dead seabirds entangled in fishing line	2 dead deer
Seagull with fishing hook stuck in throat	2 dead opossums
Dead bird entangled in plastic bag	2 dead mice
Dead pelican with rope in mouth	2 dead terns
	2 dead jellyfish
	2 dead chickens
	2 dead snakes
	1 dead squirrel
	1 dead black grebe
	1 bird with broken wing
	1 dead hawk

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED: (cont.)

Debris Related	Other Reports
	1 dead crab 1 dead seabird 1 dead hermit crab 1 dead pigeon 1 dead leopard shark

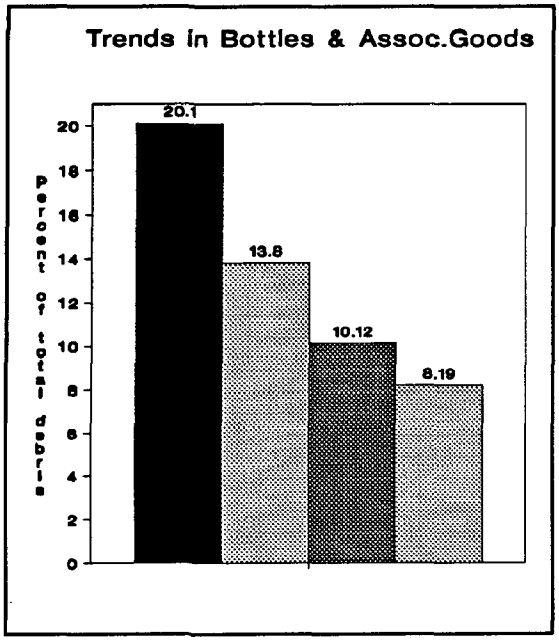
MOST PECULIAR DEBRIS ITEMS REPORTED:

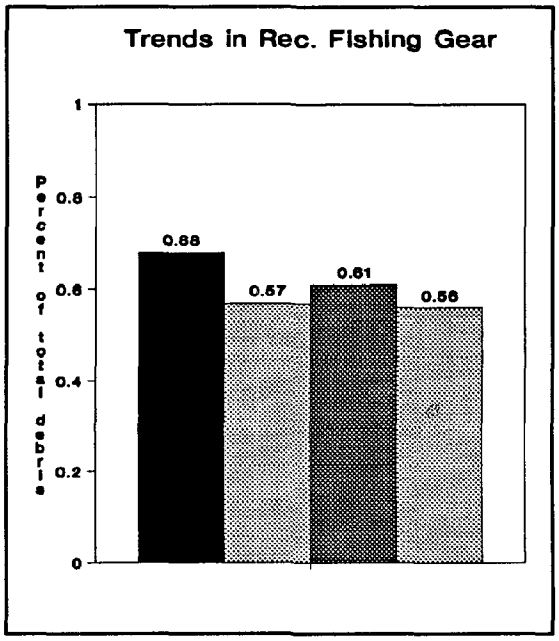
Del Norte	steering wheel, surf board, truck seat, muffler, underwear
Humboldt	blanket, horseshoe, H2O water heater, couch, underwear, car windshield, coffee maker, guitar, plastic doll face
Mendocino	shopping cart, case of batteries, windshield wiper
Sonomaboat	muffler, lipstick, road reflector, hammer, stereo speaker, propane tank, pair of shoes, golf tee, men's plastic fishing overalls, hubcap, men's undies, 70 lb. wrench, baseball, Fisher Price man, full container of yogurt, $100, underwear, radio dial, full can of beer, coat hanger, overlay sheet for a math assignment, sandal, circuit board, flannel jacket, tin of tobacco with rolling papers, bullet
Lake Tahoe	cloth toilet seat cover
Sacramento	propane tank, gas tank
Solano	arm of a chair, lottery ticket, toilet seat
Contra Costa	blanket, washing machine, chainlink fence, chair, golf ball, fire hydrant
Marin	jacket, full bottle of 7-Up, feather duster, chess piece, tea kettle, 1/2 bottle of rum, child's wagon, $1, shoe polish brush, suitcase, stereo radio
Alameda	scissors, Easter basket grass, chair, boogie board, disposable plastic camera lens
San Francisco	2 foam rubber ear plugs, TV set, bra, 20 razor blades, full bottle of medicine, pants, contraceptive sponge, small plastic green kangaroos, radiologist's badge, hat - 1982 Sears Point Raceway, surfing shoe, traffic violation ticket, car battery cover, arrow shaft, underwear, bag of ice, shoelace, alarm clock, gas can cover, large bucket, check, $1.25, pacifier, necklace, eyeliner, visor, cactus, garden hose, walkman, egg beater, hair curler, mattress and springs
San Mateo (Oceanside)	horseshoe, $6, 14 full bottles of fabric softener, panties and garter belt, telephone, fire extinguisher, purse, full can of beer, full can of paint, doll head, plastic sword, life jacket, wine opener, lace panties, broom, Styrofoam ice chest, men's blue underwear, 2 candles, cocaine, face mask, rake, CO2 cartridge
San Mateo (Bayside)	bed springs, $6, underwear, pot scrubber, baby's teething ring, Barbie doll head, tennis ball, athletic supporter, bowling ball, dress pattern, fire extinguisher, couch springs, toilet seat, TV, note in a bottle
Santa Cruz	unused birth control pills, 2 blankets, bloody underwear, volleyball net, voltage meter, surf board, hammer, lawn chair, incense burner, melted "boom box", large chili pepper, boxer shorts, Black and Decker drill, road reflector, 2 sleeping bags, wig, sweat pants, potholder, toilet bowl scrubber, beach chair, broom, sunglass lens, TV antenna, pornographic magazine
Monterey	antique bottle
San Luis Obispo	frying pan, $1, golf tee, earplug, sleeping bag, lawn chair, powdered donut, GI Joe, poker chip, men's jacket, watch, dog collar, rubber car mat, oil filter
Santa Barbara	jock strap, wallet, barbecue starter, scissors, yo-yo, Lazy Boy chair, baby's sunsuit, pant leg, cut of blue jean shorts, warning sign - "RR crossing", car seat, note in a bottle, ironing board, toaster, men's underwear, unicycle, car door

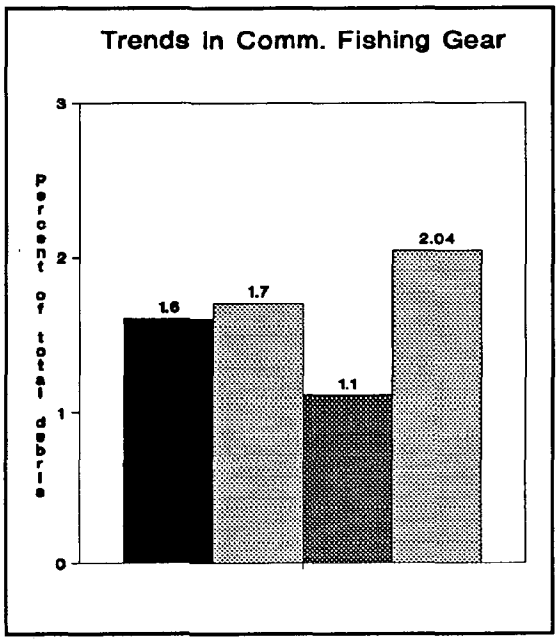
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

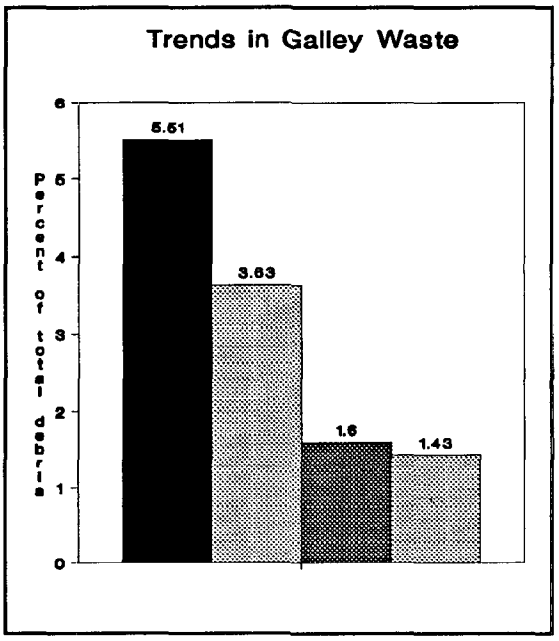
Ventura	washing machine, plastic strawberry, salt shaker, 25 cents, candle, lawn chair, kazoo, pacifier, plastic aquarium plant, false teeth, chop sticks, silver and wood bong, shovel, 3/3/91 newspaper, shopping list, flashlight, pregnancy test, car keys, 1/2 door, whiffle ball, lipstick, boxer shorts, nasal inhaler, green squeaky toy, Match Box car, car bumper, tea bag, earring, toilet float, toy soldier, plastic toy bear, dust mask, wallet, baby's teething ring, GI Joe army man, baby bottle nipple, socket set, hair curler, Comedy Club ticket, plastic pig, chewed-up shoe, 8-track tape, plastic chicken, copy of the book - "Mormon", muffler, bicycle frame, fishing rod, 2 electrical outlet covers, broken stereo, warning sign saying- "Warning-Transcontinental Cable Route, Do Not Dig Anywhere In This Area, For Location Call Toll-Free 1-800-442-4133, AT&T San Luis Obispo, CA 805-544-1620", seat cushion, bag of marijuana and hash pipe, plastic toilet paper holder, "Greenpeace" flier, scuba mouthpiece
Los Angeles	comic strip, rubber magnet, plastic plant, Barbie shoe, electric blanket, pacifier, garbage can lid, tennis shoe, men's underwear, basting pan, pack of birth control pills, jock strap, jean jacket, full bottle of Coors, door hinge, mattress springs, paint roller, ski line, cart, 2 hub caps, bag of marijuana, street sign, lawn chair, beer keg, plastic frog, scissors, hotel key chain, new Reebok tennis shoe, Nerf football, earplug, baseball hat, rug, sweat pants, bottle of molasses, salt shaker, underwear, 2 bagels with cream cheese, blanket, Sherlock Holmes cap, snorkel
Orange	football, lipstick, lawn furniture, underwear, plastic hour glass, basketball, golf ball, yellow police tape, boat seat, cement park bench, couch, old 78 record, child's plastic hammer, baby doll arm, blow-up sex doll, pacifier, yo-yo, boogie board, Barbie doll shoes, mud flap, Christmas tree lights, coffee-maker, GI Joe man, Polaroid film, wine glass
San Diego	tricycle handlebars, plastic flower, sofa cushion, spatula, bikini bottom, flash cube, nut cracker, guitar pick, hospital band, bra, panties, stuffed animal, pen knife, telephone book, rubber shark, ice cream scoop, size 10 1/2 Reebok shoes, Nerf football, full can of beans, marijuana, 12 cents, trash can, pornographic book cover, tie, motorcycle frame, cabinet door, picture of a girl in a bathing suit, bed springs, Bissel vacuum, car bumper, burned-out motor, BVD's, red G-string, rusted pocket knife, woman's nursing pad, rug, bedspread, traffic sign, Mickey Mouse toy, long thermal underwear, radio antenna, car, Barbie arm, Styrofoam mattress, boat paddle, red shirt, belt buckle, cart, bike, Barbie doll head, Nike shoe, rubber worm, audio cassette, toy car, monster, tent stakes, 5 lb. weight, recipe for chicken burgundy, hairbrush, lawn chair, nail clippers, key, barbecue grill, snorkel mouthpiece, lens cap, bottle of pills, door handle, marijuana pipe, bike horn, egg plant, exploding cigarette, wet suit, gun, bicycle pump, anti-thief tag, baby bottle, purple jockey shorts, lady's underwear, child's sand bucket

TRENDS IN MAJOR TYPES AND SOURCES OF CALIFORNIA'S BEACH DEBRIS:



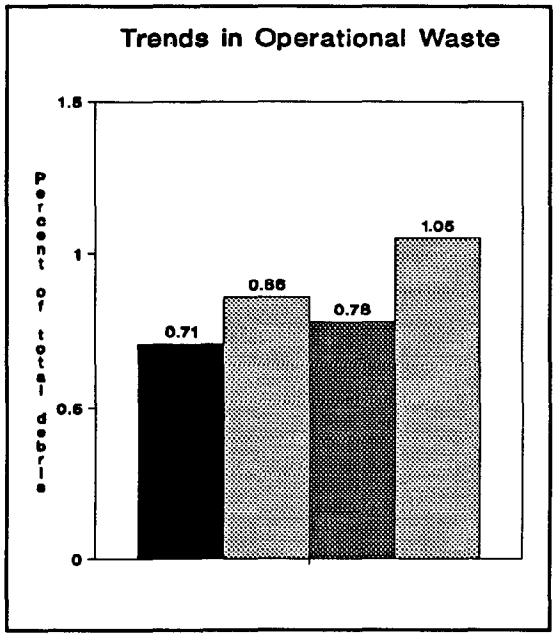


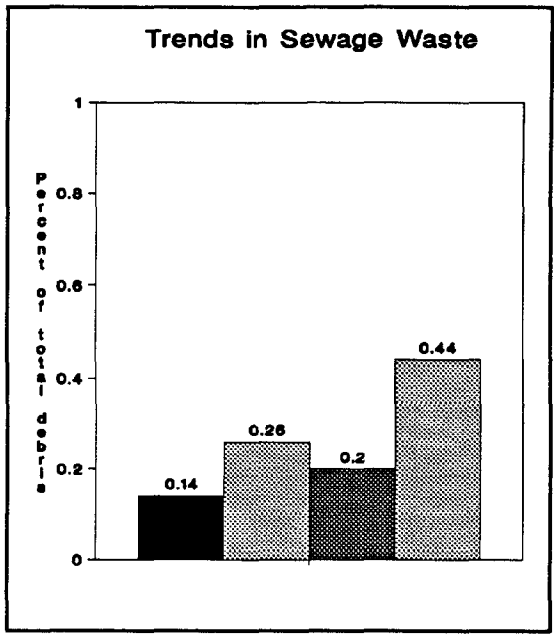


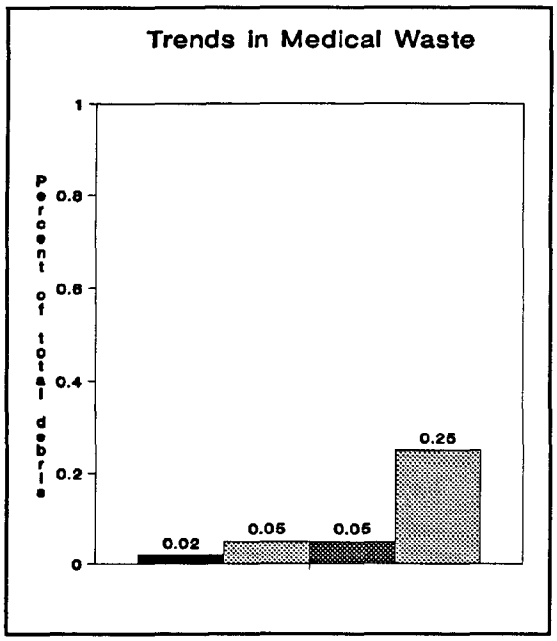


1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF CALIFORNIA'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON CALIFORNIA'S 1992 COASTAL CLEANUP CONTACT:

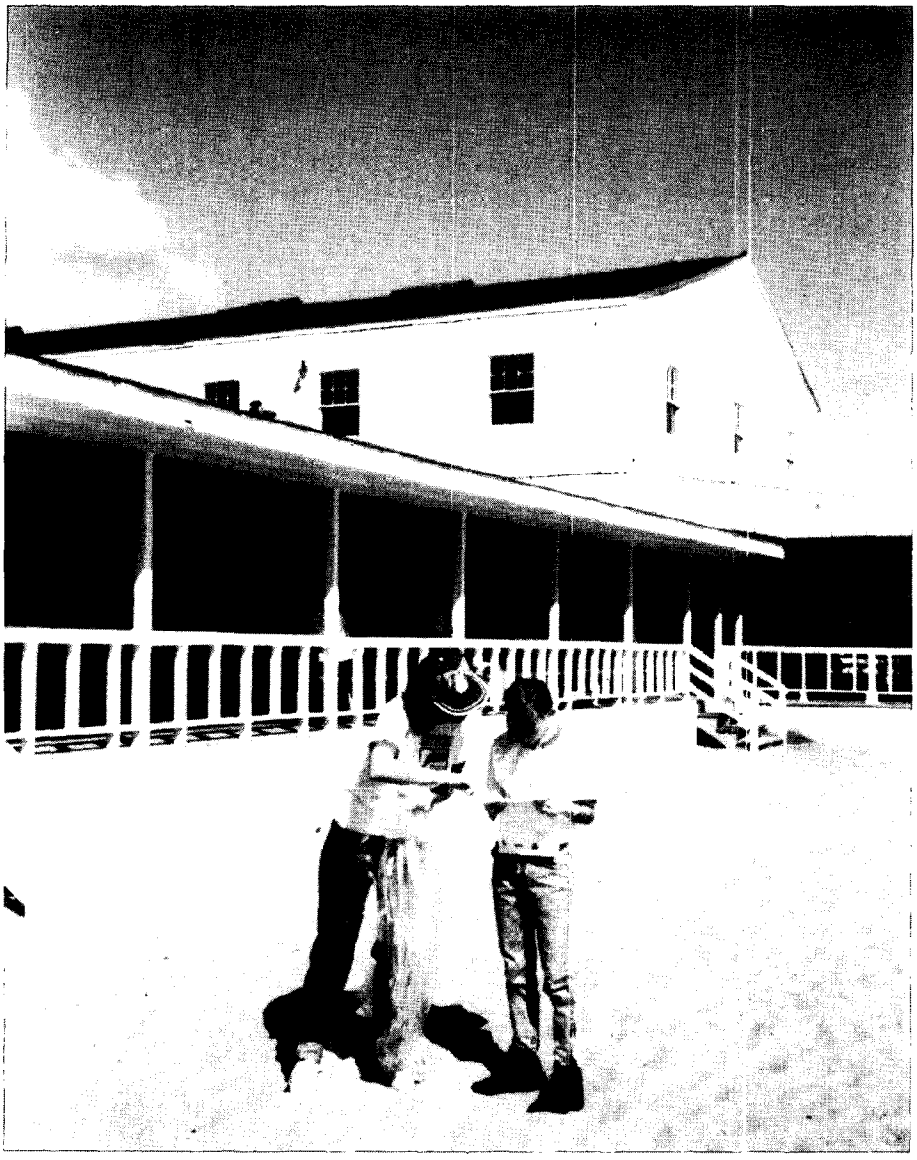
Jack Liebster
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219
(415) 904-5200

For information on data collection contact:

Maria Brown
Center for Marine Conservation
312 Sutter Street, Suite 606
San Francisco, CA 94108
(415) 391-6204

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991



State coordinator Peg Van Patten gives volunteer Ellis Monahan advice on filling out a data card on a Fairfield Beach.

CONNECTICUT

September 21, 1991
936 Volunteers
70 Miles Cleaned
22,000 Pounds of Debris Collected
241 Data Cards

Coordinated by: Peg Van Patten
and Kelly Jones
Connecticut Sea Grant College
Program
University of Connecticut
Marine Science Institute, Avery Point
Groton, CT 06340-6097
(203) 445-3459

This year was the biggest success yet, with a total of 936 volunteers bagging trash on beaches and marshes from Greenwich to Stonington. An incredible 11 tons of debris was removed from Connecticut beaches. Volunteers recorded information about the amount and types of debris on CMC's data cards. An army of dedicated zone captains in 32 towns set out not only to clean the beaches, but also to educate the public on the problem of floatable wastes in the ocean, and to prevent harm to estuarine and marine animals.

Some areas were accessible only by boat. Fragile marshes along the Connecticut and Housatonic Rivers were cleaned by volunteers in boats, as well as Chimon Island, off Norfolk, and Mashantucket Land Trust Islands.

We seem to be making progress--most beaches that were cleaned last year were in good shape this time, yet our total is higher because of the addition of several areas cleaned for the first time, and 158 new volunteers. Recycling was encouraged. One gruesome find in Darien was the carcass of a small dog, tangled in fishing line and other debris, inside a tire rim. A single cleanup in Stratford netted 84 tires.

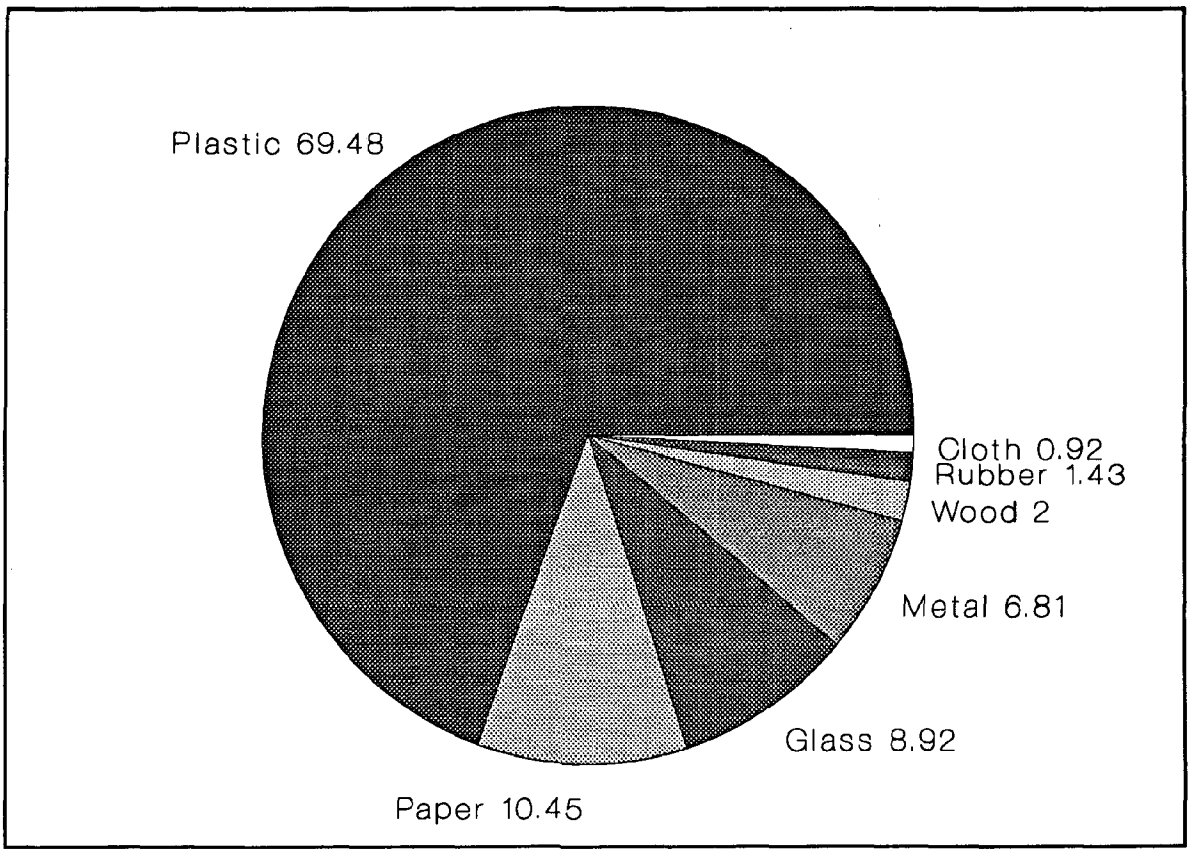
Again this year, the most frequent item in our state was cigarette butts, which many people incorrectly assume biodegrade rapidly. Volunteers griped that it was not possible to pick up or count all of the butts--you could see 50 at a time without moving from one spot. One cleanup of three-quarters of a mile netted 8,000 butts. Many took home the R. J. Reynolds Tobacco company's bumper stickers reading "Don't Leave Your Butt on the Beach!"

Volunteers included school children, college students, teachers, families, Boy and Girl Scouts, 4-H Clubs, community service groups, educational organizations, and a number of environmental clubs and groups such as the Audubon Society and the Sierra Club. The Connecticut Department of Environmental Protection was instrumental in organization of the event. First Brands Corporation supplied the trash bags.

The cleanup was coordinated by the Connecticut Sea Grant College Program, one of 29 Sea Grant programs located in the coastal and Great Lakes states. Supported by federal and state funding, Sea Grant awards grants for marine research, advisory service, and education.

Peg Van Patten

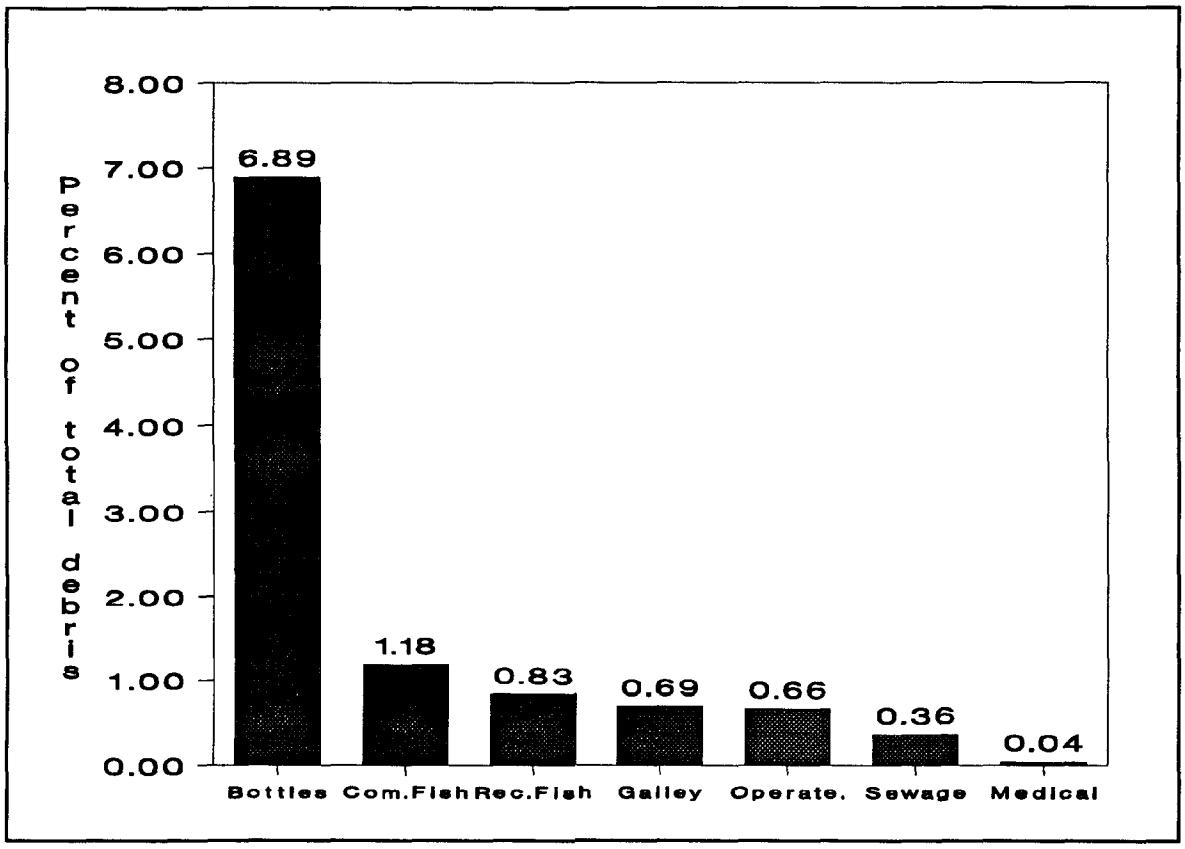
PERCENT COMPOSITION OF CONNECTICUT'S BEACH DEBRIS:



CONNECTICUT'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	20,690	9.77
2. Glass pieces	4,790	6.89
3. Plastic pieces	4,676	6.72
4. Foamed plastic pieces	4,449	6.40
5. Paper pieces	3,902	5.61
6. Plastic food bags/wrappers	3,489	5.02
7. Plastic straws	2,677	3.85
8. Plastic caps and lids	1,990	2.86
9. Plastic cups and utensils	1,317	1.89
10. Plastic beverage bottles	1,273	1.83
11. Metal beverage cans	1,174	1.68
12. Foamed plastic cups	1,120	1.61
Total	**51,547**	**74.18**

MAJOR TYPES AND SOURCES OF CONNECTICUT'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Stratford	71.81	Plastic food bags/wrappers
Madison	63.20	Cigarette butts
Westport/Compo Beach	66.84	Cigarette butts
Niantic/McCook's	71.56	Cigarette butts
East Lyme/Rocky Neck	71.62	Cigarette butts
Stamford	73.15	Cigarette butts
Lyme	75.10	Foamed plastic pieces
New Haven	58.09	Glass pieces
West Haven	71.37	Cigarette butts
Fairfield	82.29	Cigarette butts
Darien	71.38	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Stratford	Porta-potty sign	BFI

FOREIGN DEBRIS ITEMS REPORTED:

None reported

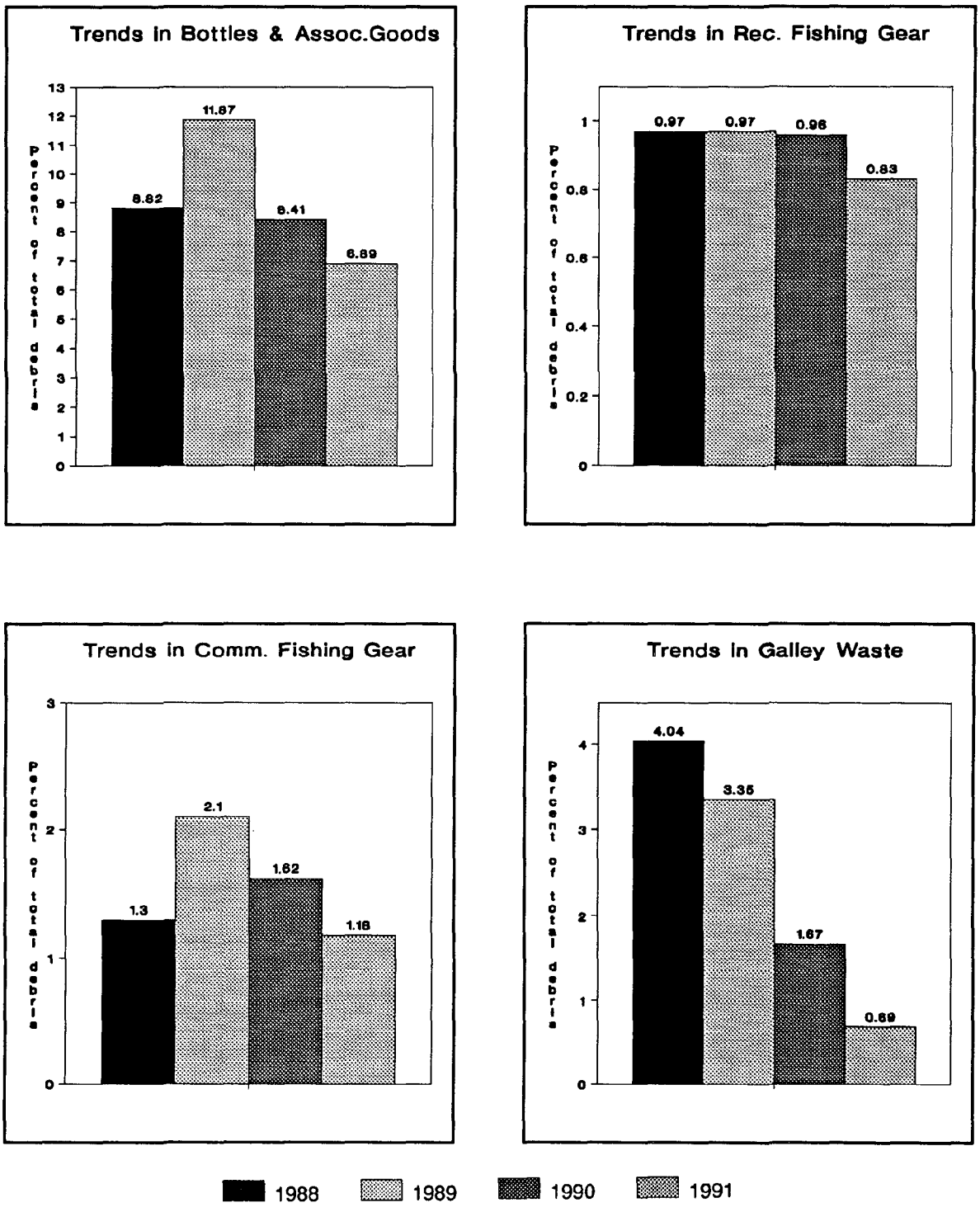
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead bird with plastic lid on leg	4 dead seagulls
Canine carcass entangled in fishing line, inside a tire	3 dead jellyfish
	2 dead horseshoe crabs
Crab in a bottle	2 dead clams
	1 dead rat
	1 dead fish
	1 seagull with broken wing

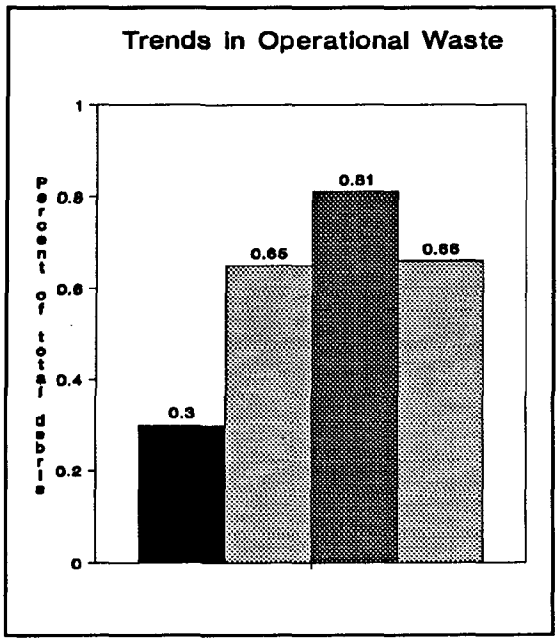
MOST PECULIAR DEBRIS ITEMS REPORTED:

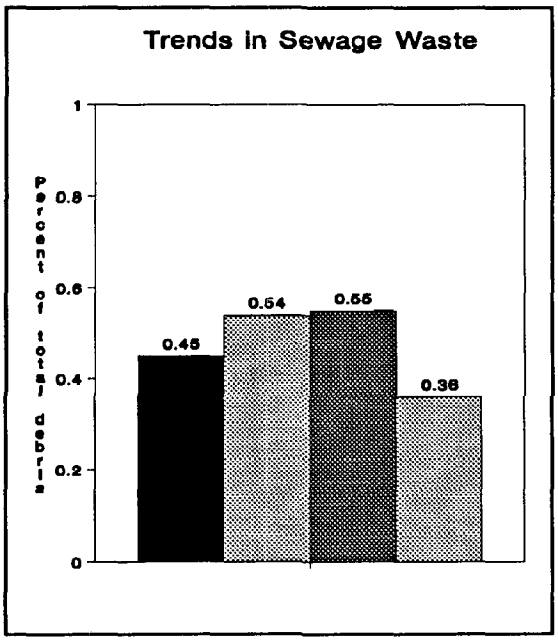
Stratford	shirt and blue jeans, skateboard, car door, men's underwear, part of plastic Christmas tree
Madison	car tailpipe, golf tee, underwear, 2 beach chairs, head of a toy plastic doll
Westport/ Compo Beach	cowboy hat, bikini top, binoculars, pair of glasses
Niantic/McCooks	nail polish, operating room cap, manhole cover, engraved piece of marble
East Lyme/ Rocky Neck	moth balls, crayon, half of a fishing pole, cassette tapes, neck pillow, pornographic magazine, 2 bras, plastic chair set, truck radio
Stamford	seat cushion, shotgun shell, propane gas tank, boat steering cable, full bottle of beer, lawn chair, gas tank, boat seat, wooden sign, elastic tank top
Lyme	baby pacifier, piece of gas stove, bowling ball, unopened bottle of Coke, counter-top
New Haven	underwear, umbrella frame, headless baby doll, burnt sneaker, birth control sponge, plastic exit sign
West Haven	hair brush
Fairfield	arm of a doll
Darien	pickle jar, auto gas tank, Bazooka Joe comics, fake fingernail, radio tube

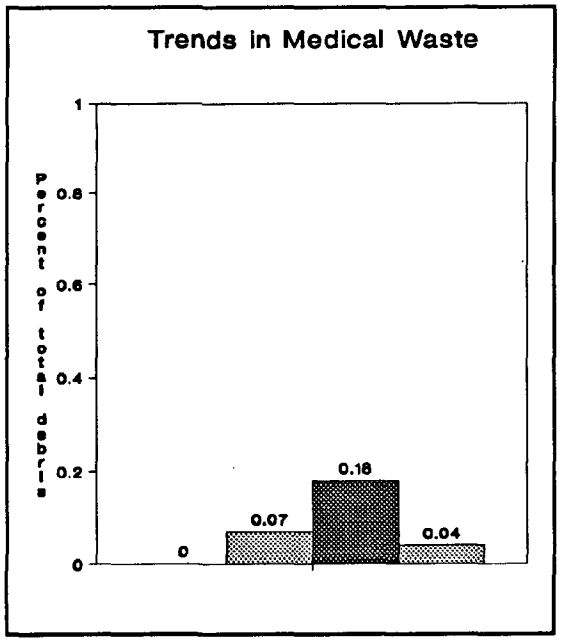
TRENDS IN MAJOR TYPES AND SOURCES OF CONNECTICUT'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF CONNECTICUT'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON CONNECTICUT'S 1992 COASTAL CLEANUP CONTACT:

Peg Van Patten
Connecticut Sea Grant Program
University of Connecticut
Marine Science Institute, Avery Point
Groton, CT 06340-6097
(203) 445-3459

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

This canine carcass was found entangled in a tire rim during Darien's cleanup.

Employees of Delmarva Power after an impressive three hours work at Holts Landing State Park.

DELAWARE

Delmarva Power

"GET THE DRIFT AND BAG IT" 1991

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

September 21, 1991
2,800 Volunteers
93 Miles Cleaned
37,000 Pounds of Debris Collected
634 Data Cards

Coordinated by: Nancy Rolli
Delaware Department of Natural
Resources and Environmental Control
89 Kings Highway, P. O. Box 1401
Dover, DE 19901
(302) 739-4506

Delaware's "Get The Drift & Bag It" celebrated its fifth birthday on September 21, 1991 with volunteers from all walks of life dedicating just three hours of their time for a cleaner coastline. Our campaign involved 2,800 volunteers collecting 37,000 pounds of trash from coastal areas bordering the Atlantic Ocean, the Delaware River and Bay, and inland riverways. The project was co-sponsored by the Department of Natural Resources and Environmental Control and Delmarva Power Company.

The enthusiasm and publicity for the "Get The Drift & Bag It" was unprecedented. Delmarva Power supplied T-shirts to all participants for the impressive morning's work. Thanks to their co-sponsorship, the Department of Natural Resources and Environmental Control was able to fund promotional and educational support for the cleanup.

Volunteers, ranging from Governor Castle and Congressman Carper to scout troops and senior citizen organizations, families, the Environmental Protection Agency, Delaware National Guard, and hundreds of Delmarva Power employees, cleaned 93 miles of accessible coastline.

The 1991 campaign was expanded to promote plastic recycling at all sites as a practical means to reduce solid waste in our environment and alleviate the burden placed on our landfills. Most of the trash collected was taken to the Delaware Recycling Processing Plant for separation of all recyclable materials.

We believe the partnership between government, industry, and the general public is truly working. Our coastlines are cleaner and fewer reports of entangled wildlife were found. The message is being heard, but it is clear that the amount collected could not be attributed to beach littering alone; both the quantity and the nature of the debris indicated that most of it had washed ashore.

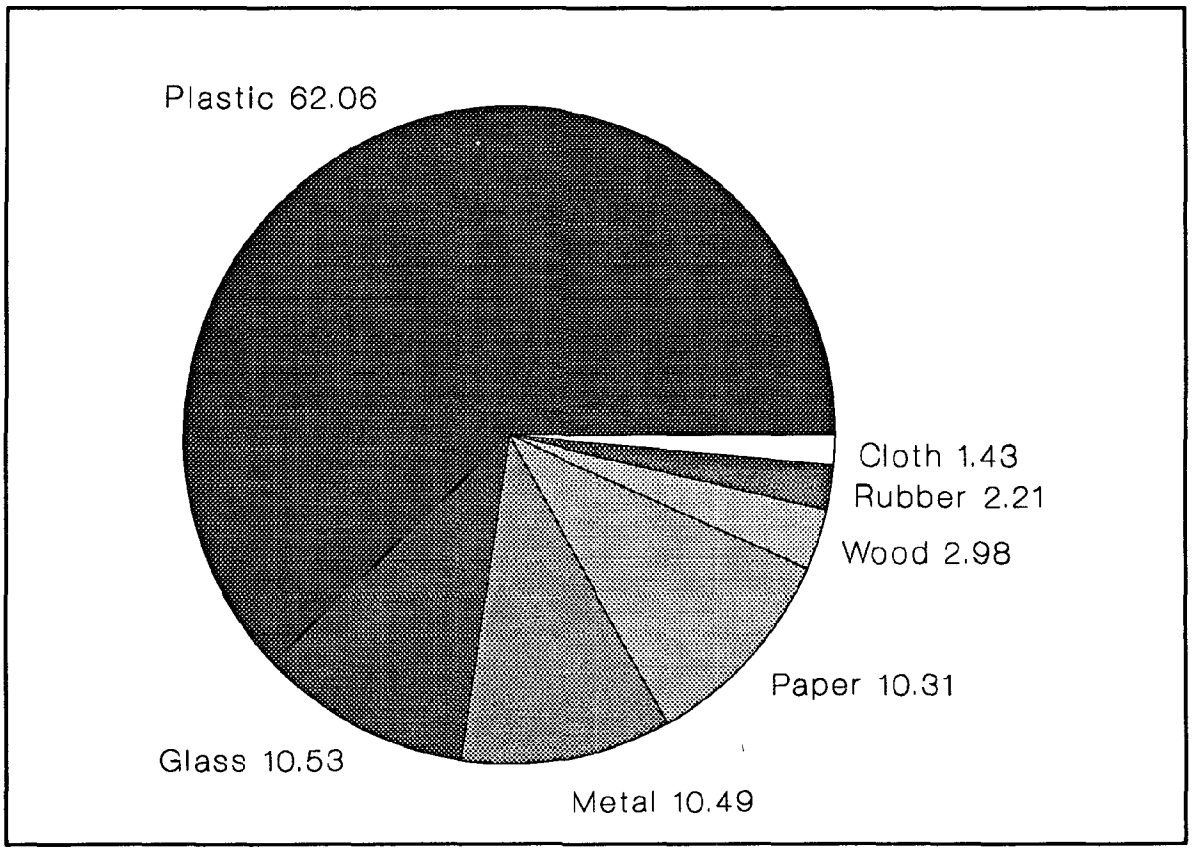
But finding trash each year continues to send a message to the public that our work is not done, even after five cleanups. Everyone needs to keep up the pressure that litter injures wildlife, spoils our beaches, and threatens boater safety.

The First Brands Corporation supplied the trash bags. Browning-Ferris Industries donated labor and vehicles for collecting full trash bags from sites. Playtex Family Products donated gloves and Wilmington Trust Company supplied the pencils.

The sixth annual "Get The Drift & Bag It" will be held September 26, 1992 from 9 a.m. to 12 noon. The program for '92 will be expanding into our inland bay areas.

Nancy Rolli

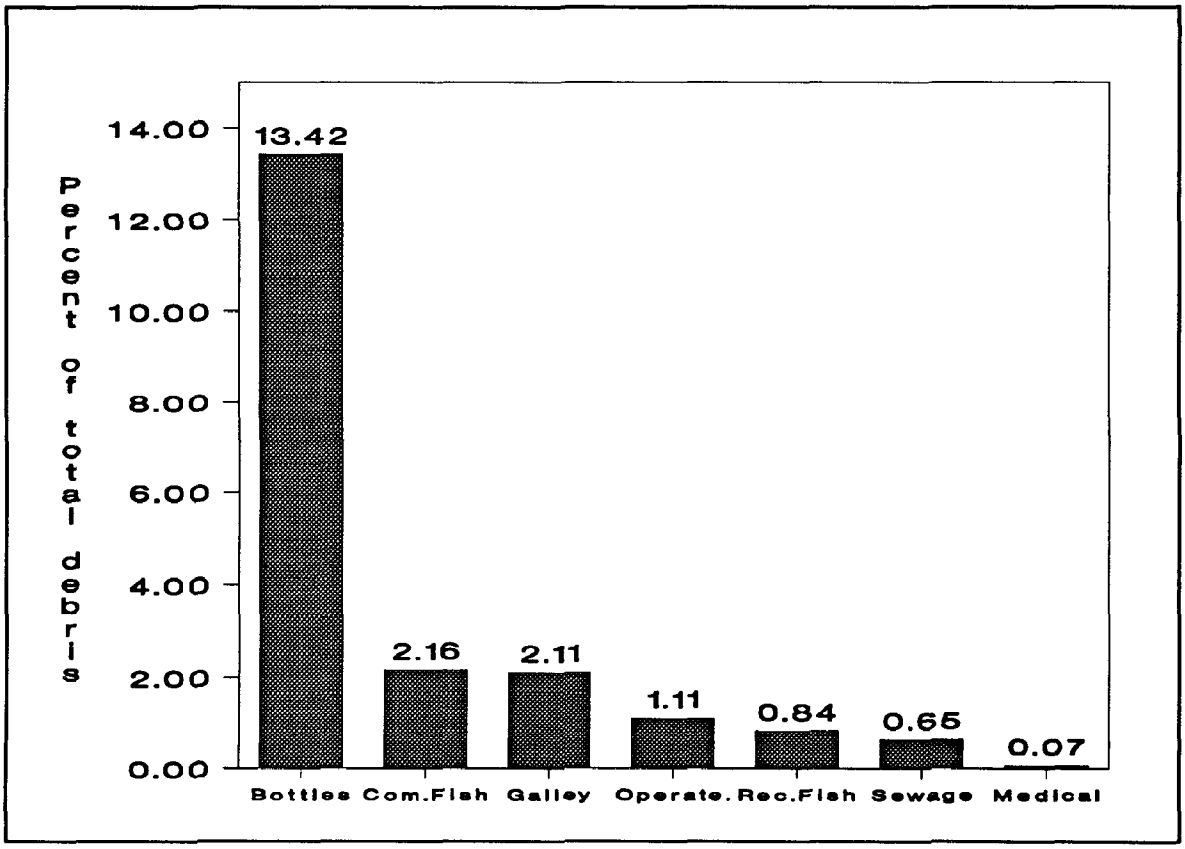
PERCENT COMPOSITION OF DELAWARE'S BEACH DEBRIS:



DELAWARE'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	18,359	15.47
2. Plastic pieces	8,195	6.90
3. Glass pieces	7,828	6.59
4. Paper pieces	6,403	5.39
5. Plastic food bags/wrappers	6,276	5.29
6. Metal beverage cans	5,262	4.43
7. Plastic straws	4,978	4.19
8. Plastic caps and lids	4,389	3.69
9. Foamed plastic pieces	4,084	3.44
10. Glass beverage bottles	3,581	3.01
11. Foamed plastic cups	3,406	2.87
12. Plastic beverage bottles	2,799	2.35
Total	**75,560**	**63.69**

MAJOR TYPES AND SOURCES OF DELAWARE'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Battery Park	67.77	Glass pieces
Augustine	67.64	Cigarette butts
Carpenter State Park	29.89	Glass beverage bottles
Brandywine Park	55.15	Glass beverage bottles
Fort Delaware	67.06	Foamed plastic pieces
Woodland Beach	40.25	Glass pieces
Pickering Beach	53.02	Glass pieces
Kitts Hummock	51.79	Metal beverage cans
North Bowers Beach	43.67	Cigarette butts
South Bowers Beach	58.51	Plastic pieces
Bennetts Pier	52.91	Plastic pieces
Big Stone Beach	59.56	Metal beverage cans
Fowler	49.53	Plastic pieces
Slaughter	58.37	Metal beverage cans
Broadkill	57.88	Plastic pieces
Beach Plum Island	61.66	Plastic pieces
Lewes	63.90	Cigarette butts

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE: (cont.)

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Cape Henlopen (Bay)	75.57	Cigarette butts
Cape Henlopen (Ocean)	55.78	Glass pieces
Gordon's Pond	71.30	Cigarette butts
Rehoboth Beach	75.51	Cigarette butts
Dewey Beach	66.88	Cigarette butts
Indian River	60.18	Foamed plastic meat trays
DE Seashore State Park	64.30	Glass pieces
Deauxville	65.44	Cigarette butts
Rehoboth Sailing Area	73.61	Miscellaneous types of plastic bags
Nanticoke	47.78	Cigarette butts
Bethany	78.53	Cigarette butts
South Bethany	59.22	Cigarette butts
Fenwick Island	74.03	Cigarette butts
Holts Landing State Park	59.01	Metal beverage cans
Assawoman Bay	44.86	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Battery Park	plastic bottle	DuPont
Augustine	pencil	Wilmington Builders
	balloon	Mercy Health Plan
Fort Delaware	truck tire flap	Lykes Brothers Shipping Line
Kitts Hummock	plastic case	Johanna Farms, Inc., Flemington, N.J.
Fowler	plastic top to case	Jackson Marine Sales, Pompano Beach, Florida
Cape Henlopen (Ocean)	pen	Property of New Castle County
DE Seashore S.P.	strapping band	Al-Ahmad M.K. Overseas, PVT. Ltd. Sahibabad Up, India

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
DE Seashore S.P.	India	strapping band	Al-Ahmad M.K. Overseas, PVT. Ltd. Sahibabad Up, India

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead seagull entangled in net	6 dead birds
Dead seagull tightly entangled in fishing line	4 dead headless turtles
Dead decayed bird entangled in boards	2 dead horseshoe crabs
	2 dead seagulls

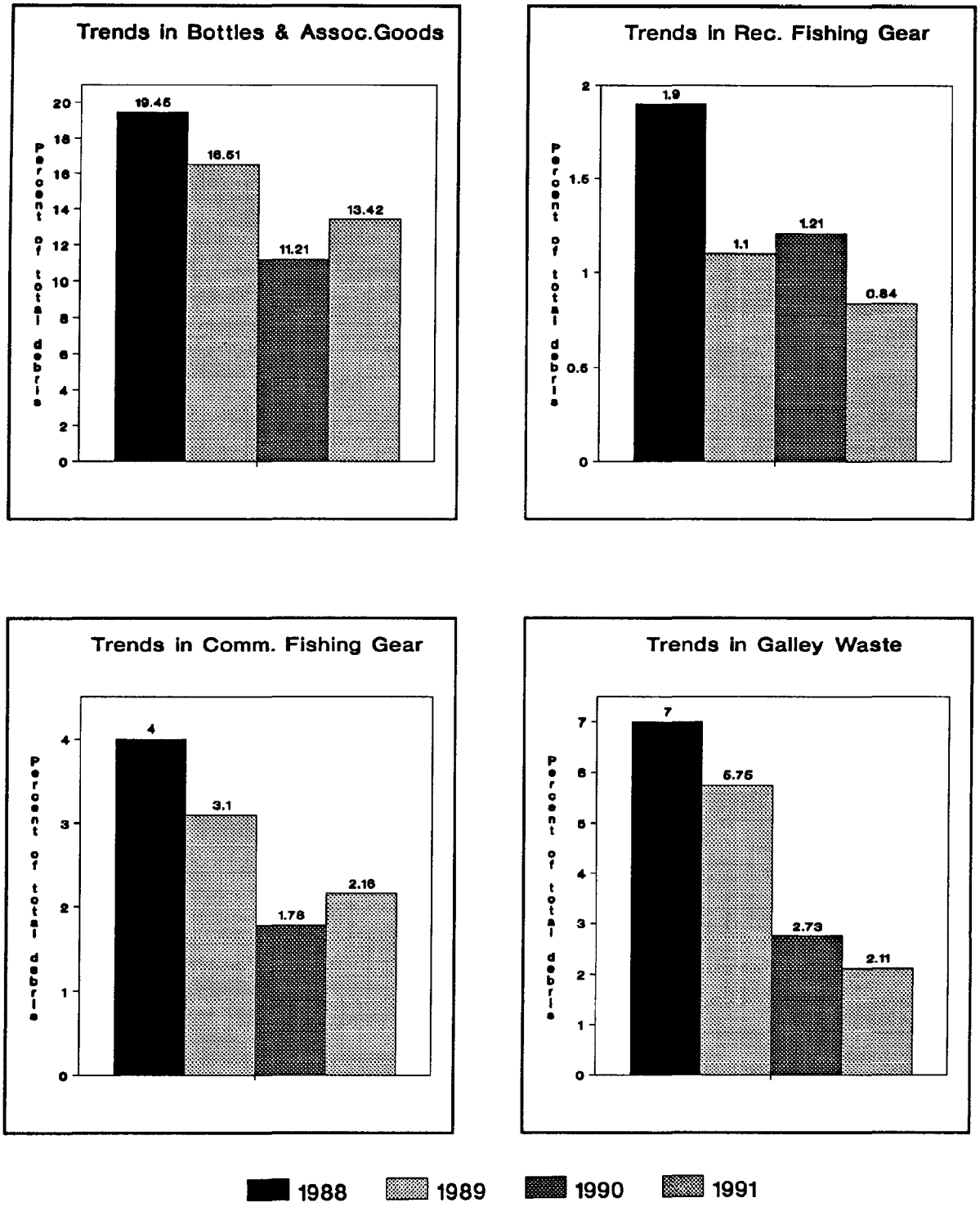
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
	1 dead shark 1 dead squirrel

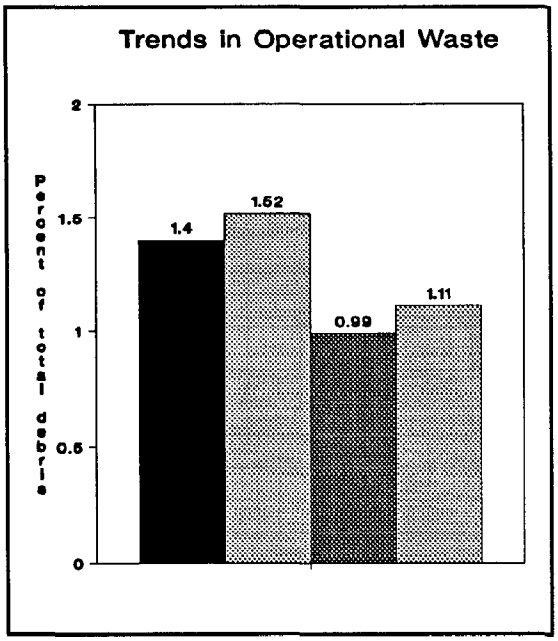
MOST PECULIAR DEBRIS ITEMS REPORTED:

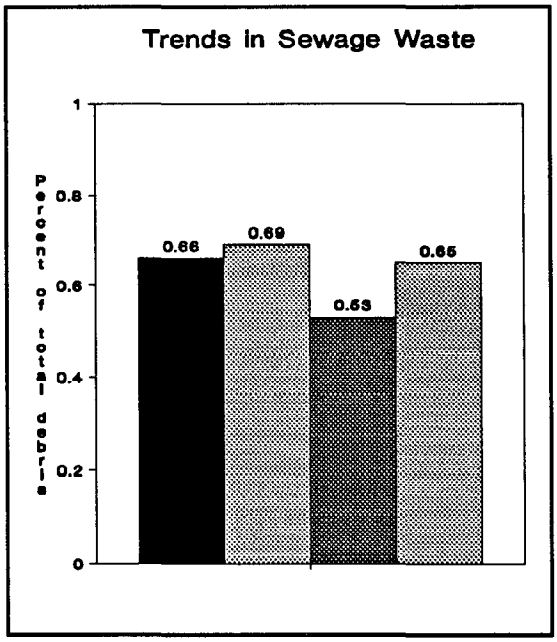
Battery Park	crack vials, shotgun shell, pair of shorts, half of a Barbie doll
Augustine	red plastic rose, toy alligator, scrub brush, plastic holly wreath, underwear
Carpenter State Park	bed frame, Penthouse magazine, hospital bracelet, windshield
Brandywine Park	car mat, stereo speaker, woman's underwear, air filter, calculator, jock strap, step ladder, vacuum, pacifier, shoulder pads, parts of an air conditioner
Fort Delaware	bowling ball, bowling pin, unopened beer can, melted Playmate cooler
Woodland Beach	motor, lawn chair
Pickering Beach	fence, boat hook
Kitt's Hummock	pillow, crack vials, car speaker, vacuum cleaner, toilet bowl, sofa, pot pipe
North Bowers Beach	sleeping man on beach, gun shell casings, underwear, washcloth, refrigerator with groceries
South Bowers Beach	tennis shoes, bike, seatbelt, toilet tank
Bennetts Pier	car muffler, pacifier
Big Stone Beach	toilet, clay pigeon, swimming pool, paint brush, refrigerator
Fowler	shorts, gun shells, sandle, sofa cushion, car
Slaughter	hair curler, flip flop
Broadkill	lawn chair, bucket, part of car bumper, real estate sign, $1
Beach Plum Island	metal hole puncher, electrical box cover, mascara applicator, exhaust pipe, telephone pole, birthday candle
Lewes	refrigerator door, couch cushion, full soda cans, Ninja turtle, GI Joe, pacifier, muffler pipe, paintbrush handle, pantyhose
Cape Henlopen (Bay)	part of a radio, Brut aftershave bottle, basket, sneaker
Cape Henlopen (ocean)	gun shell, diving mask, metal toy soldier, toy block
Gordon's Pond	bedspring, piston, asthma inhaler, fake flower, pink spongy toy
Rehoboth	coin earring, "D" cell battery
Dewey Beach	insulation, motor
DE Seashore S.P.	large knife, toy military man, "live" machine gun shell, garbage can lid, toy Corvette, beach lounge chair, plastic Christmas ornaments, vacuum tube, boat seat, boxer shorts
Deauxville	two golf balls, hair curler
Rehoboth Sailing Area	broken pontoon boat, kitchen sink
Nanticoke	toilet pump, toilet seat, TV frame, shoe sole
Bethany	bucket handle, toy spider, mustard in package, pencil sharpener
South Bethany	boat seat
Fenwick Island	crayon, paintbrush handle, beach blanket, Chapstick applicator, men's underwear, picture frame with man's picture and love note, one full can of beer
Holt's Landing S.P.	hair coloring kit, roll of carpet
Assawoman Bay	man's pair of boots, fireworks canister, fishing pole from mini fish game, dental floss holder, large paint brush.

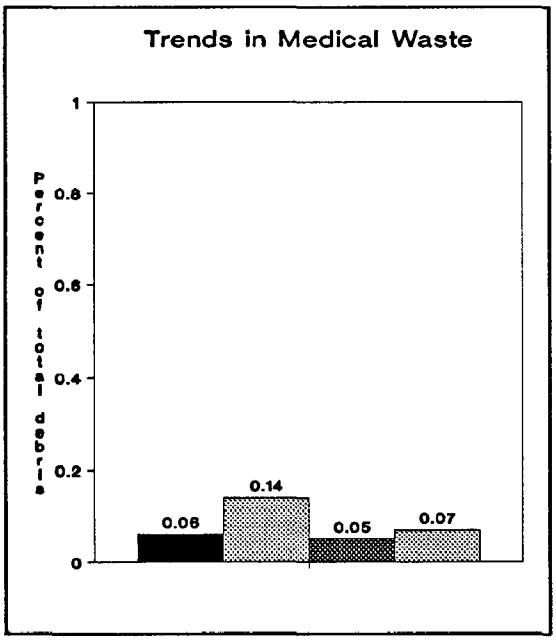
TRENDS IN MAJOR TYPES AND SOURCES OF DELAWARE'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF DELAWARE'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON DELAWARE'S 1992 COASTAL CLEANUP CONTACT:

Nancy Rolli
Delaware Department of Natural Resources and Environmental Control
89 Kings Highway, P. O. Box 1401
Dover, DE 19901
(302) 739-4506

CLEANUP DATE: September 26, 1992

1988 1989 1990 1991

DISTRICT OF COLUMBIA

September 22 & October 5, 1991
9 Volunteers
0.5 Miles Cleaned
900 Pounds of Debris Collected
2 Data Cards

Coordinated by: Liza Gookin
The Nature Company
1323 Wisconsin Ave., NW
Washington, DC 20007
(202) 333-4100

Early on September 22, our small, but enthusiastic, volunteer force arrived at Kenilworth Gardens in Washington D.C. armed with gloves, bags and data cards to clean a section of the Anacostia River shoreline. But before we got down to work we were treated to a guided tour of Kenilworth's spectacular aquatic gardens, by Ranger "Mac" (Walter McDowney). Inspired by these tranquil surroundings and the early morning sun reflecting off quiet pools of water teeming with plant life, we eventually wandered down to the Anacostia River which borders the garden's western edge. As we gazed at the amount of trash which had accumulated on the shoreline, reality slowly crept back and we rolled up our sleeves for the job ahead of us.

Liza Gookin, the cleanup's coordinator, waded through the shallows in hip-boots to collect trash that was out of reach from the shore. Embedded in the mud she pulled up a variety of interesting items including a chrome strip from a car. On shore the rest of the volunteers were also making interesting "trash discoveries." The items collected and entered on the data cards included shower curtain rings, a sneaker, a hiking boots, plastic flower pots, and a working elephant squirt gun.

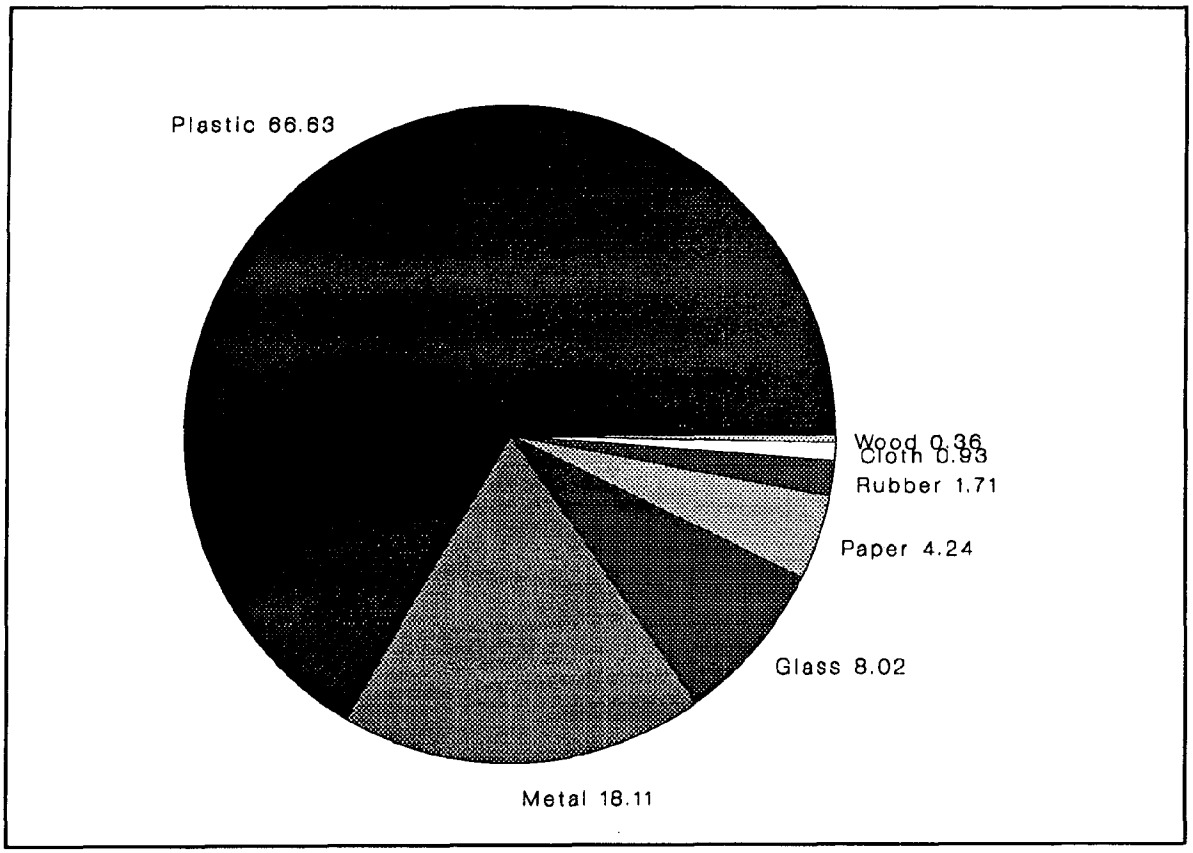
The most prevalent trash items were plastic beverage bottles, styrofoam cups and fast food containers. Also in abundance were plastic oil or lubricant containers and, surprisingly, a large number of balls including 3 plastic bowling balls and 23 tennis balls! What do all of these items have in common? While some of them, such as soda bottles, may have been trash from boaters, it is most likely that these items were washed down storm drains in neighborhoods bordering the Anacostia. We even found one car oil filter which would support this theory. It would seem people are using storm drains to discard used motor oil, filters, and oil containers when doing "do-it-yourself" oil changes at home.

After three hours of muddy, sweaty collection our intrepid volunteer force had bagged 24 bags of trash. Glass bottles and aluminum cans were bagged separately for recycling.

The Nature Company, sponsored the cleanup. Their mission statement, "to give our customers an experience which makes them feel good about themselves and the world in which they live," certainly seemed appropriate for the way weary volunteers felt after a hard morning's work. Looking back as we were leaving, I'm sure each of us felt a strong sense of accomplishment and harbored a new feeling of stewardship for a tiny section of the Anacostia.

Betsy Schrader

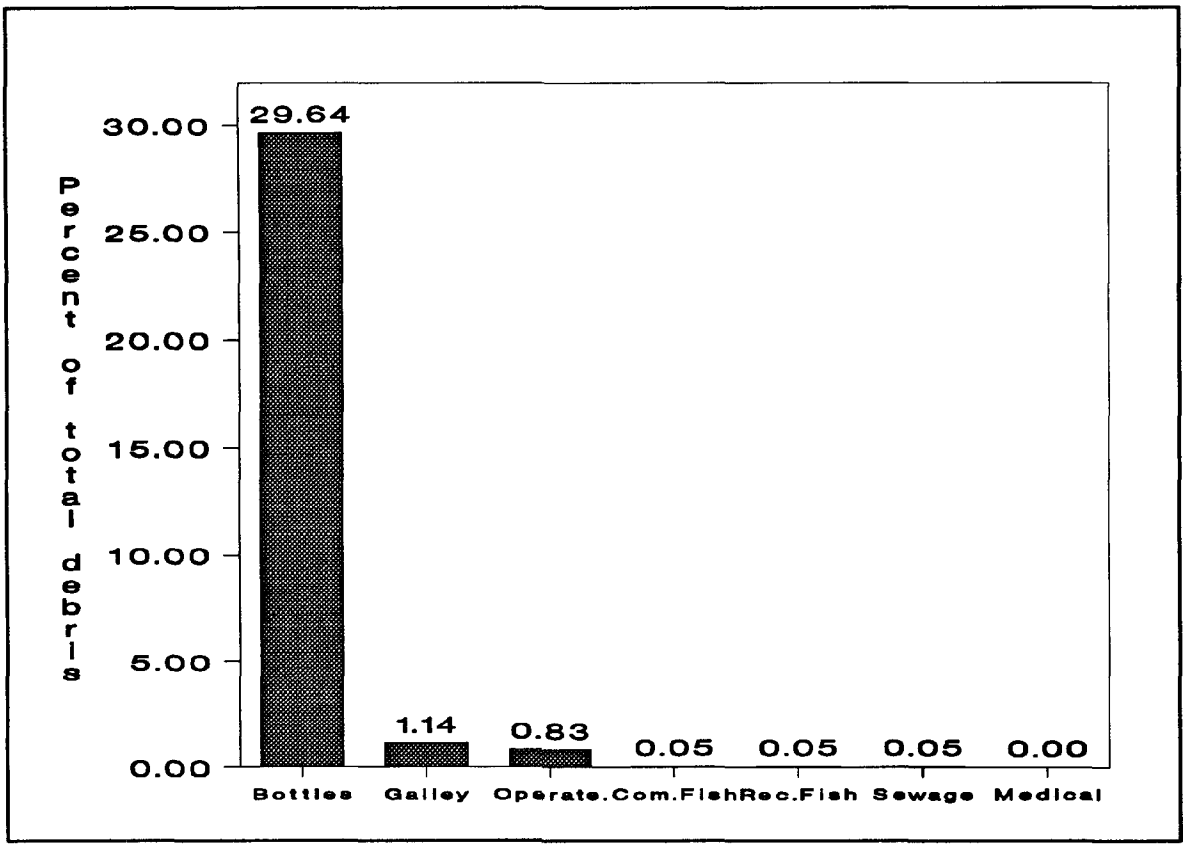
PERCENT COMPOSITION OF THE DISTRICT OF COLUMBIA'S WATERWAY DEBRIS:



DISTRICT OF COLUMBIA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Foamed plastic pieces	486	25.14
2. Metal beverage cans	291	15.05
3. Foamed plastic cups	255	13.19
4. Glass beverage bottles	133	6.88
5. Plastic beverage bottles	123	6.36
6. Fast-food containers	76	3.93
7. Paper pieces	61	3.15
Plastic bottles	61	3.15
8. Plastic caps and lids	45	2.32
9. Plastic cups/utensils	34	1.75
Oil/lube bottles	34	1.75
10. Plastic food bags	32	1.65
Plastic pieces	32	1.65
11. Clothing	18	0.93
12. Plastic bags	16	0.82
Bottle caps	16	0.82
Total	**1,713**	**88.61**

MAJOR TYPES AND SOURCES OF DISTRICT OF COLUMBIA'S WATERWAY DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
C&O Canal	48.90	Paper pieces
Anacostia River	70.72	Foamed plastic pieces

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

C&O Canal	Weiner whistle
Anacostia River	Elephant squirt gun

TRENDS IN MAJOR TYPES AND SOURCES OF DISTRICT OF COLUMBIA'S WATERWAY DEBRIS:

Data collection from District of Columbia's cleanup has only been carried out for two years and therefore trends can not be assessed.

FOR INFORMATION ON DISTRICT OF COLUMBIA'S 1992 COASTAL CLEANUP CONTACT:

Taryn Bennett
The Nature Company
1323 Wisconsin Ave., NW
Washington D.C. 20007
(202) 333-4100

CLEANUP DATE: COASTWEEKS

Triplets at Wakulla County, picked up three bags of trash.

FLORIDA

September 21, 1991
18,488 Volunteers
1,203 Miles Cleaned
360,000 Pounds of Debris Collected
3,319 Data Cards

Coordinated by: Heidi Lovett
and Bruce Ryan
Center for Marine Conservation
One Beach Drive SE, Suite 304
St. Petersburg, FL 33701
(813) 895-2188

Thousands of concerned citizens across the state of Florida came out in record numbers once again for the 1991 Florida Coastal Cleanup. At our fifth statewide event, approximately 18,500 volunteers collected more than 180 tons of debris from 1,203 miles of coastline.

This huge event would not be possible without the outstanding efforts of more than 70 zone captains in all of Florida's coastal counties. It is their work and dedication that leads the cleanup to new records each year. In addition, the Center also appreciates the personnel at the many state and federal parks, preserves, and refuges that get involved in the cleanup each year.

As in past years, entangled animals, both dead and alive, discovered by beach cleaning volunteers demonstrated the dangers caused by a marine environment polluted with trash. A raccoon, marsh turtles, crabs, several fish, a cormorant, pelicans, and other birds were reportedly entangled in monofilament fishing line, discarded cast nets, and abandoned crab and lobster traps. Two live great blue herons were spotted by volunteers also entangled in line, but unfortunately rescuers were unable to catch them.

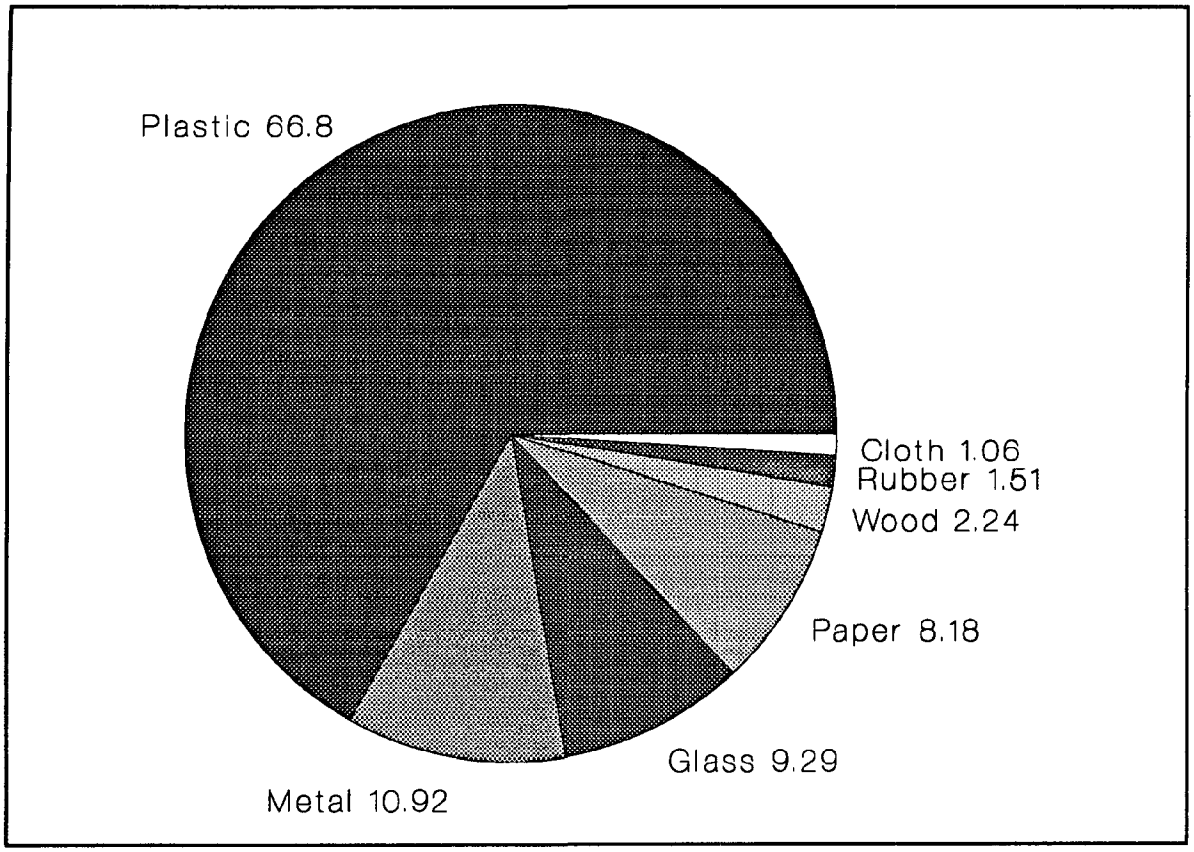
Cruise line industry and other shipping debris was found littering Florida's coast once again. Unusual items found during the cleanup included a toilet, a '57 Ford car radio, a Teenage Mutant Ninja Turtle waste basket, a 26" color television, a skateboard, a vacuum cleaner, a garter belt, and a set of false teeth.

The major sponsors for the 1991 Florida Coastal Cleanup were COAST 97.3 FM; Cowles Charitable Trust; George W. Jenkins Foundation, Inc.; Society of the Plastics Industry, Inc.; Southern Bell; and Mrs. Howard F. Whitney, Jr. In-kind contributions for the statewide effort were: The Bayfront Center in St. Petersburg, First Brands Corporation (GLAD Bags); Faber Castell Corporation; Newswatch 8 Earthwatch; and Tampa Tube Containers, Inc.

This was the largest cleanup in Florida's history and our volunteers deserve a heartfelt thanks for a job well done.

Heidi Lovett
Bruce Ryan

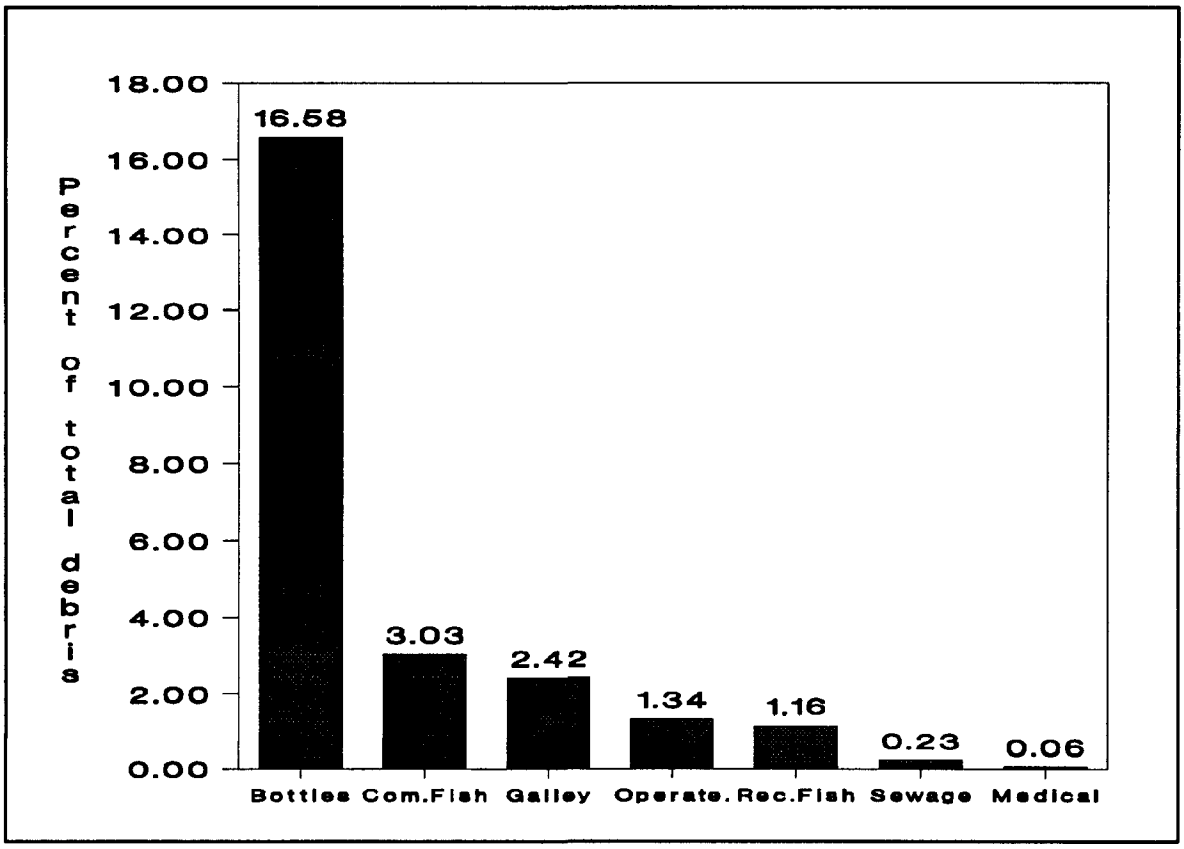
PERCENT COMPOSITION OF FLORIDA'S BEACH DEBRIS:



FLORIDA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	143,493	16.78
2. Plastic pieces	56,335	6.59
3. Foamed plastic pieces	53,179	6.22
4. Metal beverage cans	47,632	5.57
5. Glass beverage bottles	44,672	5.22
6. Plastic straws	36,208	4.23
7. Plastic caps and lids	33,452	3.91
8. Plastic food bags/wrappers	33,055	3.86
9. Paper pieces	32,507	3.80
10. Foamed plastic cups	28,615	3.34
11. Plastic cups and utensils	21,259	2.48
12. Glass pieces	21,038	2.46
Total	**551,445**	**64.51**

MAJOR TYPES AND SOURCES OF FLORIDA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Nassau	61.34	Cigarette butts
Duval/NAS Jacksonville	67.19	Foamed plastic pieces
St. John's	76.65	Cigarette butts
Flagler	74.10	Cigarette butts
Volusia	84.28	Cigarette butts
Brevard	72.03	Cigarette butts
Indian River	76.26	Plastic pieces
St. Lucie	83.84	Cigarette butts
Martin	73.93	Foamed plastic pieces
Palm Beach	77.64	Cigarette butts
Broward	77.92	Cigarette butts
Dade	68.89	Plastic pieces
Monroe	71.97	Plastic pieces
Collier	60.88	Cigarette butts
Lee	61.37	Cigarette butts
Charlotte	59.65	Cigarette butts
Sarasota	70.39	Cigarette butts

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE: (cont.)

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Manatee	59.48	Cigarette butts
Hillsborough	52.00	Glass beverage bottles
Pinellas (Beaches)	73.54	Cigarette butts
Pinellas (Tampa Bay)	49.63	Paper pieces
Pasco	58.19	Cigarette butts
Hernando	50.60	Metal beverage cans
Citrus	67.41	Plastic milk/water bottles
Levy	56.35	Plastic pieces
Dixie	42.92	Paper pieces/glass beverage bottles
Taylor	48.29	Glass beverage bottles
Jefferson	53.38	Metal beverage cans
Wakulla	48.28	Glass beverage bottles
Gulf	40.30	Paper pieces
Bay	70.45	Cigarette butts
Walton	49.80	Glass beverage bottles
Okaloosa	59.61	Cigarette butts
Santa Rosa/Escambia	66.14	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Nassau	plastic tubing	Imperial Eastman
St. John's	plastic shampoo bottle	Holland American Lines
	balloon with party horn attached	Morrisons Family Dining
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines
Flagler	plastic rim	Chaque Orifice
	plastic jar	Destapacanos (En Escamas 100) Poison
	oil drum	Gretna, LA
	building supplies	Martin's Restaurant
	milk container	Mivaca Lacteos Dee, Venezuela C.A.
	shampoo container	Royal Caribbean Cruise Lines, Grace Line
	5 gallon basket	Shell Rottelle Oil 40, John W. Stone, Oil Dist. Inc. 87 1st St., Gretna, LA 70053, (504) 366-3401 Prod. Code 54004
Volusia	packing crate and styrofoam	ACSA
	balloons	Caribbean Cruise Lines
	balloon	Carnival Cruise Lines
	ID tag B12	Commodore Cruise Lines
	plastic drink mixer	Hilton
	2 shampoo bottles	Princess Cruise Lines
	plastic bag	PUBLIX (supermarket)
	plastic cups	Quality Inn
	plastic cup	Royal Caribbean Cruise Lines
	plastic wrapper	Royal Caribbean Cruise Lines

TRACEABLE DEBRIS REPORTED: (cont.)

Location	Type of Debris	Source Indicated
Volusia (cont.)	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines
	frozen whole eggs	Sunny Fresh Foods, Monticello, MN
Brevard	paper cups	AAFES
	2 pieces of balloons	Carnival Cruise Lines
	balloon	Carnival Cruise Lines
	6 tea bags	Europa Cruise Lines
	pen	Howard Johnson's
	plastic cups	Holiday Inn
	blood bag	Orlando
	balloons	Ron Jon's Carnival Cruise
	2 plastic hair conditioner bottles	Royal Caribbean Cruise Lines
	plastic cup	Royal Caribbean Cruise Lines
	2 shampoo bottles	Royal Caribbean Cruise Lines
	paper band	Western Australian Meat Company
	plastic cap lid	Zima-Ljubljana
Indian River	5 liter plastic bucket	Hacedor
	conditioner bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
St. Lucie	shampoo bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
	ball point pen	Royal Caribbean Cruise Lines
Martin	plastic cup	Carnival Cruise Lines
	Eau De Javel Disinfectant	Products Research and Chem. Corp., Glendale, CA
	shower cap	Hyatt
	plastic cup	Grand Caymen British
	3 shampoo bottles	Royal Caribbean Cruise Lines
	plastic bottles	Royal Caribbean Cruise Lines
	fragrance bottle	World Marketing, Iver, Bucks, England
Palm Beach	candy wrapper	Carnival Cruise Lines
	plastic glass	Discovery Cruise Lines
	med ampule, 20cc	Inadrox Intenuvscula, J. Logeais
	shampoo containers	Princess Cruise Lines
	shampoo bottle	Royal Caribbean Cruise Lines
	balloon	Shell Oil
Dade	plastic planned maintaince systems manual	Dept. of Navy, USA
	plastic eye shades	England Virgin Airways
	frozen shrimp 3 lb. bag	Indianola, Port Lavaca, TX
	plastic hair conditioner bottle	Royal Caribbean Cruise Lines
	3 packages	Royal Caribbean Cruise Lines
	coupon	Studebaker
Monroe	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	shoe polisher	Royal Caribbean Cruise Lines
Lee	10 invoices	ARA fleet maintaince
	plastic shrimp bag	Bait Master

TRACEABLE DEBRIS REPORTED: (cont.)

Location	Type of Debris	Source Indicated
Hillsborough	plastic milk case	Coburg Dairy, Charleston, S.C.
	plastic hard hat	Hankin Construction
Pinellas (Beaches)	realty sign	Prudential Florida
Bay	plastic food bags	Air Force
	plastic cups	Glass Bottom Boat
	plastic cup	Holiday Lodge
	plastic cup	JR Store
Okaloosa	plastic bags	AAFES
	plastic cups	B W Aloha Village
	cardboard box	Genpak Polytherm Products

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
St. John's	Cuba	glass bottle	Wine
	Spain	water bottle	Fuente Alto
Flagler	Venezuela	milk container	Mivaca Lacteos Dee, Venezuela C.A.
Volusia	Belgium	spray can	deodorant
	France	bridal bourgnarre	
	Germany	electric transistor	Osram
	Jamaica	plastic pen	
	Mexico	bottle	Veedol
	USSR	aerosol can	
	Venezuela	green bin	
		pen	
	"Oriental"	plastic bottle	
	"Spanish"	cap for oil container	Spanish writing
		bottle	Maalox written in Spanish
Brevard	England	tobacco	Three Games
	Japan	candy wrapper	
	"Spanish"	plastic bottle	Clorolex
Indian River	France	dessert cup	Cito dessert
	Istanbul	bottles	Lotion and shampoo
	Japan	plastic container	
	USSR	light bulb	
	"Spanish"	plastic container	Hacedor, 5 ltr.
		plastic salt box	N520, Made in Halenill
	Unknown	foreign aerosol can	
St. Lucie	Cuba	plastic lid	
	France	aerosol perfume	
	USSR	aerosol can	
	"Arabic"	aluminum can	
	"Oriental"	plastic bottle	
Martin	Egypt	plastic water bottle	
	England	fragrance bottle	World Marketing, Iver, Bucks, England
		plastic cup	Grand Caymen British

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
	France	Eau De Javel Disenfectant	Products Research and Chem Corp., Glendale, CA
	France	hair spray	
	Greece	Florex	Eureka Hellas S.A. Volos
	Italy	shampoo bottle	Division Cosmetica, Malizia, Balsam Shampoo
	Jamaica	shower cap	
	Japan	aluminum can	
		plastic bottle	
	"Foreign"	light bulb	
	"Greek"	bug spray	
Palm Beach	France	med ampule, 20cc	Inadrox Intenuvscula, J. Logeais
	"Spanish"	bottle	
Broward	England	snack bag	London
	"Greek"	milk carton	
Dade	England	plastic eye shades	Virgin Airways
	Germany	black plastic bags	
	Japan	20 ltr. drum	SLCC-A (Cononsote Corrison Inhibitor)
		battery storage cont.	Japan Storage Battery Co.
	Norway	5 gal. can	Jotun Protective Coating
	USSR	liquor bottle	
	"Spanish"	aerosol can	shaving cream
Monroe	England	table salt container	DRI-PAK Derryshire
	Republic of Dominica	plastic lid from bottle	
Sarasota	England	formula cap	Baby Milk Plus, Trewbridge, Wiltshire, England
	Japan	thermo syringe-needle	Tokyo
Bay	France	bottle	toilet bowl cleaner
	Mexico	plastic bottle	fuel additive
	"Spanish"	big plastic bag	
Santa Rosa/ Escambia	Venezuela	piece of plastic	Topoplast C.A., Hecho En Venezuela

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead bird in fishing line	73 dead fish
Bird with rope around neck	21 dead crabs
Dead bird entangled in monofilament line	18 dead birds
Brown pelican with lure attached to wing	11 dead jellyfish
Seagull with fishing hook, wire and weight stuck in side of bird	10 dead seagulls
	9 dead catfish
Seabird strangled by fishing line	7 dead horseshoe crabs
2 marsh turtles in crab trap	4 dead cats
Dead crane entangled in rope	3 dead cormorants
Fish with string through eyes	3 dead turtles
Fish and little crabs in old traps	2 dead blowfish
2 fish and 2 eels in fishing line	2 dead dogfish

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED: (cont.)

Debris Related	Other Reports
Fish with hook in throat	2 dead stingrays
Dead shark with hook hanging out of back	1 dead dolphin
Catfish entangled in fishing line	1 dead raccoon
2 dead fish entangled in fishing line	1 dead rat
Sand crab stuck to duct tape - released	1 dead duck
Sponge entangled in nylon fishing line	1 dead seabird
1 turtle in six-pack holder	1 dead snake
Raccoon entangled in monofilament line	1 dead hammerhead shark
	1 dead jack crevall
	1 dead manta ray
	1 dead redfish
	1 dead ghost crab
	1 dead stone crab

MOST PECULIAR DEBRIS ITEMS REPORTED:

Nassau	Christmas wreath, Nike shoe, fishing pole, wheelbarrow
Duval/ NAS Jacksonville	golf ball, Playboy magazines, bike
St. John's	pieces of wallpaper, paintbrush handle, aircraft parachute flare cover, underwear, lawn chair, Batman figure, life preserver, extremely soiled BVD underwear, stereo speaker, 3 golf tees, mattress, pair of sunglasses, mace bottle, driver's license, car hose, muffler, contact lens vial and solution, metal cooking tongs, comforter, arrow, kids trash can, $1, holster for pistol
Flagler	curtains
Volusia	small Christmas tree, cigarette lighter in leather case, plastic toy soldiers, rubber finger, extension cord, $1, large plastic bin, toy bed, boat hook, egg, glass salt shaker, baby doll arm, plastic flowers, plastic radio, toilet seat cover, Russian caviar, fake fingernails, tiger stripe underpants, green plastic boat prop, plastic army man, watch, mascara, pacifier, sunglasses, plastic eye for stuffed animal, leg of a doll, binoculars
Brevard	partial car bumper, underwear, pair of glasses, asthma inhaler, hair pin, table leg, brush, surfboard wax, boxer shorts, seat head rest, Barbie doll head, fan blade, head of garlic, surfboard, 4 full cold beers in plastic bag with ice, fishing knife, hair curler, TV set, air conditioner screen, sunglasses, hubcap, car stereo, life preserver, bike, screwdriver, 1/2 license plate, unopened Diet Coke can
Indian River	Barbie doll leg, sun visor cap, ladies underwear, trash can, BBQ stove
St.Lucie	lipstick tube, clothes brush, piece of wood saying "The Lord giveth and the Lord taketh away"
Martin	fan blade, plastic flowers, boat prop, dress shoe, bullet casing, combs, plastic doll leg, Happy Meal toy, wet suit, lawn chair, bike, vacuum cleaner hose, Nike shoe, thermal blanket, jock strap, pink bathing suit, rubber shoes
Palm Beach	ping pong ball, watch, rubber duck, Barbie doll, tennis racket, plastic doll leg, rug, pacifier, hair roller, tennis balls, cut off jeans, drugs, bifocals, gym shoes, 3 pairs of underwear, bowling pin, $1, laundry basket, 5 yr. old newspaper

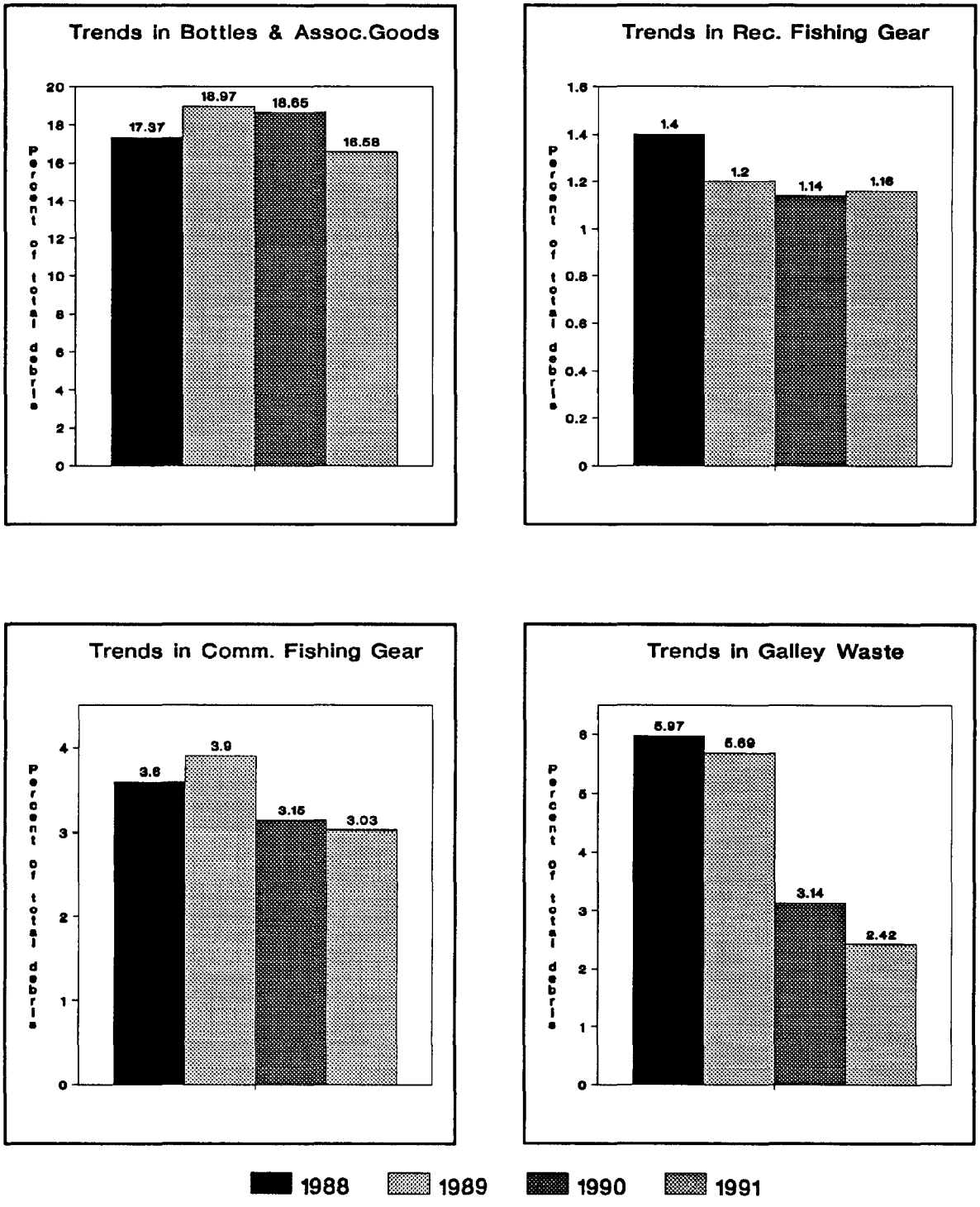
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

Broward	hairbrush, 1/2 gal. of orange juice, watch, mechanic's uniform
Dade	2 crates of dismembered goat, lamb, and chicken from a religious ritual, high top sneaker, medical bottle, military meal bag, 1950's Pepsi bottle, blue jeans, mattress, mascara brush, reflector, slippers, toy bird, toy dog bone, big blue bucket, scrub brush, diving mask, doll parts, motorcycle gas tank, kitchen counter, bicycle pipe, boat toilet, underwear, plastic whistle, 52 cents, slippers, duct tape, plastic General Custer figure, bike tire
Monroe	whole tent, toy rake, refrigerator, salami sausage, TV set, adult play toy, jewelry box, toy horse, toilet bowl floats, car headlight, bed-pan, water ski, binoculars, TV screen, toilet seat
Collier	man's underwear, plastic watch, cabinet door, rug, anchor, hub cap, ice scraper, skateboard, green plastic monster toy, camera case, small bra
Lee	U.S. Marine tie clip, windowshade, plastic horse, light switchplate, kitchen cushion, cooking pot, 2 pennies, lawn chair, silk shirt, windshield wipers, drum stick, cooler, carpet sample, baby bath tub, metal gun, fan
Charlotte	high-top sneaker, full can of beer, piece of automobile, men's boxer shorts, wash cloth, 2 lawn chairs, car bumper, brake pads, scale with fish hook, chopped up squid in plastic bag, broken scale, 1/2 of a toilet, chain link fence, old fishing pole
Sarasota	jock strap, plastic flower, broom, hairbrush, baby bottle, part of a toilet tank, electrical fuse box, men's underwear, iron pipe, battery, toy shovel, fireworks, fire extinguisher, belt buckle, scrub brush, boat parts, bra
Manatee	washing machine agitator, flip flops, scooter, "No littering" sign covered with barnacles, seat belt, toilet bowl, unopened beer bottle, extra large BVD's, baseball bat, note in a bottle in German written in 1988, realty sign, diving flipper, tube of sunscreen, heater element, dope bags, barbeque grill, door key, bathing suit strap, dental flosser, carpet, bicycle, boat door, fire extinguisher, car parts, chain, hub cap, metal TV stand, 1982 beer can, wine bottle opener, tape recorder, old boat seat, old lounge chair, refrigerator, oil filter, dog collar
Hillsborough	cigar plastic tip, grocery cart, Lego, cowboy hat, car dashboard, toaster, laundry basket, muffler, refrigerator door, child's wading pool, yellow rubber raft, toilet tank lid, lunch bucket, slipper, large mirror, weight bench, TV, TV antenna, car mat, pool cue, purse, wallet, rusted car radiator, men's soiled underpants, microphone, football, fire extinguisher, "No Trespassing" sign, black baby doll, toy hot dog, automobile fuel tank, checkbook, pornographic pictures, razor blade, bottle full of roaches, knee pad, crime scene police tape, brake drum, gas cap, picture of naked man, valid driver's license, full bottle of wine, bra, refrigerator shelf, alarm clock, cash register drawers
Pinellas (Beaches)	wastebasket, IRS tax due notice, foam mattress, bread crate, box of prophylatics and Vaseline, plastic toys, cooler full of ice and beer, lawn chair, skull, belt, grocery cart, two pairs of underwear, flea collar, thermometer holder, vodka bottle, dress, 4 lounge chairs, bar of soap, bathing suit bottom, hairbrush, baseball bat and ball, box of pencils, pacifier, frying pan, blue Jockey underwear, plastic Christmas wreath, bed post, door mat, woolen mitten, 1940 whiskey bottle, radio antenna, hearing aid, baby doll head, step ladder, jock strap, can of chewing tobacco, crack bag, street sign, Prudential Florida realty sign

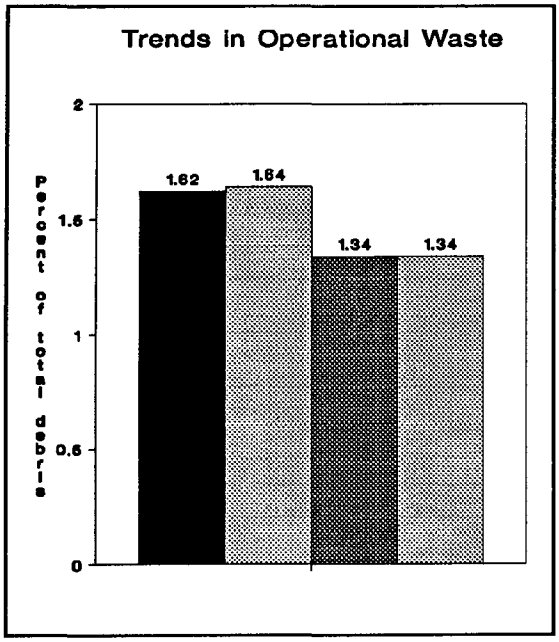
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

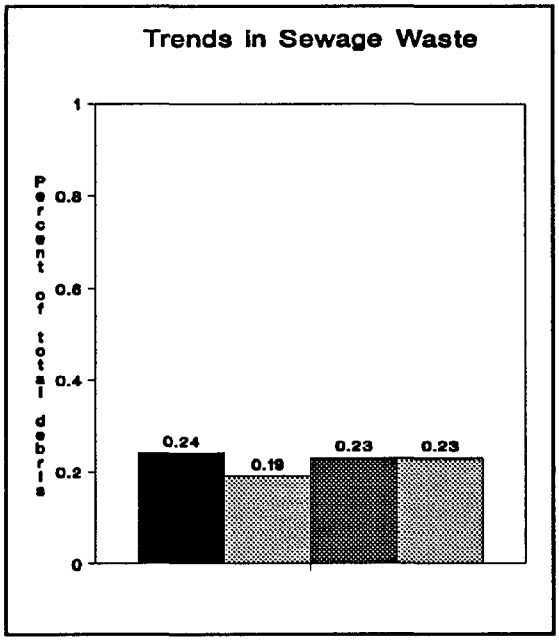
Pinellas (Tampa Bay)	man's watch, BMW muffler, aluminum chair, door, swim shorts, green Army man, car stereo, bed springs, Igloo cooler, TV, doorhinge, crank shaft, piece of a jet ski, worn teddy bear, jacket, poison container, dress, sleeping bag, air conditioner, radiator grill, magnet, trash can, table cloth, umbrella frame, drink vending machine, Frisbee, steering wheel, mop, hair dryer, enema bag, wall plug, drapes, toilet, car battery, message in a bottle, couch, Christmas tree, most of a Volkswagen, oil filter, stove, canoe, car seat, car hood, cable spool, golf club, washing machine, life preserver, old boat trailer, book binder
Pasco	St. Petersburg Times metal newspaper box, sinks, 23 cu. ft. refrigerator/freezer, recliner, bed mattress, TV, bed frame, bedpan
Hernando	truck bumper, Volkswagen car seat, kitchen sink, unopened rum, boat battery, garden hose, lawn chair, belt, Tupperware order tray, full gas tank, "Caution" sign, high heel shoes, bra (34a), truck door, newspaper stand, wallet, plastic frog, softball, orange rubber duck, rusted folding chair, a "Please Don't Litter Bag", 1 3-pair pkg. women's lovepants (extra large), washing machine, traffic cone
Citrus	full jar of peanut butter
Levy	mufflers
Dixie	7 different tennis shoes
Taylor	bottle with note in it, engine piston, floating dock, bike
Jefferson	plastic air mattress
Wakulla	pillow, "BVD" underwear, straw hat, tube of disappearing ink, toilet, car bumper, oil filter, car radio, skimboard, purse, bottle with note in it, lamp, baby doll, plastic army man, 2 5-gallon coolers, TV, car parts, pink wheelbarrow, lounge chair, paddle, plastic peach, carpet, fire extinguisher
Bay	men's underwear, blue-headed Barbie doll, tape measure, complete clothing outfit, baby bottle, 2 air mattresses, paint brush, cockpit, sink, tent stake
Walton	contact lens case, car headlight
Okaloosa	full bottle of wine, full 2 ltrs. of Mountain Dew, wine glass, hotel key, wallet, baby bottle nipple, broom handle, plastic raft, men's jockey underwear, plastic mini-blinds, wire cutters, shovel, rearview mirror, 2 bras, 5 unopened beers, bread rack, fuel filter, night light, watch, golf balls
Santa Rosa/Escambia	full bottle of red wine, rubber raft, TV tube, unopened can of Coke, rubber toy football, champagne glass, plastic razor, 2 hubcaps, pacifier, toilet bowl float, Lego plastic house, Sharp calculator, unopened can of beer, Nerf football, metal car trim, long-stemmed rose, surgical mask, metal switch box, big plastic raft, toilet paper holder, kite, Reebok shoe, women's panties, signal flare, tongue depressor, blanket, winter glove, fan belts, $5, 1/4 of a car bumper, witch doll, office metal seat, life preserver, rusty water cooler

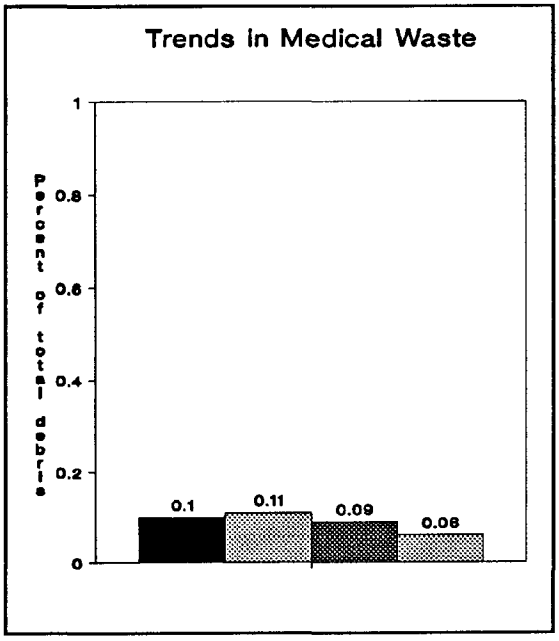
TRENDS IN MAJOR TYPES AND SOURCES OF FLORIDA'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF FLORIDA'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON FLORIDA'S
1992 COASTAL CLEANUP CONTACT:

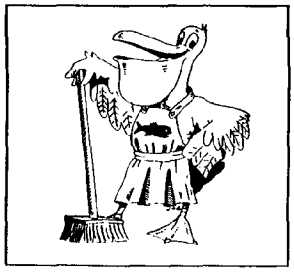
Heidi Lovett or Bruce Ryan
Center for Marine Conservation
One Beach Drive, SE, Suite 304
St. Petersburg, FL 33701
(813) 895-2188 or
1-800-CMC-FLORida

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

Volunteers show off the Florida Coastal Cleanup t-shirt in Wakulla County.

Hauling in trash from Petit Chou Island, Georgia which is only accessible by boat.



GEORGIA

September 21, 1991
301 Volunteers
36.9 Miles Cleaned
10,165 Pounds of Debris Collected
95 Data Cards

Coordinated by: Larry Shaffield
Clean Coast
29 Bluff Drive
Savannah, GA 31406
(912) 356-3672

The coastal and wetland areas of Georgia are a unique resource, preserved almost by accident from the depredations which have overtaken so many similar places in the world. How sad it is to find the refuse of humanity throughtlessly strewn along the ocean for a hundred miles, borne up on the shores from the hands of those who live from or play upon those same waters.

We cannot as yet boast of thousands of supporters to remove that accumulated waste. Neither have we seen the coordinated, continuous effort made by the states of Texas and North Carolina. Yet, that is exactly what it will take to remove the millions of objects which rest not only along Georgia's oceans shore, but the thousands of miles of lands bordering 500,000 acres of marshes...one third of the remaining marsh along the Atlantic coast of the United States! It is worth cleaning up, worth keeping that way, but it will take more than the three hundred dedicated individuals who took the field this year to do it.

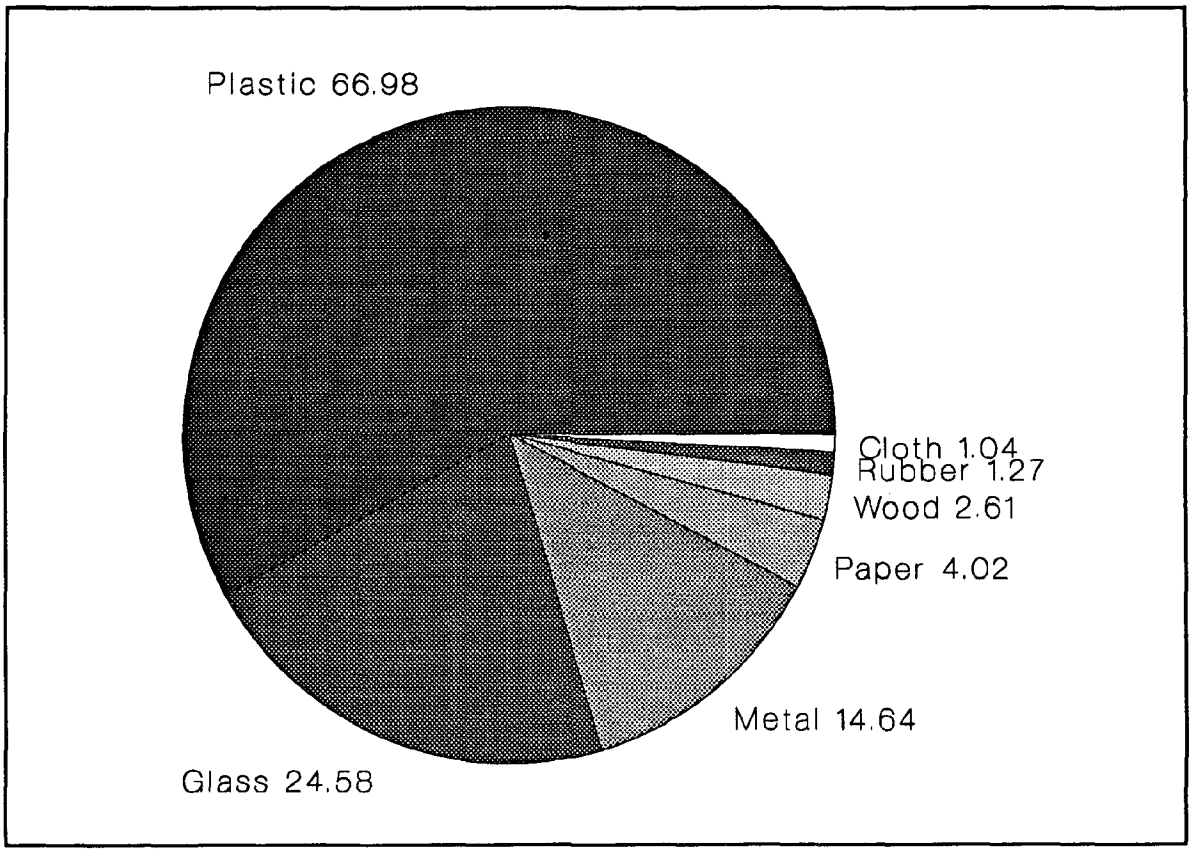
Those of you from Sierra Club; Audubon, Georgia Conservancy, America Clean & Beautiful, National Park Service, Georgia Department of Natural Resources, NOAA, University of Georgia Marine Extension Center, Clean Coast, Citizens for a Clean Environment, Tybee Beautification, Grove High, Jenkins High, McIntosh Chamber of Commerce, Savannah Boys Club, St. Andrews Key Club, Girl Scouts, Boy Scouts, Cub Scouts, Xi Delta Chi, Smoker's Rights of Savannah, H&H (Budweiser) of Savannah, Tybee Art, Delta Omega, St. Michael's of Savannah, WSVH Public Radio, Tybee Historical Society, Chatham County Health, Diver's Den, Savannah College of Art & Design, U.S. Navy and all of you who came as individuals may be proud of the 10,000 pounds of litter removed from our beaches.

We may be equally proud of the key organizers of this annual effort, and the vessel captains who made access to many islands possible. Let us not forget Mobil Oil Corporation for the litter bags, or First Union Bank for pencils, nor the publicity donated by both the broadcast and print media. This year has seen the rise of Clean Coast, Inc., a volunteer group dedicated to continuing litter removal, which hauled off 17,000 objects from areas in Chatham and Bryan counties over the past year. The largest restaurant/lounge on Tybee Island agreed to use only paper straws for drinks. People went into the marshes this year...not so attractive as the beach, but just as important. Our oldest participant was 86 years old.

It is hard to get people onto the beach in Georgia...most islands are not accessible by highway, only by boat. Who in the world wants to pick along a marsh? People did; these few people cared enough to try and undo the senseless disregard of those who know better. We'll be back next year, perhaps more will come along, perhaps fewer people will discard without regard. Our thanks to everyone who made the world a better place for all to live in.

Larry Shaffield

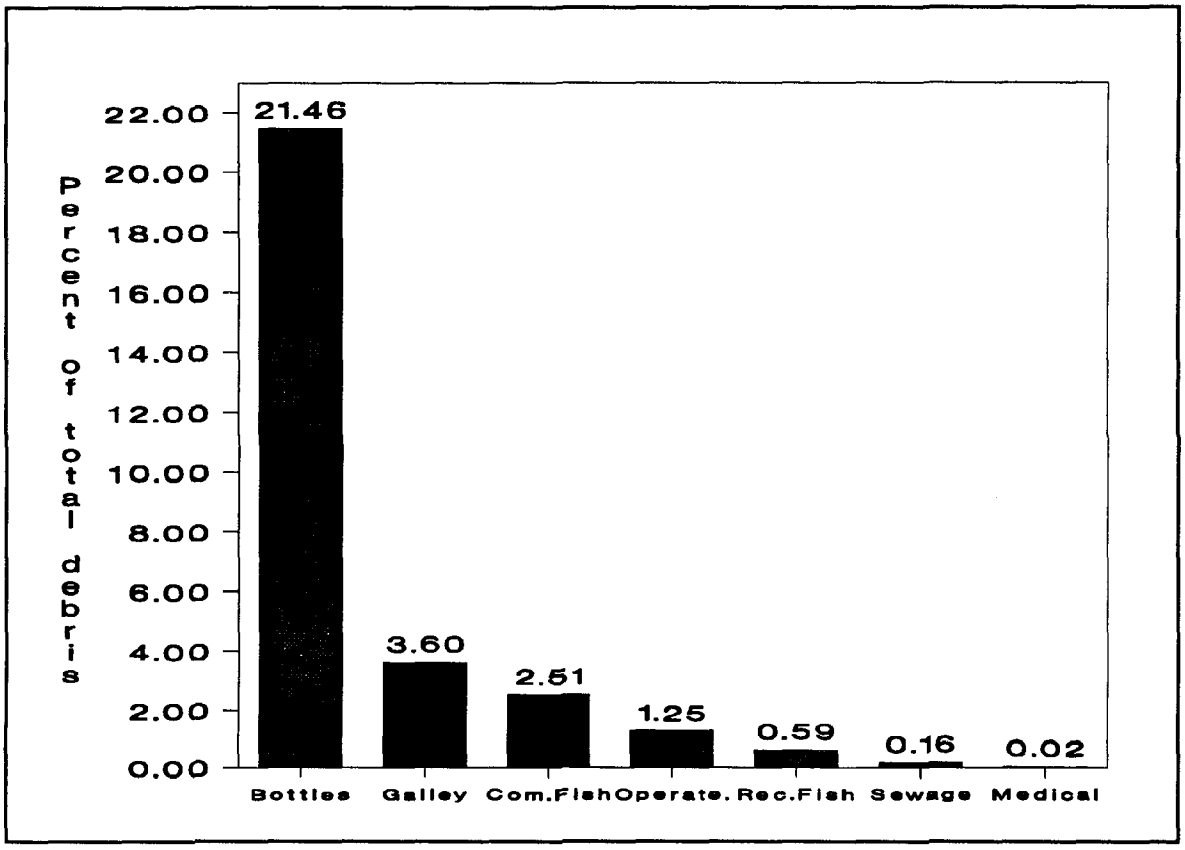
PERCENT COMPOSITION OF GEORGIA'S BEACH DEBRIS:



GEORGIA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Foamed plastic pieces	4,641	16.09
2. Metal beverage cans	3,066	10.63
3. Cigarette butts	2,761	9.57
4. Glass beverage bottles	1,699	5.89
5. Plastic pieces	1,151	3.99
6. Plastic caps and lids	1,136	3.94
7. Plastic food bags/wrappers	1,093	3.79
8. Foamed plastic cups	1,069	3.71
9. Plastic cups and utensils	935	3.24
10. Plastic beverage bottles	894	3.10
11. Plastic straws	813	2.82
12. Lumber pieces	622	2.16
Total	**19,880**	**68.96**

MAJOR TYPES AND SOURCES OF GEORGIA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Tybee Island	69.81	Cigarette butts
Goat Island	64.78	Glass beverage bottles
Long Island	42.78	Metal beverage cans
Wassaw Island	75.21	Foamed plastic pieces
Pine Island	77.97	Foamed plastic pieces
Cabbage Island	36.47	Metal beverage cans
Petit Chou Island	62.77	Foamed plastic pieces
Sapelo Island	60.59	Foamed plastic pieces
St. Simon's Island	50.91	Metal beverage cans
Cumberland Island	66.17	Foamed plastic pieces
Gray's Reef	92.31	Plastic fishing line

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Wassaw Island	balloon	Camp Hilton Head
	glass bottle	Gae Pong Ginsing Corp.
	bait trap	Taylor and Son Seafood, (919) 225-3151
Pine Island	harness float	Berkley & Co., Spirit Lake, IA 51360
	small shampoo bottle	Premier Cruise Lines
Sapelo Island	shampoo bottle	Princess Cruise Lines

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Wassaw Island	"Spanish"	plastic tub	Ponds Cold Cream
Pine Island	"Oriental"	plastic wrapper	Food
Gray's Reef	"Asian"	plastic bottle	Trio
	Germany	aerosol can	Holts Spray Paint
		glass bottle	Heineken Duty Free
		plastic tea container	Skipper
		plastic bubble bath container	Fa Beauty
	"Spanish"	plastic laundry soap	La Masse

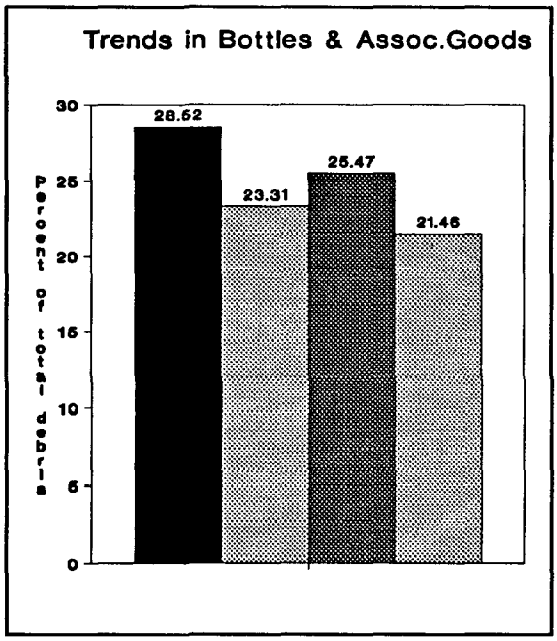
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

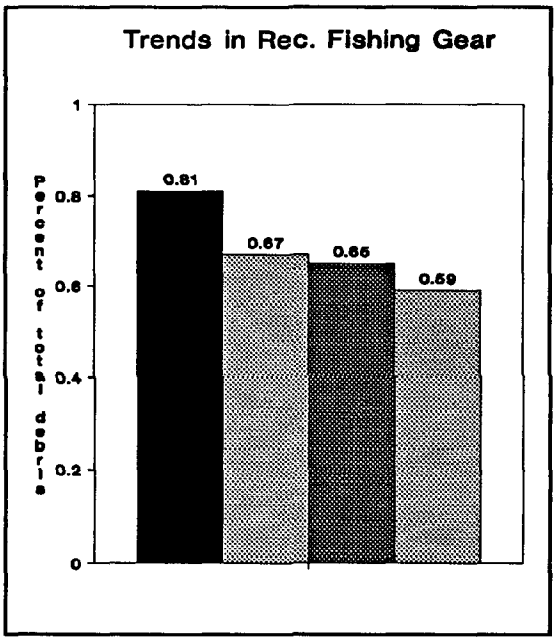
Debris Related	Other reports
None reported	2 dead seagulls
	2 dead birds
	1 dead puffer fish
	1 dead horseshoe crab

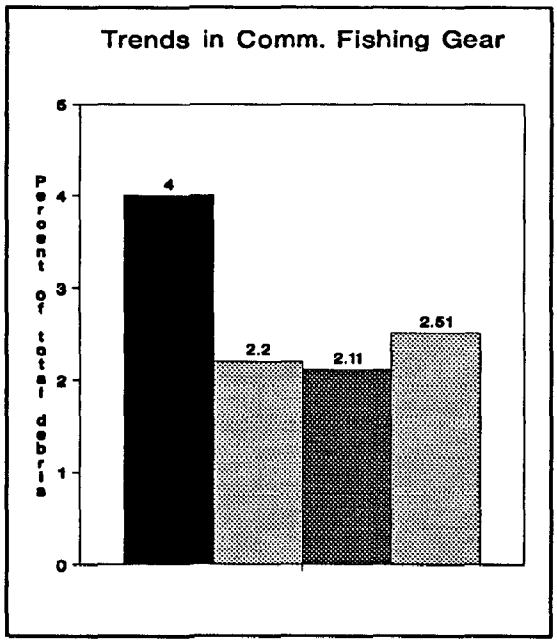
MOST PECULIAR DEBRIS ITEMS REPORTED:

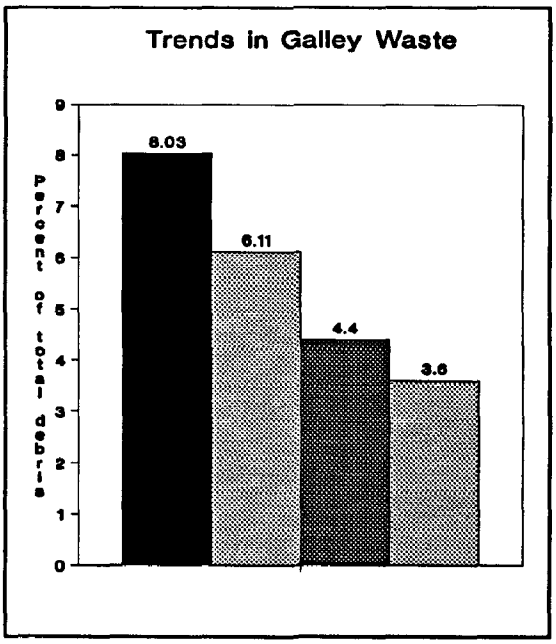
Tybee Island	female panties, toilet bowl float, driver's license, bed sheet, piece of car bumper, golf tee, curtain rod, crack cocaine pipe, two playing cards
Wassaw Island	carton with one egg, wheel barrow
Petit Chou Island	grill, lawn furniture
Sapelo Island	compressed air sprayer tank
St. Simon's	toilet bowl tank, boat seat, ear plugs
Gray's Reef	fogger, headlamp, toilet plunger

TRENDS IN MAJOR TYPES AND SOURCES OF GEORGIA'S BEACH DEBRIS:



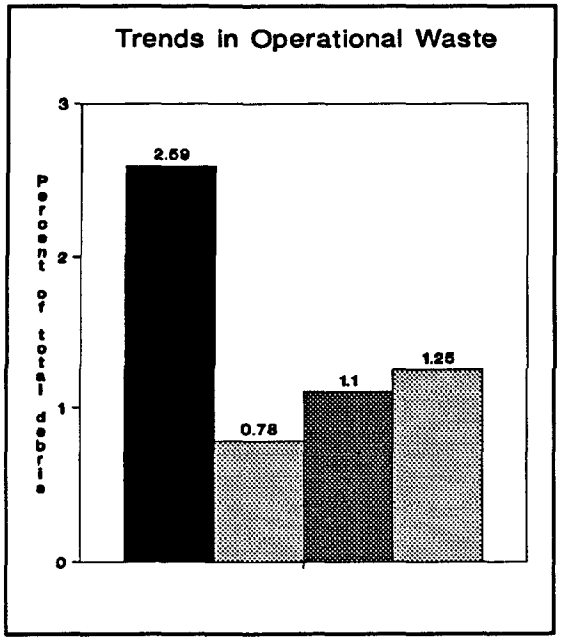


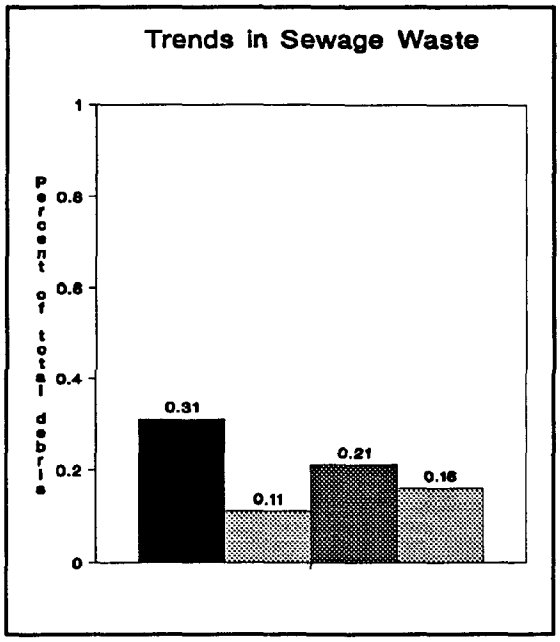


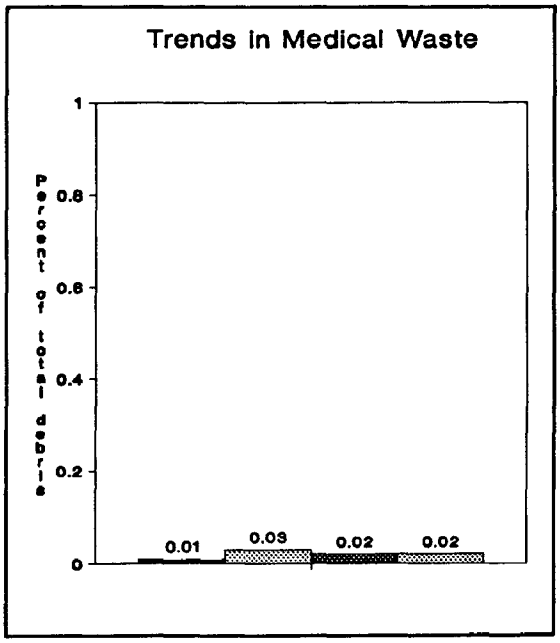


1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF GEORGIA'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON GEORGIA'S
1992 COASTAL CLEANUP CONTACT:

Larry Shaffield
Clean Coast
29 Bluff Drive
Savannah, GA 31406
(912) 356-3672

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

Piles of trash collected by volunteers at Petit Chou Island, Georgia.

HAWAII

October 5 and 12, 1991
7,312 Volunteers
195 Miles Cleaned
249,279 Pounds of Debris Collected
1,310 Data Cards

Coordinated by: John Yamauchi
Hawaii Litter Control Office
835 Keeaumoku Street, Suite 200
Honolulu, HI 96814
(808) 586-8400 or (808) 586-8444

On Saturday, October 5 and 12, 1991, Hawaii's beaches and shorelines were cleaned and surveyed for ocean debris and trash. Ninety-eight tons of debris were cleaned from 190 beach areas on the islands of Oahu, Maui, Molokai, Kauai, Hawaii, and even the uninhabited island of Kahoolawe. This beach cleanup, themed "Get the Drift and Bag It," was designed to focus public attention on the problem of marine debris and its impact on aquatic and terrestrial wildlife.

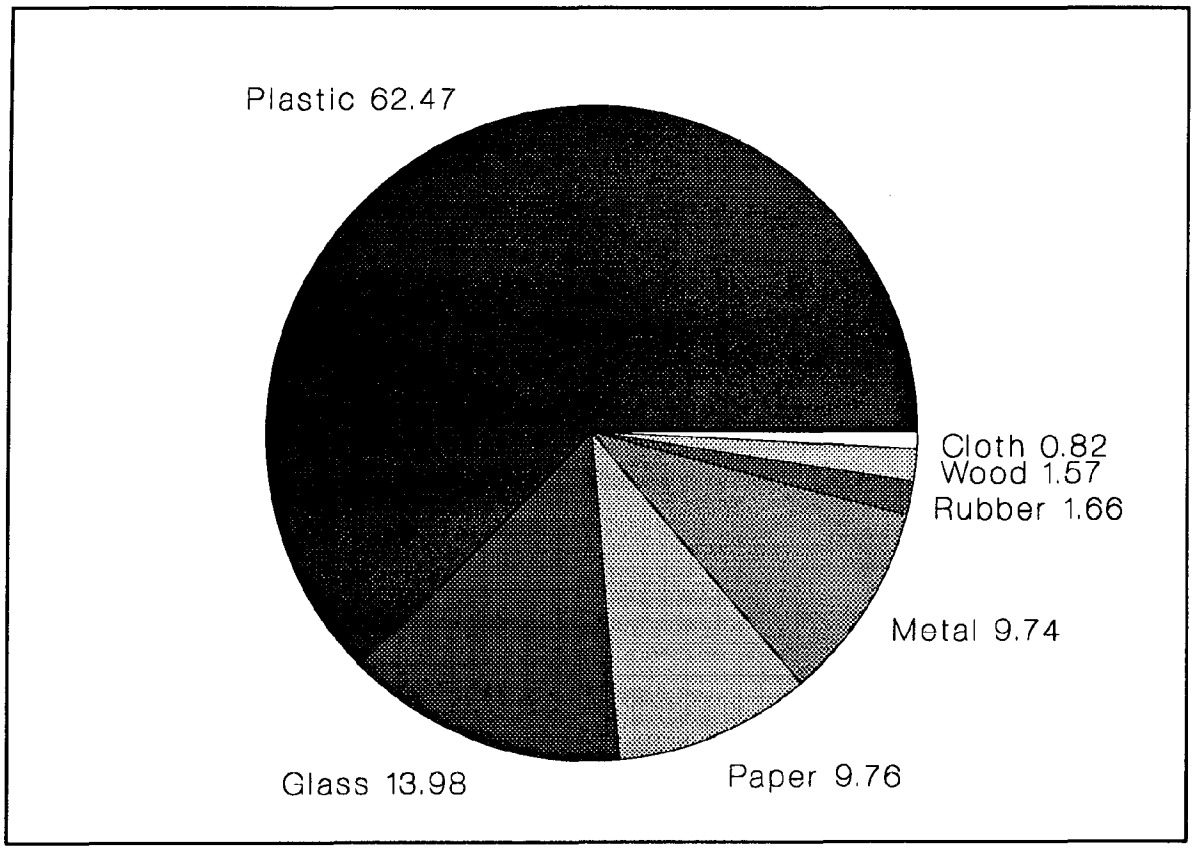
More than 7,300 volunteers participated in the cleanup. The tons of debris included plastic, styrofoam, fishing nets, and lines, which have been known to kill marine animals in Hawaii including Hawaiian monk seals, green sea turtles, and birds.

Community organizations, military personnel, conservation groups, Boy and Girl Scouts, school groups, dive clubs, commercial and leisure fishing organizations, ocean sports enthusiasts, recreational clubs, business, and tourists all pitched in to make this "Get the Drift and Bag It" cleanup a big success.

The cleanup was coordinated by the following organizations: Community Work Day Program, State Litter Control Office, County of Hawaii Department of Parks and Recreation, Pacific Whale Foundation, and the Maui Community Work Day Program. The "Get the Drift and Bag It" cleanup was sponsored by the Governor's Advisory Committee on Litter Control.

John Yamauchi

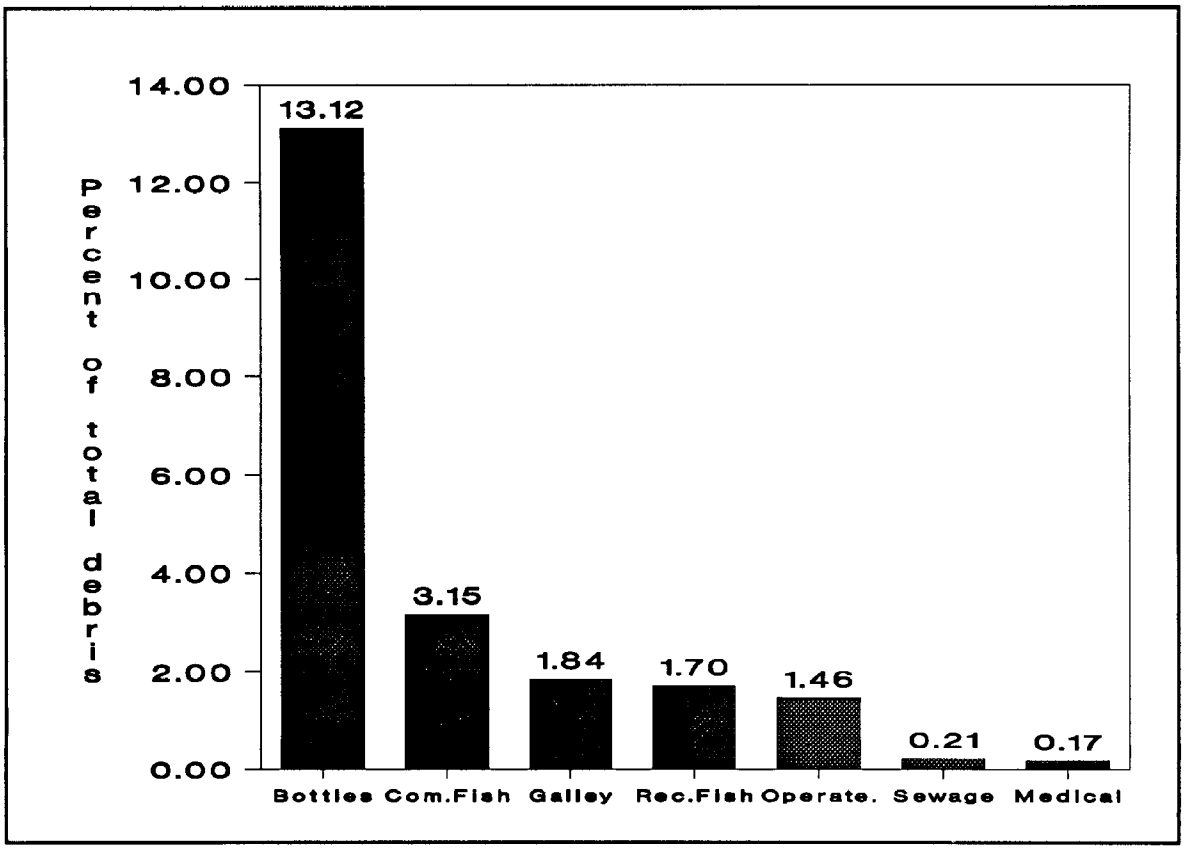
PERCENT COMPOSITION OF THE HAWAII'S BEACH DEBRIS:



HAWAII'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	108,853	22.64
2. Glass pieces	31,766	6.61
3. Plastic pieces	28,476	5.92
4. Glass beverage bottles	21,683	4.51
5. Paper pieces	20,092	4.18
6. Plastic food bags/wrappers	18,240	3.79
7. Foamed plastic pieces	16,058	3.34
8. Metal beverage cans	16,042	3.34
9. Plastic caps and lids	12,600	2.62
10. Plastic straws	10,946	2.28
11. Metal bottle caps	10,267	2.14
12. Plastic cups/utensils	9,141	1.90
TOTAL	**304,164**	**63.27**

MAJOR TYPES AND SOURCES OF HAWAII'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Oahu	63.39	Cigarette butts
Maui	60.90	Cigarette butts
Hawaii	57.59	Cigarette butts
Kauai	65.86	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Oahu	plastic shopping bag	Times Supermarket

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Oahu	China	black float	
	Japan	aerosol can	
		wrapper	
Maui	Japan	bottle	bleach
Hawaii	Japan	buoys, rubber pieces	
	Mexico	plastic bottle	bleach
Kauai	Japan	silicon gel	
		plastic bottles	

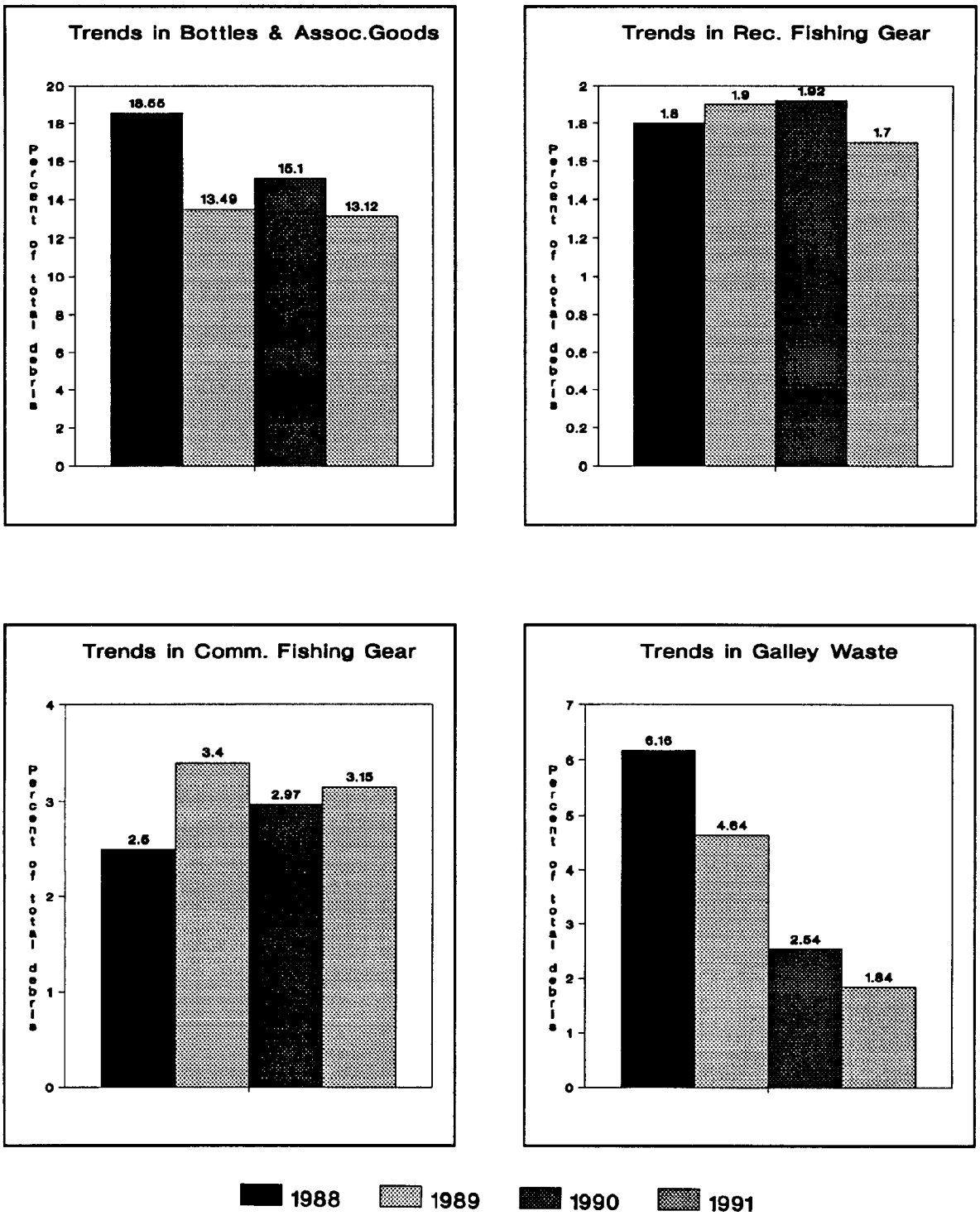
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other reports
Moray eel with fish hook in mouth and line wrapped around body	3 dead kittens
	2 dead hammerhead sharks
	2 dead birds
	1 dead marlin
	1 dead cat

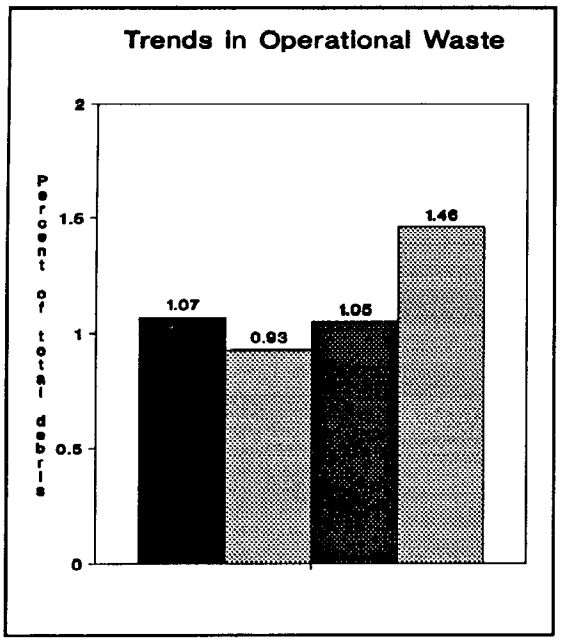
MOST PECULIAR DEBRIS ITEMS REPORTED:

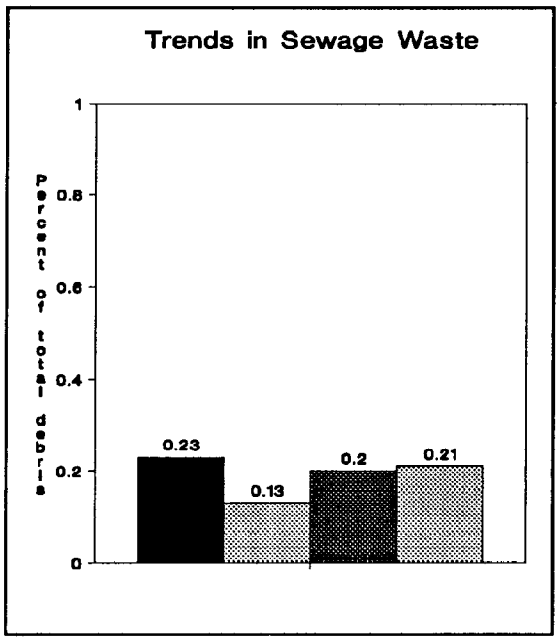
Oahu	pornographic magazines, T-shirt that read - "Give A Hoot Don't Pollute", fan, toilet seat, sofa pillows, underwear, car floor mat, love seat, car muffler, kitchen sink, cocaine holder, ziplock bag of blood, driver's license, bullets, car cigarette lighter, rusted motor bike, full bottle of Vodka, new watch, barbell weight, razor blade, men's underwear, old mattress springs, car air conditioner, BBQ grill, cassette tape, bathing suit, swim fin, airplane wheel, air pump, can opener, small travel bag, whoopie cushion, baseball hat, lawn chair, full can of dog food, volleyball net, voodoo doll, headlight, transmission, brass bells on a chain, chop sticks, radio, car manifold, rear view mirror, turntable, car seat, 25 cents, jock strap, water heater, tape measure
Maui	car bumper, shovel, underwear, kingsize sheet, plastic plant, lip gloss, Easter egg grass, $1, microwave, bra and panties, windshield wiper, bucket, toy raft, Mastercard, curtain rod, queensize mattress, office chair, full can of beer, full packet of cigarettes, pay check,
Hawaii	keys, engine block, cane, broken calculator, carburetor cap, women's underwear, microwave
Kauai	strapless bra, tent, quilt, rug

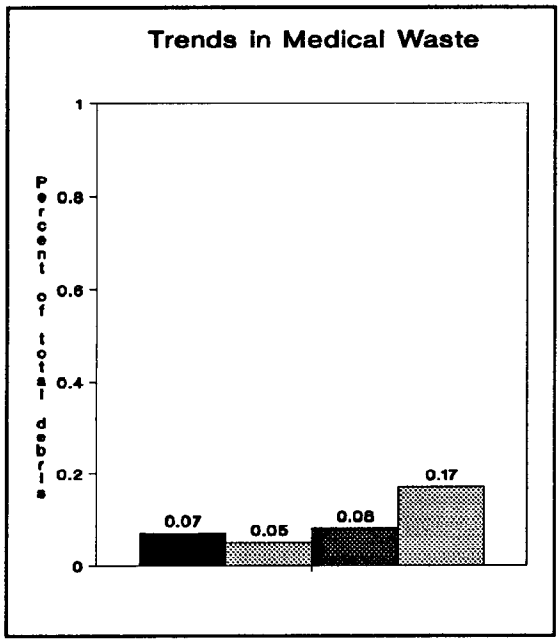
TRENDS IN MAJOR TYPES AND SOURCES OF HAWAII'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF HAWAII'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON HAWAII'S 1992 COASTAL CLEANUP CONTACT:

John Yamauchi
Hawaii Litter Control Office
385 Keeaumoku Street, Suite 200
Honolulu, HI 96814
(808) 586-8400 or (808) 586-8444

CLEANUP DATE: October 10, 1992

Chicago volunteers taking extra care to mark every piece of trash on the data card.

1991 GREAT LAKES BEACH SWEEP

ILLINOIS

September 21, 1991
908 Volunteers
6.75 Miles Cleaned
6,216 Pounds of Debris Collected

Coordinated by: Tim Early
Aquasphere Project
102 Pulaski Road
Calumet City, IL 60409
(708) 862-9949

The 1991 coastal cleanup effort focused in the Chicago area, the most heavily used portion of Illinois' shoreline. More than 900 volunteers participated in removing 6,216 pounds of debris from 6.75 miles of public beaches. Targeted beaches extended from an area north of Chicago to the Illinois/Indiana state line.

Support from regional coordinator Karen Furnweger of the John G. Shedd Aquarium and Chicago Park District Superintendent Mr. Robert Penn made this year's event highly successful.

Donations and support were received from First Brands, Inc., Illinois Tool Works, Coors Brewing Company, Starbucks Coffee, Bakers Square, and Marriot, Incorporated.

The Shedd Aquarium offered facility and logistic support for staff members, which included personnel from the Chicago Park District, Chicago Tool Works, Friends of Lincoln Park, Friends of the Park, the Lake Michigan Federation, and The Aquasphere Project.

Special thanks for this year's effort go to Karen Furnweger and Lisa Elkus of the Shedd Aquarium, Connie Robison of the Friends of Lincoln Park, Margaret Rader of the Lake Michigan Federation, and Carol Garsee of the Friends of the Park (Chicago).

We also extend our heartfelt thanks to the hundreds of volunteers who graciously gave of their time and energy in helping to improve the condition of our aquatic and coastal environments.

Tim Early

Editor's Note: Due to a problem in mail service, the 1991 data cards from the Illinois cleanup were lost. We look forward to receiving data from Illinois' 1992 cleanup and hope for better luck with the postal service.

FOR INFORMATION ON ILLINOIS' 1992 COASTAL CLEANUP CONTACT:

Tim Early
Aquasphere Project
102 Pulaski Road
Calumet City, IL 60409
(708) 862-9949

OR

Margaret Rader
Lake Michigan Federation
59 E. Van Buren, Suite 2215
Chicago, IL 60605
(313) 939-0838

CLEANUP DATE: September 12, 1992

A variety of volunteers turned out for the Great Lakes Beach Sweep in Chicago, Illinois.

1991 GREAT LAKES BEACH SWEEP

INDIANA

September 21, 1991
130 Volunteers
15 Miles Cleaned
1,371 Pounds of Debris Collected

Coordinated by: Tim Early
Aquasphere Project
102 Pulaski Road
Calumet City, IL 60409
(708) 597-2988

A good portion of the Indiana coastline is devoted to industrial use which limited the extent of the 1991 cleanup effort. Approximately 130 volunteers and staff members covered four major target areas that extended from Illinois/Indiana state line to the Indiana/Michigan state line.

Support for this event was provided by First Brands, Inc., the Gary Park District, the Save the Dunes Council, and the Lake County Parks Department.

Special thanks are given to Ed Vasquez, superintendent of the Gary Park District, Charlotte Road and Tom Anderson of the Save the Dunes Council, Tim Janowski of the Lake County Parks Department, and Guy and Marlene Liptack of The Aquasphere Project.

Mention should be made of the Indiana Dunes Lakeshore area which, although it accounted for half of the shoreline covered, provided the least amount of debris. The responsibility for the pristine condition of both the national lakeshore and the state park lakeshore is the result of the policies and practices of the two governing agencies. "No-glass" policies, adequate disposal containers, maintenance programs, and ongoing educational programs have resulted in a coastal area which serves as an example to all Great Lakes shoreline municipalities and agencies.

We extend our appreciation to all the staff members and volunteers who participated in this year's cleanup effort.

Tim Early

Editor's Note: Due to a problem in mail service, the 1991 data cards from the Illinois cleanup were lost. We look forward to receiving data from Indiana's 1992 cleanup and hope for better luck with the postal service.

FOR INFORMATION ON INDIANA'S 1992 COASTAL CLEANUP CONTACT:

Tim Early
Aquasphere Project
P. O. Box 414
Dolton, IL 60419
(708) 597-2988

CLEANUP DATE: COASTWEEKS

LOUISIANA

September 21, 1991
5,700 Volunteers
132 Miles Cleaned
266,000 Pounds of Debris Collected
372 Data Cards

Coordinated by: Barbara Coltharp
Louisiana Department of Culture, Recreation, and Tourism
P. O. Box 94921
Baton Rouge, LA 70804
(504) 342-8148 or
(504) 342-8145

Fifty seven hundred people picked up 266,000 pounds of trash and debris along 132 miles of beach line and barrier islands off Louisiana's coastline during the Greater Louisiana Beachsweep '91.

Pleasant temperatures and a beautiful day brought Louisianans out in droves to clean beaches and inland waterways Saturday, September 21, 1991. The Beachsweep program is part of the broader "Take Pride Gulfwide" effort and the new Louisiana Clean Waterways Program sponsored by the Office of Litter Control and Recycling, Department of Culture, Recreation, and Tourism.

What we've been hoping for is happening. We found less trash on the beaches and cleaned more miles this year. We are beginning to see a marked reduction in the amount of trash and debris we are picking up. Zone coordinators reported a significant increase in young people at every beach: scouts, 4-H clubs, and science classes. These young people were highly visible and vital workers across the state. We know that these cleanups are making a difference in the appearance of our waterways and the whole state when we get this kind of participation.

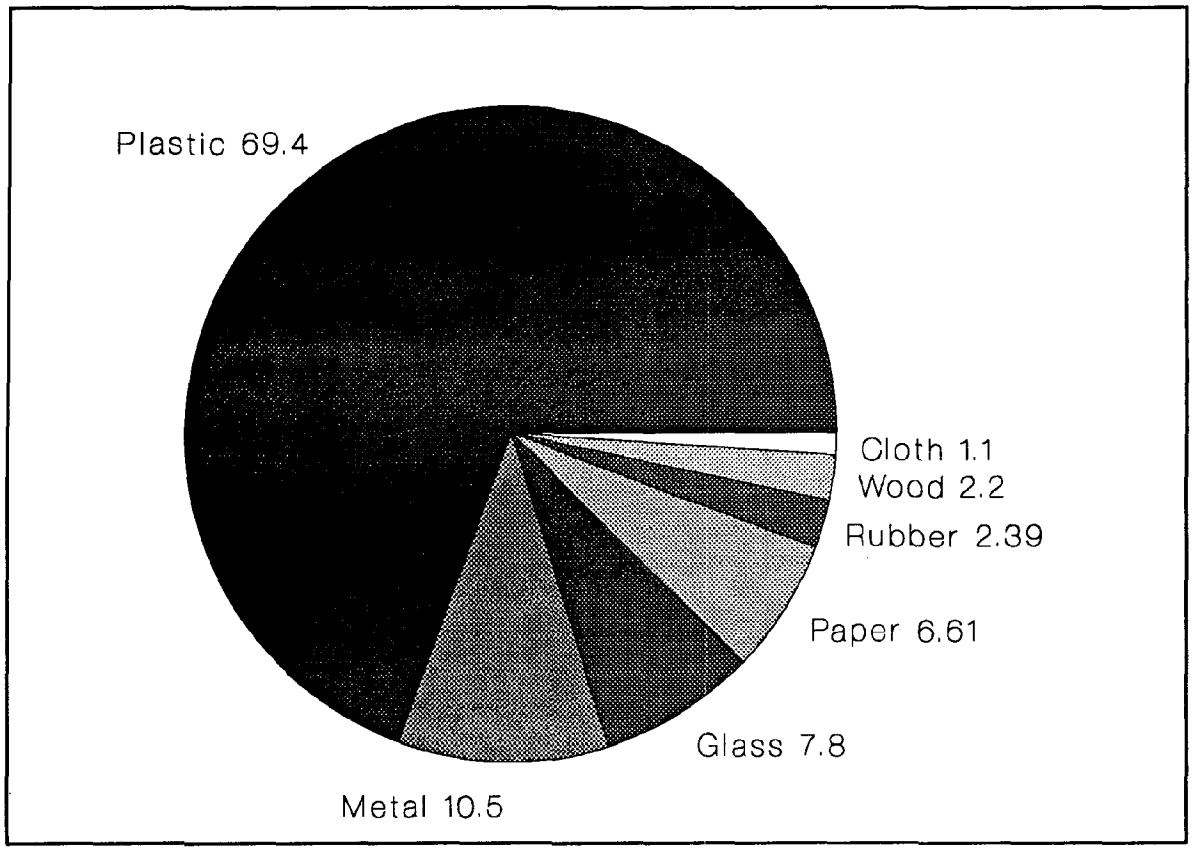
One half of the debris collected was recycled. Plastic trash, with the potential for causing the greatest harm, again ranked as the highest offender on Louisiana beaches. Unusual items found along the beaches consisted of a bottle containing scripture in a foreign language, a complete lamp with foreign inscription on the base, mattresses, kitchen stoves, and refrigerators. A beached bottlenosed dolphin was found at Breton Island and rescued; several dead sea turtles were observed at Grand Isle and Grand Terre Island; and two dead dolphins were reported at Cameron.

Syringes and needles were found in the sand along Old Pontchartrain Beach in New Orleans. Workers reported this beach to be littered with large numbers of dead fish, crab baskets, nets, and miscellaneous fishing gear. A Rolex watch was found among the debris at Pontchartrain.

Co-chairmen for the Greater Louisiana Beachsweep '91 were Lt. Governor Paul Hardy, commissioner of the Department of Culture, Recreation and Tourism, and Ron Rutherford, Division Manager of Conoco, Incorporated.

Barbara Coltharp

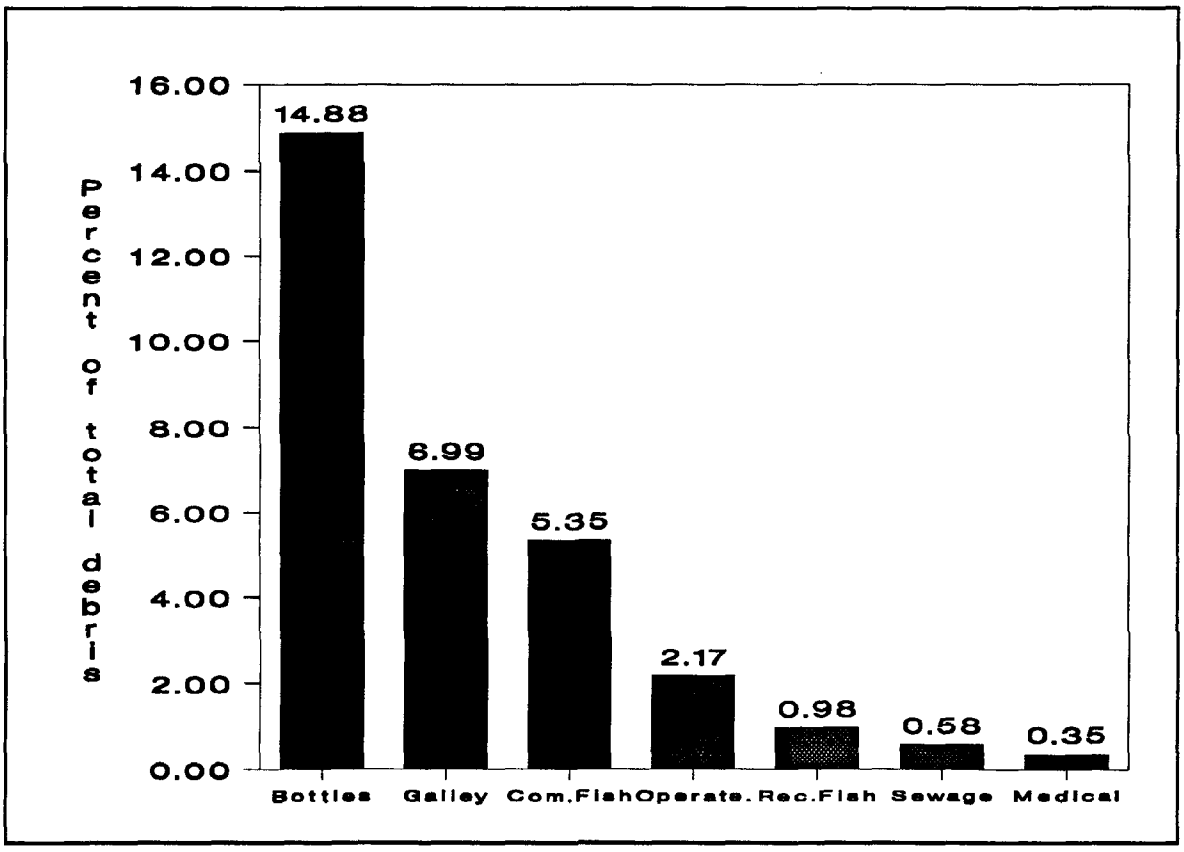
PERCENT COMPOSITION OF LOUISIANA'S BEACH DEBRIS:



LOUISIANA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic pieces	6,716	7.08
2. Plastic caps and lids	6,186	6.52
3. Plastic straws	5,189	5.47
4. Foamed plastic pieces	4,666	4.92
5. Plastic food bags/wrappers	3,736	3.94
6. Metal beverage cans	3,399	3.58
7. Cigarette butts	3,301	3.48
8. Plastic beverage bottles	3,139	3.31
9. Plastic cups and utensils	3,027	3.19
10. Paper pieces	2,928	3.09
11. Plastic rope	2,751	2.90
12. Glass beverage bottles	2,736	2.88
TOTAL	**47,774**	**50.35**

MAJOR TYPES AND SOURCES OF LOUISIANA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Lake Pontchartrain	69.86	Plastic straws
Breton Island	66.83	Metal beverage cans
Grand Gossier Island	73.74	Plastic caps and lids
Grand Isle	76.19	Plastic pieces
Fourchon Beach	67.29	Plastic pieces
Dulac	72.67	Foamed plastic pieces
Constance Beach	74.10	Foamed plastic pieces
Cameron	71.04	Plastic caps and lids
Rutherford Beach	68.45	Plastic pieces
Oceanview	68.83	Plastic milk/water gallon jugs
Holly Beach	65.33	Plastic caps and lids

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Breton Island	salt bag	Cargill, Gulf Shore Rock Salt
Grand Gossier Island	half of plastic chemical bottle	Dewitt Chemical Company
Grand Isle	plastic stand	Alliance Plastic
	plastic oil barrel cap	Chevron
	55 gal. drum	Construction Materials Inc. (504) 291-4000
	plastic cup	Patterson Rental Tools
Fourchon Beach	empty drum	British Petroleum
Cameron	sign	Sandifer Campaign
Rutherford	5 gal. bucket	Johnstone, 87 First Street, Gretna, LA 70053
Holly Beach	1/2 plastic drum	New Orleans-based Petrochemical
	plastic bucket lid	Texaco, URSA SP40

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Breton Island	France	aluminum can	
	Germany	plastic container	
	Japan	plastic container	shampoo
		glass bottle	
	Thailand	can	
	"Oriental"	food bag	
Grand Gossier Island	Japan	bottle	
Grand Isle	China	plastic sealed bag	condiment
	Taiwan	wrapper	noodles
	Vietnam	plastic food container	
Fourchon Beach	Italy	container	oil
	"Oriental"	bottle	
Cameron	Japan	glass bottle	
Rutherford	Germany	bottle	
	Japan	box	
	Mexico	can	deodorant
	Panama	plastic bottle	
	"Spanish"	food container	powdered milk
Oceanview	"Hispanic"	bottle	sulfuric acid
Holly Beach	Japan	soya drink	Singapore
	Japan	pen	
	Unknown	bottle	oil

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Sea turtle with metal hook and string	45 dead fish
Alligator with metal hook and string	13 dead seagulls
Small bird entangled in yellow rope - released	11 dead birds

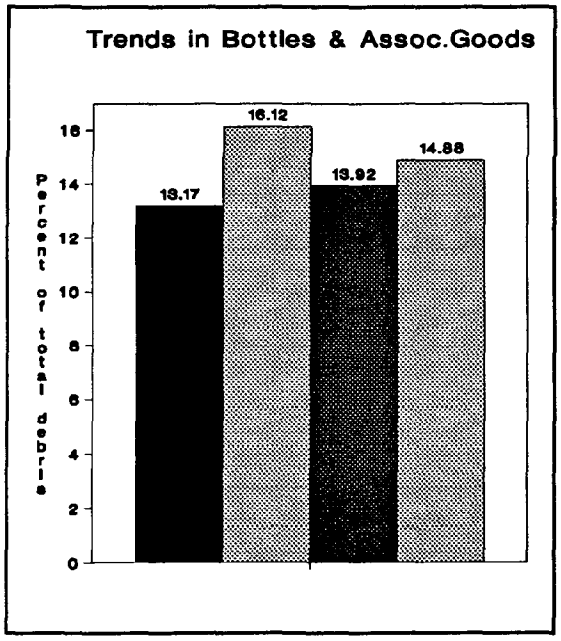
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED: (cont.)

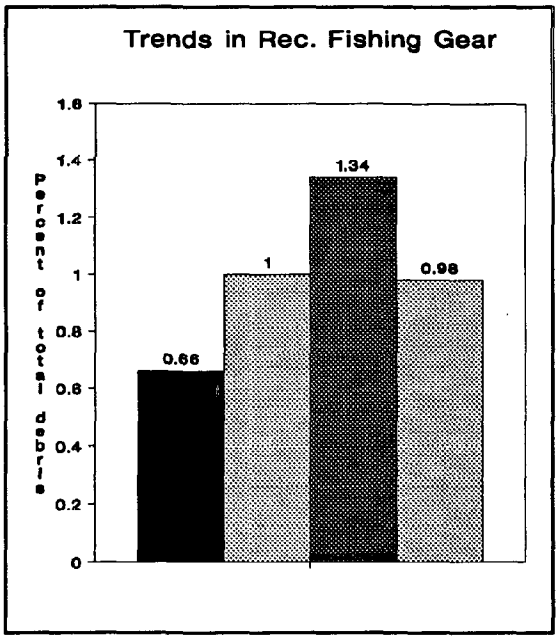
Debris Related	Other Reports
Fish entangled in nets	5 dead catfish
Large fish choked on plastic debris	4 dead sea turtles
	2 dead opossums
	2 dead porpoises
	1 dead brown pelican
	1 brown pelican, injured
	1 dead tarpon
	1 dead drumfish
	1 dead calf
	1 dead sea snake
	1 dead alligator
	1 dead rat

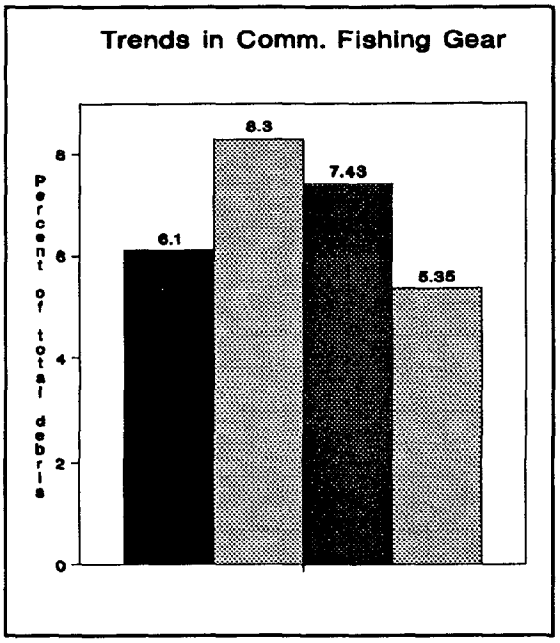
MOST PECULIAR DEBRIS ITEMS REPORTED:

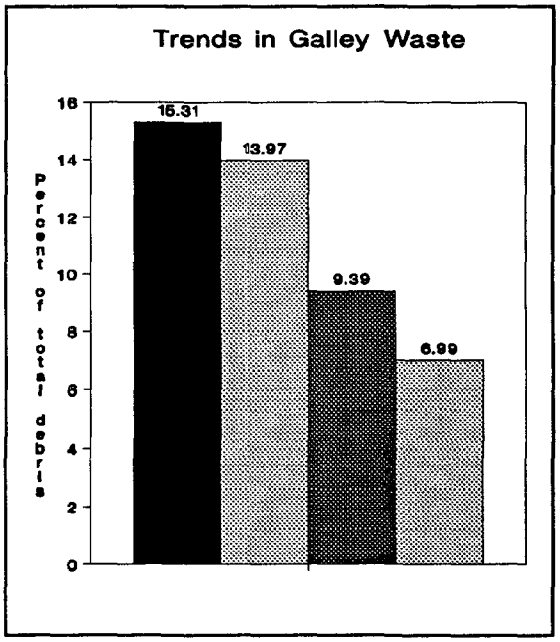
Lake Pontchartrain	broken sunglasses, spark plug, campaign sign, purse, rear car axel, plastic U.S. flag, IV bag, broom, carnival beads, fire extinguisher, stethoscope, surgical mask, grill, platform shoes, sink, telephone pole, garden hose, Rolex watch, plastic flowers, clothes basket, toy plastic elephant
Breton Island	laundry basket, boat bumper
Grand Gossier Island	toy fire truck with engine still running, baby doll leg, stove burner, grill, unopened beer can, window air conditioner unit
Grand Isle	2 matching shoes, hip waders, several pairs of underwear
Fourchon Beach	towel dispenser, paint brush, shotgun shells, hub cap
Cameron	ice tray, 25 cents
Rutherford Beach	toilet seat, wallet with ID, typewriter, full bottle of salad dressing, test tube, men's underwear

TRENDS IN MAJOR TYPES AND SOURCES OF LOUISIANA'S BEACH DEBRIS:

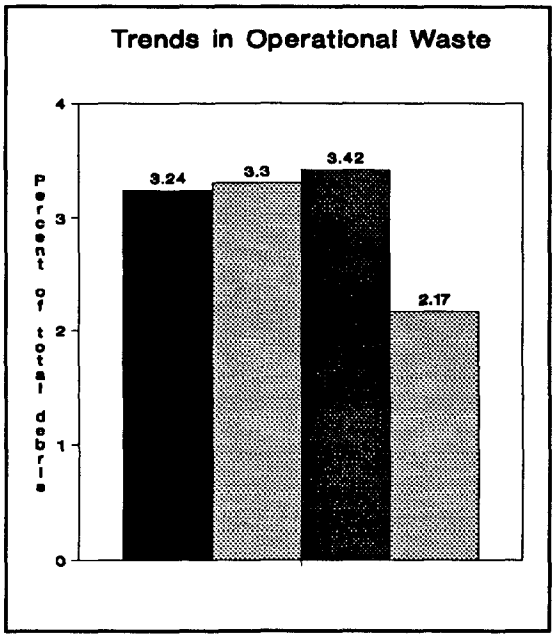


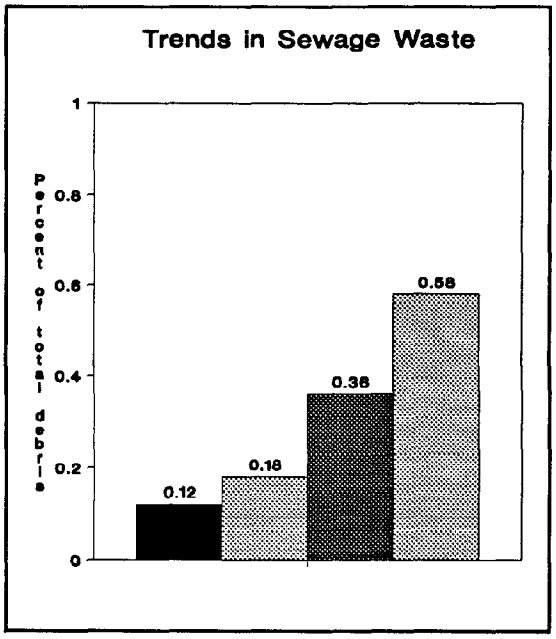


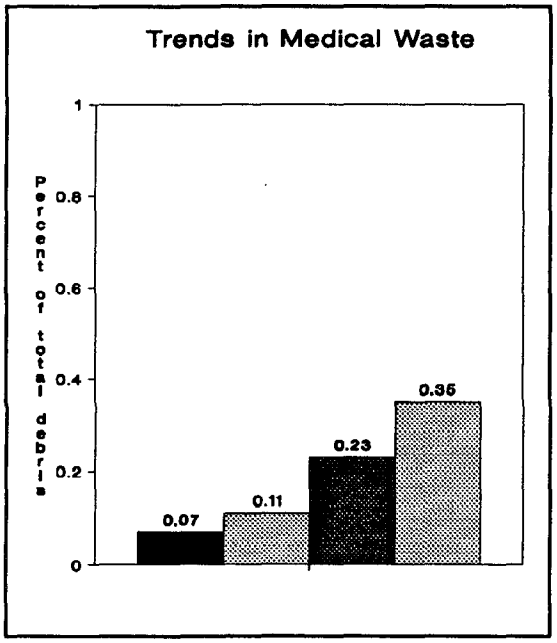




TRENDS IN MAJOR TYPES AND SOURCES OF LOUISIANA'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON LOUISIANA'S 1992 COASTAL CLEANUP CONTACT:

Barbara Coltharp
Louisiana Department of Culture, Recreation, and Tourism
P. O. Box 94921
Baton Rouge, LA 70804
(504) 342-8148 or
(504) 342-8145

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

After collecting a big bag of debris from Popham Beach, Maine, this young volunteer shows off his natural finds.

MAINE

September 14, 1991
1,735 Volunteers
219 Miles Cleaned
34,137 Pounds of Debris Collected
519 Data Cards

Nancy Griffin
Coastal Communications Coordinator
State Planning Office, Station 38
Augusta, ME 04333
(207) 289-3261

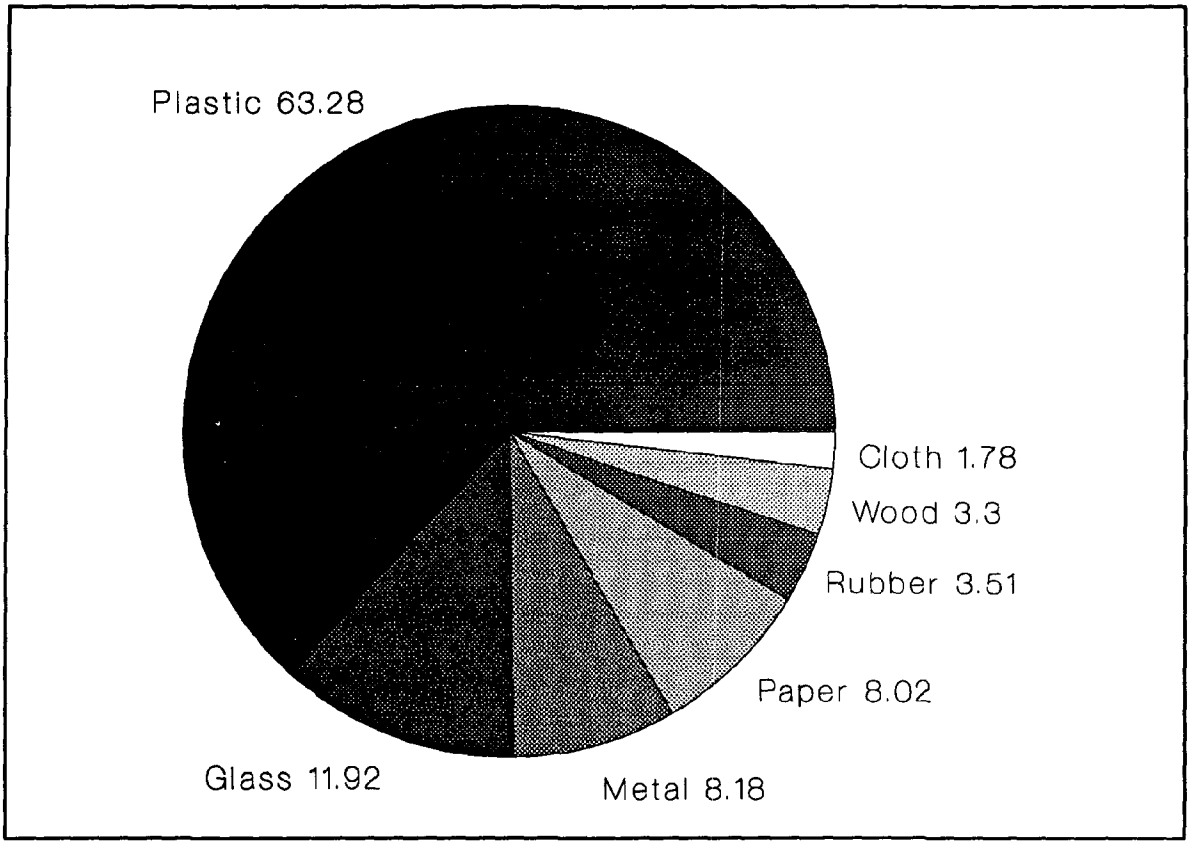
This fall's 7th annual Coastal Cleanup netted trash from Maine's shores that weighed in at more than 17 tons.

The 34,137 pounds of marine debris dragged off 219 miles of beaches and public landings by 1,735 volunteers included the front end of a car, three engine blocks, a bike, a lawn mower, a water heater, and a truckload of metal lobster trap parts. For the second year in a row, volunteers in Surry found a soda bottle containing a postcard from a Russian sailor.

While the total of trash collected went up, several cleanup organizers reported their beaches were cleaner this year than in past years. However, a group of clamdiggers cleared 12 tons of debris from land adjoining an old dump site. Another group of clamdiggers scoured a section of coast in boats and turned up 2,500 pounds of debris. At one beach, scuba divers hauled trash from under nearshore waters as well as the shore itself.

Nancy Griffin

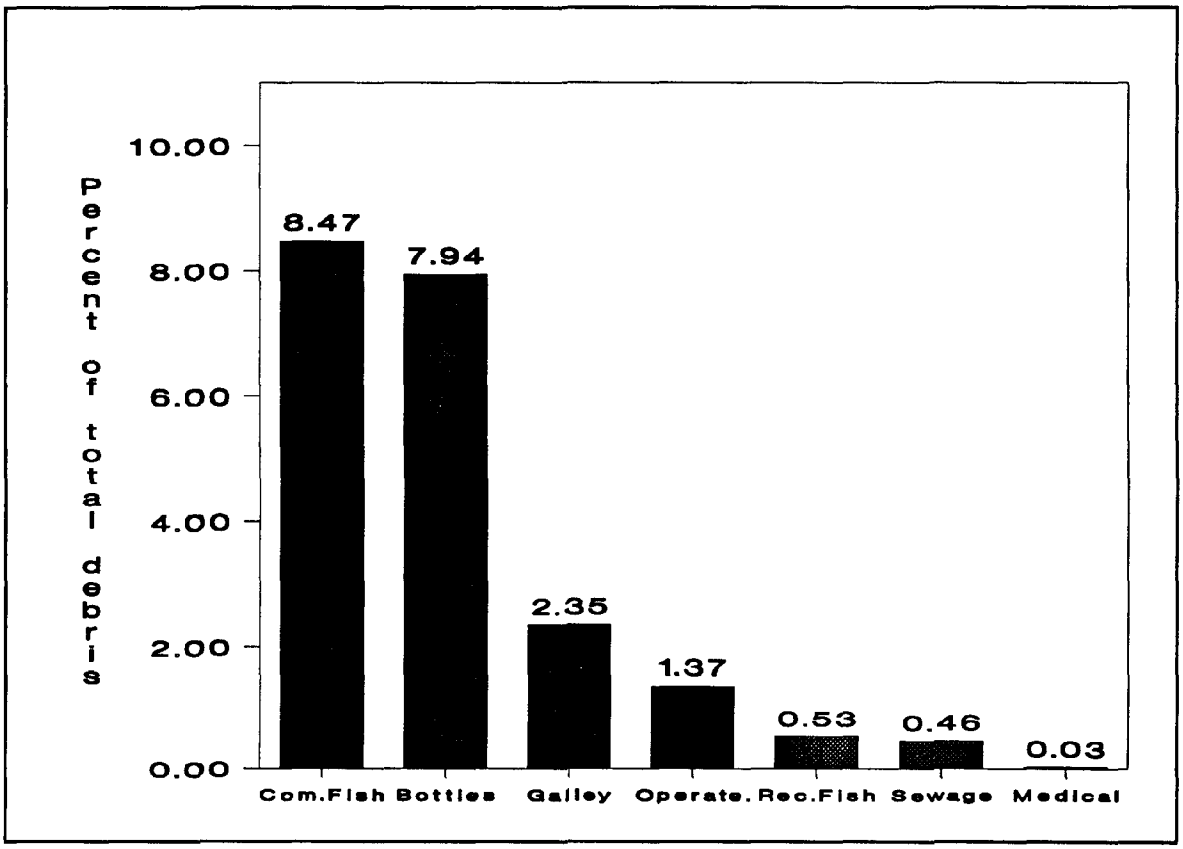
PERCENT COMPOSITION OF MAINE'S BEACH DEBRIS:



MAINE'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	14,186	16.08
2. Glass pieces	6,860	7.78
3. Plastic pieces	5,804	6.58
4. Foamed plastic pieces	5,580	6.33
5. Plastic rope	5,105	5.79
6. Plastic food bags/wrappers	3,671	4.16
7. Paper pieces	3,188	3.61
8. Glass beverage bottles	2,185	2.48
9. Plastic caps/lids	2,128	2.41
10. Foamed plastic cups	2,015	2.28
11. Lumber pieces	1,937	2.20
12. Metal beverage cans	1,593	1.81
Total	**54,252**	**61.51**

MAJOR TYPES AND SOURCES OF MAINE'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Eastport/Lubec	73.75	Plastic rope
Cutler	42.14	Glass pieces
Jonesport	71.11	Rubber gloves, foamed plastic pieces, plastic oil/lubricant bottles
Steuben	77.08	Foamed plastic pieces
Castine	58.74	Cigarette butts
Searsport	35.28	Glass pieces
Belfast	66.06	Cigarette butts
Camden	45.71	Plastic pieces
Rockland	69.37	Plastic rope
Thomaston	61.23	Plastic pieces
Damariscotta	55.17	Metal pieces
Wicasset	30.51	Glass pieces
Georgetown	68.56	Cigarette butts
Phippsburg	61.86	Foamed plastic pieces
Brunswick/Harpswell	62.23	Glass pieces
Yarmouth	30.03	Glass pieces

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE: (cont.)

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Portland/Yarmouth	64.30	Cigarette butts
S.Portland/Cape Elizabeth	59.95	Cigarette butts
Saco	72.76	Cigarette butts
Kittery Eliot	73.26	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Eastport/Lubec	plastic strapping band	Canada Lob. SF 35-87 ID# 006005
	3 plastic fish tags	New Brunswick Aquaculture Salmon, Canada
	plastic pan, salmon feed	Moore-Clark
	6 shipping bands	Canada Lobster
Steuben	band (1990)	Canada Lobster
S.Portland/	plastic warning label	Webber 8555
Cape Elizabeth	plastic cover	Friendship Trap Co. R. Turner 5021

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Eastport/Lubec	Canada	plastic strapping band	Canada Lobster SF 35-87 ID# 006005
		3 plastic fishing tags	New Brunswick Aquaculture Salmon
		6 shipping bands	Canada Lobster
Steuben	Canada	band (1990)	Canada Lobster
Rockland	Canada	plastic strapping band	CO, 69900

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Heron caught in netting, released	33 dead seagulls
Seagull trapped in plastic	6 dead birds
Herring entangled in plastic bag	5 dead fish
	2 dead herrings

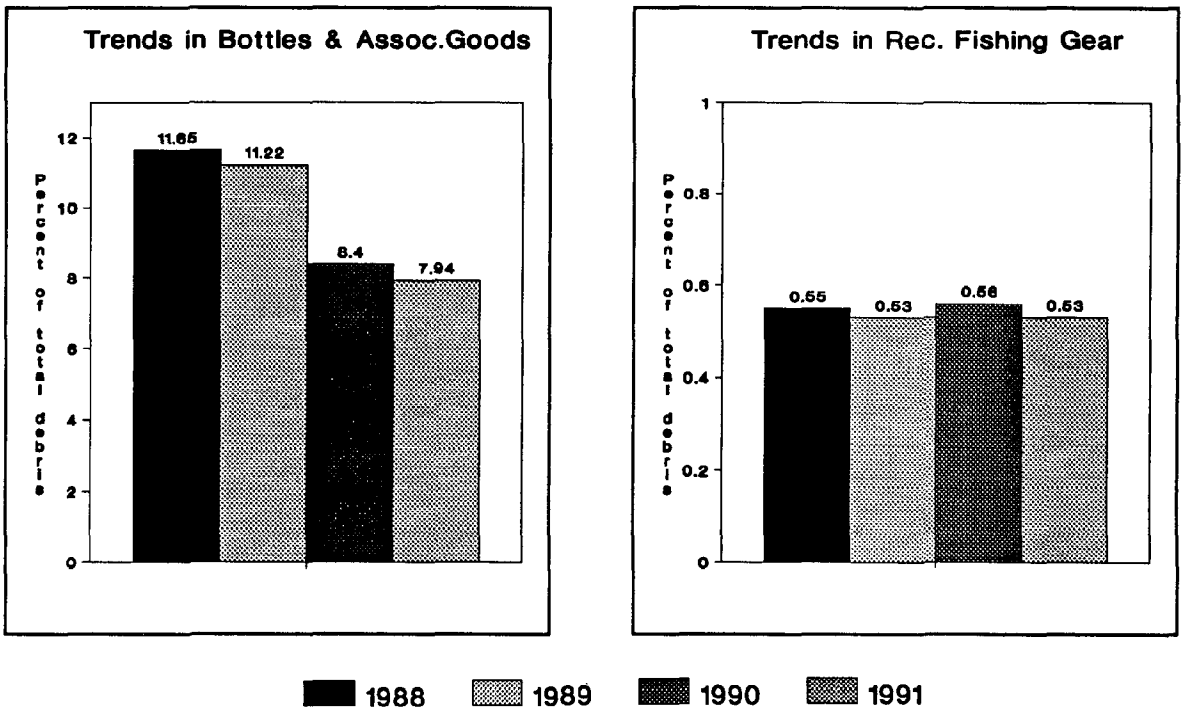
MOST PECULIAR DEBRIS ITEMS REPORTED:

Eastport/Lubec	flare, knee brace, old cloth and cork life preserver from early 1900's, retaining mesh as recommended by DEP for erosion, rubber girdle complete with garters
Cutler	hat visor, engine block, hair curler, a windshield wiper, front end of a car
Steuben	2 inch pulley with rope attached, raincoat
Castine	lawn chair, beverage pitcher
Searsport	jock strap, vinyl siding

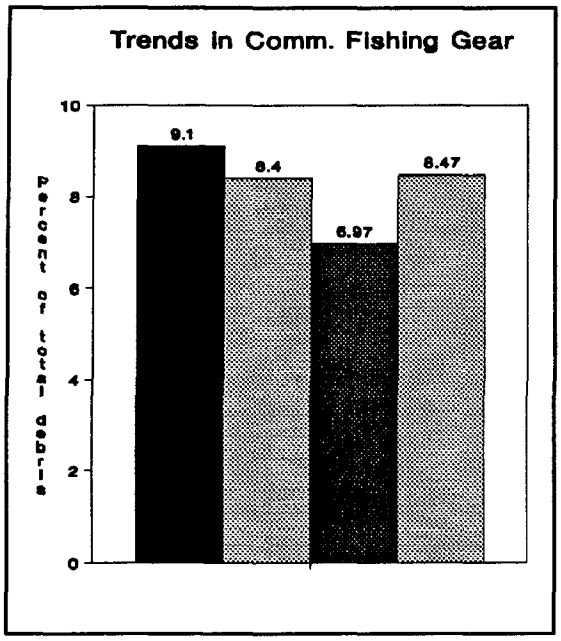
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

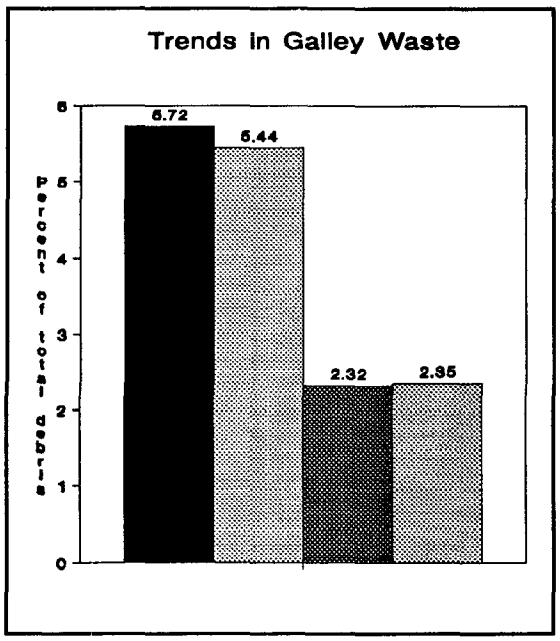
Belfast	knife, eye glasses, carhood, engine block, tire, life jacket
Camden	toys, underwear, paint brush
Rockland	IV and tubing, battery, boat muffler, binocular case, golf balls, lawn mower, paint brush
Thomaston	fire extinguisher, rubber boat bumper, electrical motor, Firestone balloon - 24 inch tire, plastic duck head, door knob, plastic shovel
Damariscotta	rug, bricks, two anchors, paintbrushes, fireworks with 56 rounds
Georgetown	jock strap
Phippsburg	tire rim, broom
Brunswick/Harpswell	deflated rubber raft 10 foot long, plastic Cheezwhiz container, comb, leather boxing striking bag
Portland/Yarmouth	plastic barrel, leather seat, wooden ladder, cable wire, sweater, baby shoes, plastic binoculars, shopping carts, fireworks, bike, shotgun shell, tire iron
S.Portland/Elizabeth	Batman doll tags, pipe, marble, half ceramic doll hand, sunglasses, plastic crate, base of toilet bowl, record, rusted nails, tool kit
Saco	false teeth, tea kettle, fry pan, plastic Santa Claus
Kittery/Eliot	gas can with gas, fireworks, broom head, pillow case, shotgun shells

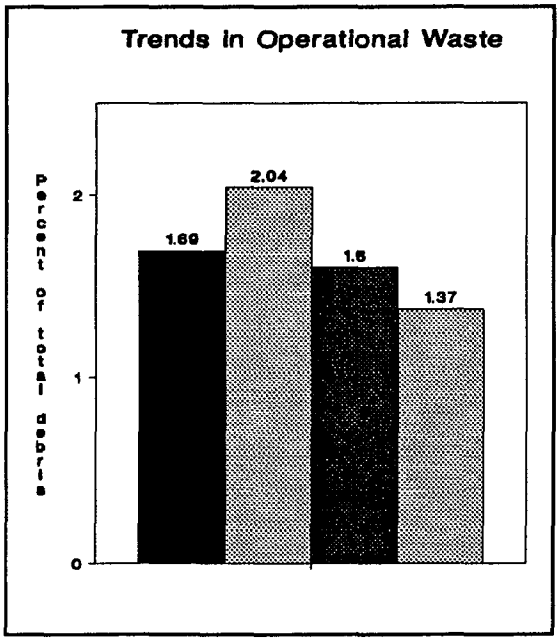
TRENDS IN MAJOR TYPES AND SOURCES OF MAINE'S BEACH DEBRIS:

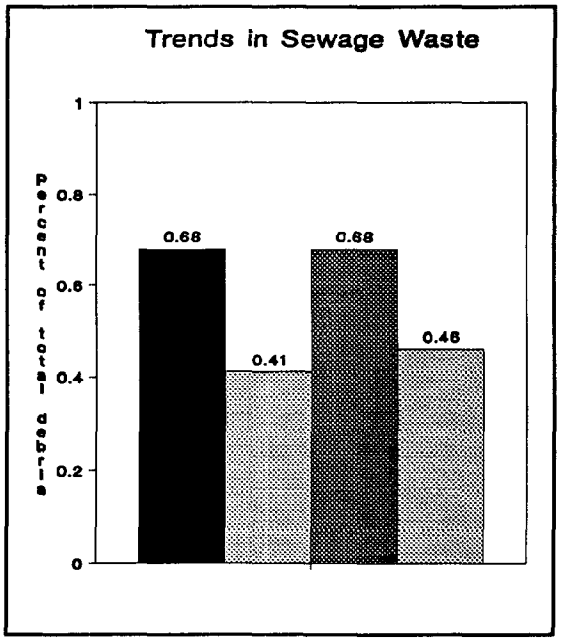


TRENDS IN MAJOR TYPES AND SOURCES OF MAINE'S BEACH DEBRIS: (cont.)



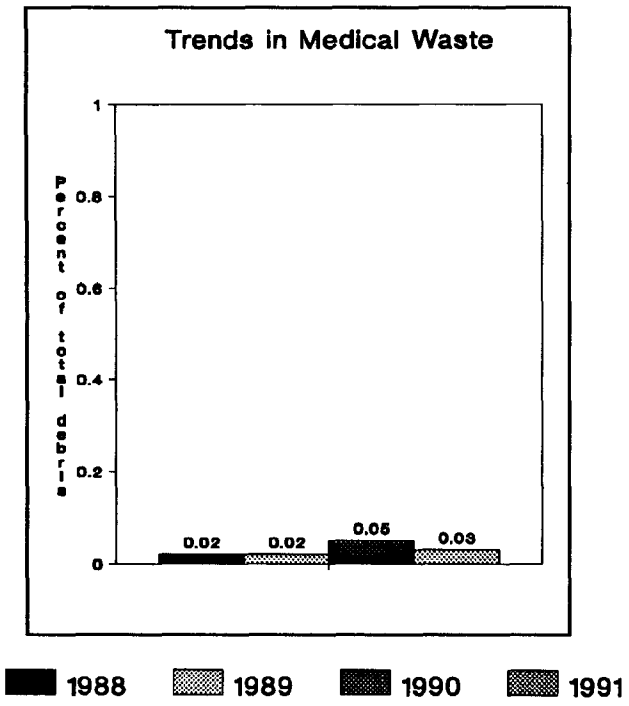






1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF MAINE'S BEACH DEBRIS: (cont.)



FOR INFORMATION ON MAINE'S 1992 COASTAL CLEANUP CONTACT:

Nancy Griffin
Coastal Communications Coordinator
State Planning Office, Station 38
Augusta, ME 04333
(207) 289-3261

CLEANUP DATE : OCTOBER 3, 1992

Volunteers separate marine debris on Assateague Island, Maryland.

MARYLAND

BEACH CLEANUP

September 7, 14, and 21, 1991
1,190 Volunteers
83 Miles Cleaned
201,759 Pounds of Debris Collected
196 Data Cards

Coordinated by: Ann Berger
Alliance for the Chesapeake Bay
6600 York Road, Suite 100
Baltimore, MD 21212
(301) 377-6270

Judy Johnson
Committee to Preserve Assateague Island, Inc.
616 Picadilly Road
Towson, MD 21204
(301) 828-4520

The Alliance for the Chesapeake Bay, Inc. held the second Chesapeake Bay Cleanup in September, 1991. These cleanups have been made possible through a congressional appropriation secured by Senator Barbara Mikulski to assist beach cleanups in the state of Maryland.

The Alliance supplied trash bags and gloves, in addition to distributing zone captain report forms and data cards supplied by the Center for Marine Conservation. Each group appointed an area coordinator to be in charge, who was responsible for completing the data cards and zone captain report form, and returning them to the Center for Marine Conservation for inclusion in their national database.

Once again, the response from citizen groups and organizations was extremely enthusiastic. Fifteen groups participated in cleanups, with some holding numerous cleanups. The locations of our cleanups were: Terrapin Park; Stevensville; Solomons Island; Broad Creek; Rocky Point Park; St. Mary's County; North Point Park; Otterpoint Park; Assateague Island (Merkle Wildlife Sanctuary, Kings Landing, Milltown Landing); Back Creek; Mason Neck Wildlife Refuge; Mayo; Herring Run Park; Cyprus and Dividing Creek on the Magothy River; and Love Point Beach.

Volunteers totaled 1,190, cleaning up 83 miles of beach and river banks. They collectively filled 699 bags with trash and debris weighing approximately 201,759 pounds. All of the participating groups recycled the collected materials and disposed of waste properly.

Cleanups along the shoreline of Chesapeake Bay were done on foot and in one instance in canoes. *Enthusiasm* and *dedication* were key components in all cleanups! In fact, one Navy squadron leader from Pax River upon seeing the cleanup in progress in St. Mary's Country, Maryland, volunteered his whole squadron. Unfortunately, over 140 volunteers had already responded, and they couldn't accommodate the Navy squadron with supplies, etc.

All groups expressed sincere thanks for the opportunity to participate in cleaning up Chesapeake Bay shorelines, and many expressed a desire to participate in the future. Some groups planned a second cleanup with their supplies on hand in the near future. Comments were very positive and ranged from an increased awareness of the litter problems and its effects on Chesapeake Bay; to "it was a fun, worthwhile, and productive day!" Once again, the Alliance was extremely pleased with participants' endeavors towards making our Bay shores clean, safe, and beautiful!

Ann Berger

Saturday, September 7 was a perfect day for the cleanup of the 22 miles of Maryland Assateague Island National Seashore. We estimated about 250 people of all ages assisted, including National Seashore and State Park personnel.

Not as much trash was found as in previous years, but some of this may be due to the spring cleanup, for which we have no figures. A large portion of the northern tip experiences overwash fairly frequently, and we found some people only collected trash along a relatively narrow strip of the beach, rather than walking across the whole sandy part towards the bay in search of additional items.

The amount of large and bulky pieces of wood and lumber surprised everyone. A total of 3 tons of wood was collected, 2 tons of which were lumber. Plastic still leads the list in total number of items collected.

Many thanks to First Brands Corporation for providing us with the Glad Bags, and Senator Barbara Mikulski for providing the funding. Reg Hancock, President of the Worcester County Commissioners, helped with cleanup again this year. Cecily Majerus (from the Governor's office and is on the board of the Center for Marine Conservation) and her husband, David helped, as did Rick Leader (with the Chesapeake Bay Trust) and his wife, Andrea; and Nick Carter, from the Department of Natural Resources.

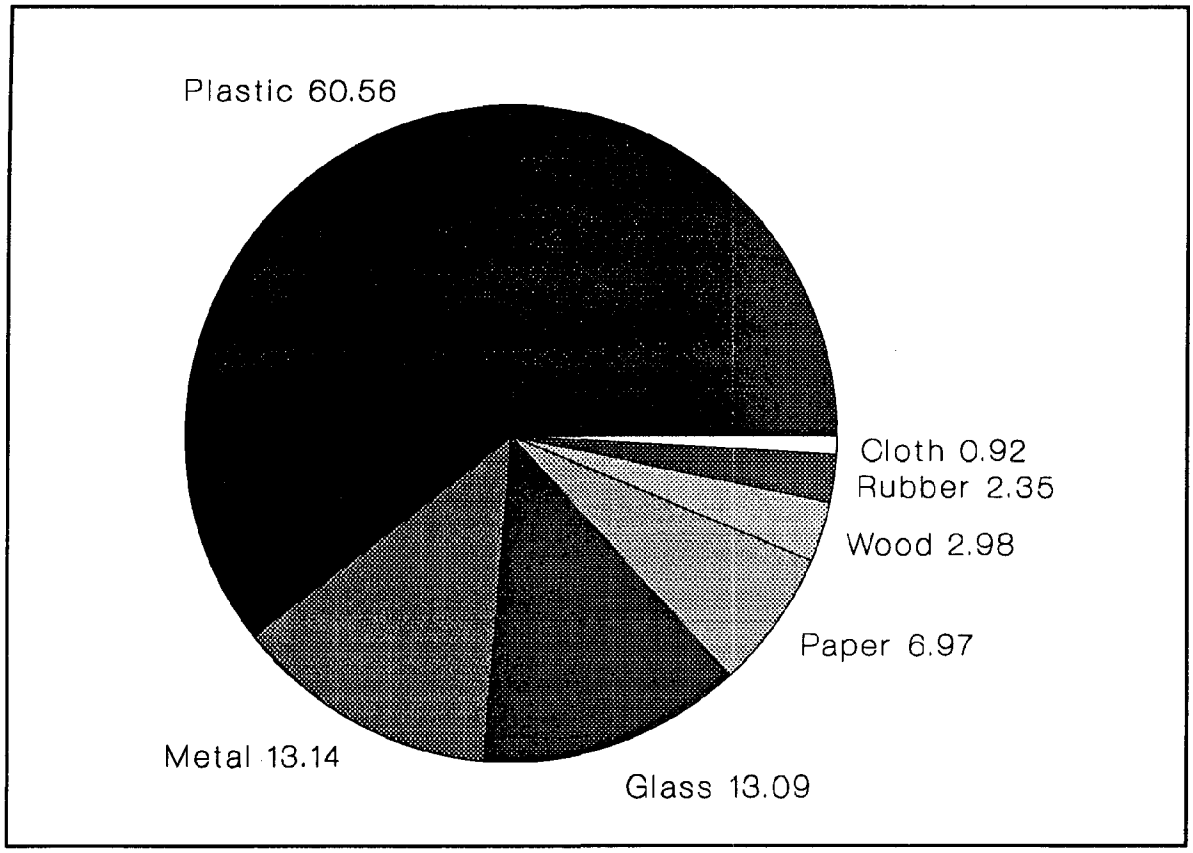
Besides our Committee, the Assateague Mobile Sportfishermen's Association, and the Worcester Environmental Trust, other groups that assisted were: the Telephone Pioneers; Alpha Omega Biology Society; Salisbury State University; Calverton School; Park School; 4H Club; and the Peace Corps.

Crane and Jane Miller brought a group from their church in Washington. Everyone found it a great experience and a most satisfying one, and they all said they will come back in 1992.

Judy Johnson

St. Mary's Friends of the Chesapeake proudly display the impressive results of a hard day's work.

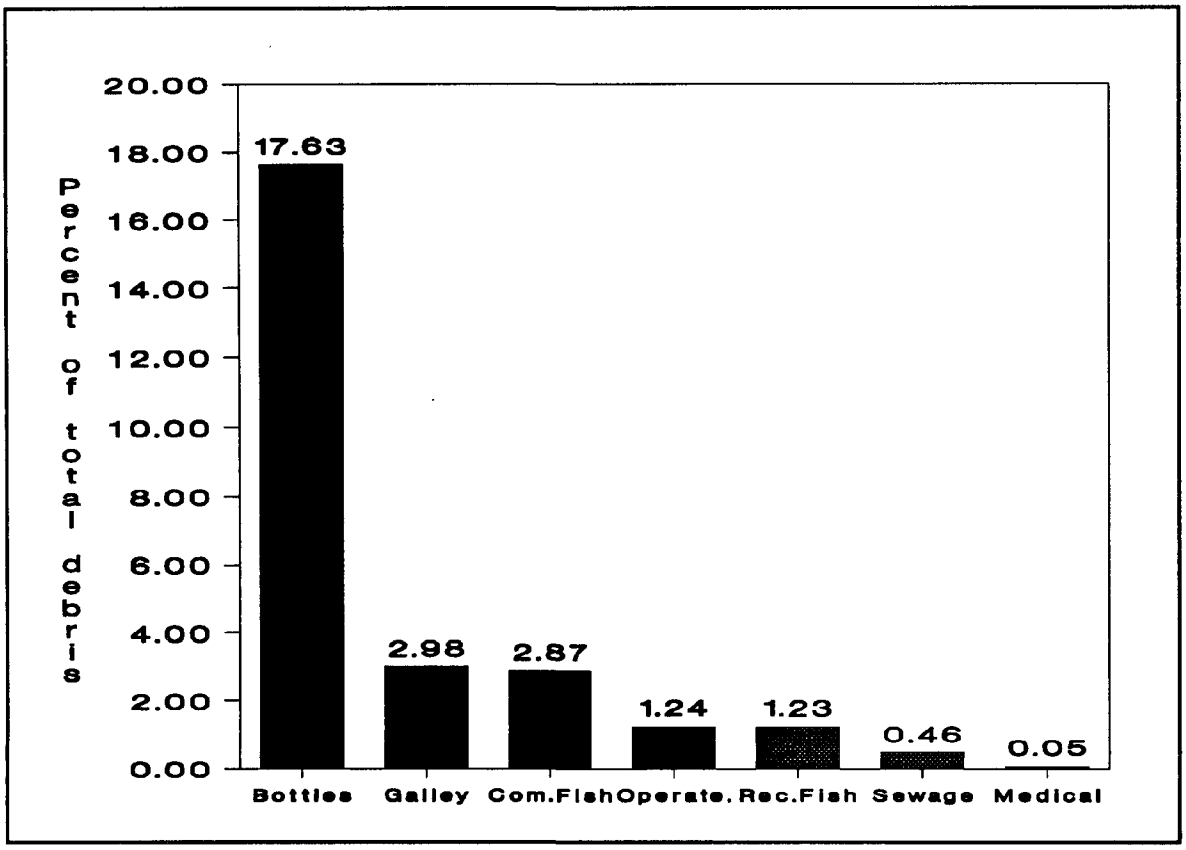
PERCENT COMPOSITION OF MARYLAND'S BEACH DEBRIS:



MARYLAND'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	6,114	8.97
2. Foamed plastic pieces	5,856	8.59
3. Glass pieces	4,803	7.04
4. Plastic pieces	4,404	6.46
5. Metal beverage cans	3,995	5.86
6. Glass beverage bottles	3,179	4.66
7. Plastic caps/lids	2,881	4.23
8. Paper pieces	2,344	3.44
9. Plastic food bags/wrappers	2,337	3.43
10. Foamed plastic cups	2,326	3.41
11. Plastic straws	1,968	2.89
12. Metal pull tabs	1,611	2.36
Total	**41,818**	**61.34**

MAJOR TYPES AND SOURCES OF MARYLAND'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Baltimore	59.54	Cigarette butts
Annapolis	62.08	Glass pieces
Terrapin Beach	76.71	Metal beverage cans
Mason Neck NWR	74.80	Foamed plastic pieces
Patuxent	32.96	Glass beverage bottles
Bladensburg	65.68	Foamed plastic pieces
Potomac	43.92	Metal beverage cans
Solomon Island	24.99	Glass pieces
St. Mary's County	59.26	Cigarette butts
Assateague Island	62.85	Plastic pieces

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Sources Indicated
Baltimore	plastic cup	Mumm's, 3203 Belair Road
	bait box	Mike's Bait Co.
Mason Neck NWR	plastic tie and seal	Snyder of Berlin, #1907
Assateague Island	metal ID band # 1298	U.S. Coast Guard

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris
Assateague Island	Japan	cloth tag #464

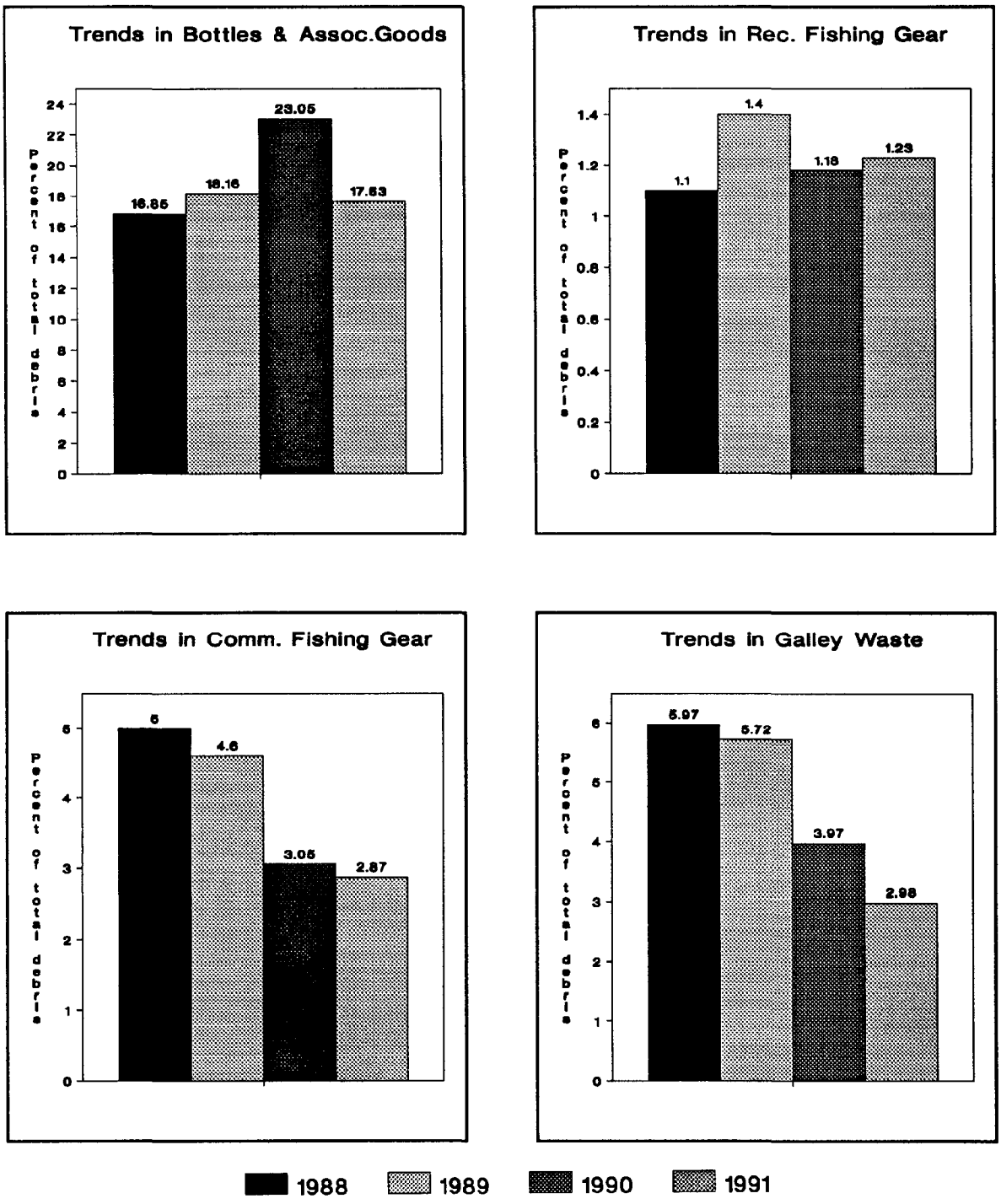
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Crab entangled in balloon ribbon	6 dead fish
Crabs and fish trapped in crab trap	1 dead turtle
	1 dead bird
	1 dead mouse

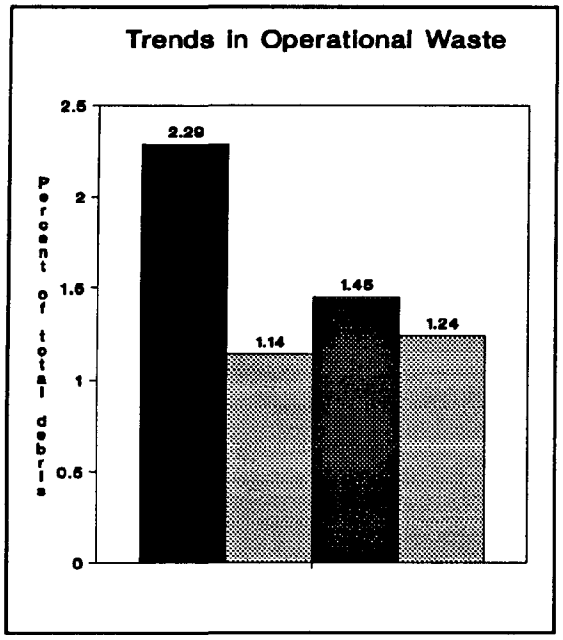
MOST PECULIAR DEBRIS ITEMS REPORTED:

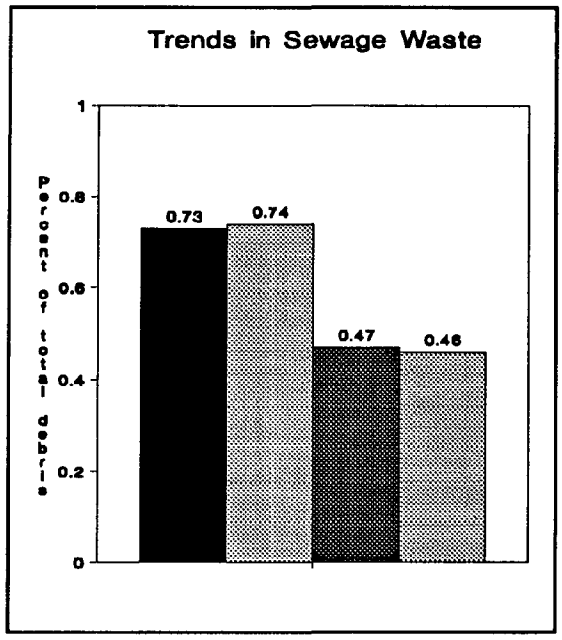
Baltimore	plastic Cookie Monster face, park bench, bicycle, sofa cushion, snorkel mask, boat windshield, TV antennas, Frisbees, broom, fan, carpet cleaner bags, AA battery
Annapolis	Walkman headphones, underwear, grill, toothbrush
Terrapin Beach	lawn chair, bowl, stuffed animals
Mason Neck NWR	plastic Christmas holly, pillow, rug, bread tray, bedpost, hose reel, baby potty, plastic cigar cover
Patuxent	water heater, electric fan, door, plastic reflector, grill
St. Mary's County	pillow, carpet, gas can, umbrella, wallet, shotgun shells
Assateague Island	pillow, computer board with wires, coffee strainer, freezer door, boomerang, picture frame, ice cube tray, Ninja Turtle doll

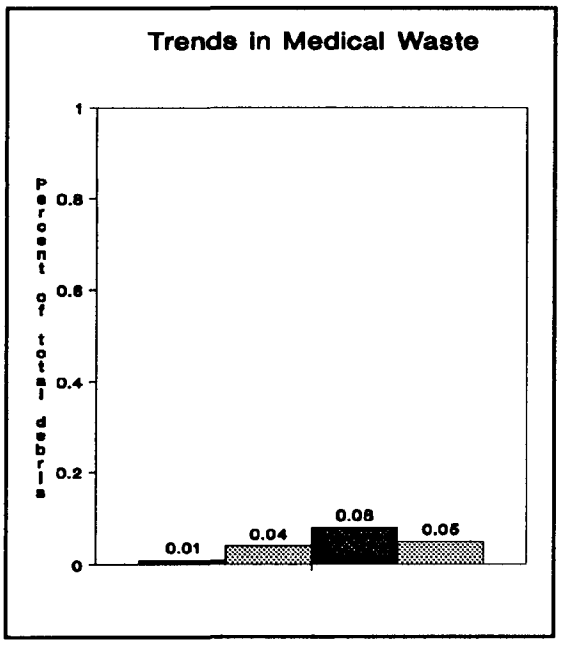
TRENDS IN MAJOR TYPES AND SOURCES OF MARYLAND'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF MARYLAND'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON MARYLAND'S 1992 COASTAL CLEANUP CONTACT:

Judy Johnson
Committe to Preserve Assateague Island, Inc.
616 Picadilly Road
Towson, MD 21204
(301) 828-4520

CLEANUP DATE : September 12, 1992

1988 1989 1990 1991

Volunteers carefully record every piece of debris at Assateague Island, Maryland.

A fraternity from Bentley College joins in the "Coast Sweep" at Massachusetts.

MASSACHUSETTS

September 21, 1991
4,500 Volunteers
190 Miles Cleaned
56,000 Pounds of Debris Collected
1360 Data Cards

Coordinated by: Anne Smrcina
Coastal Zone Management Program
100 Cambridge Street, 20th Floor
Boston, MA 02202
(617) 727-9530

The 1991 Massachusetts Coastal Cleanup, COASTSWEEP, topped all previous years' participation numbers, with some 4,500 individuals journeying to the coast to lend their support to the event. In contrast to past years, the weather was perfect, with clear, sunny skies and typical fall temperatures (cool but not chilling).

Over 300 people attended the kick-off cleanup at Revere Beach, the oldest public beach in the nation. The participants retrieved an assortment of debris, ranging from small pieces of plastic and thousands of cigarette filters to parts of a boat. People reported finding fewer tampon applicators this year, possibly due to a new scum removal system installed at the Massachusetts Water Resources Authority waste treatment facilities.

State sponsors for the event included WBZ-TV4 (NBC affiliate), Stop & Shop Supermarkets, Dunkin' Donuts, and Harvard Community Health Plan provided t-shirts, drinks, gloves, and publicity for the event.

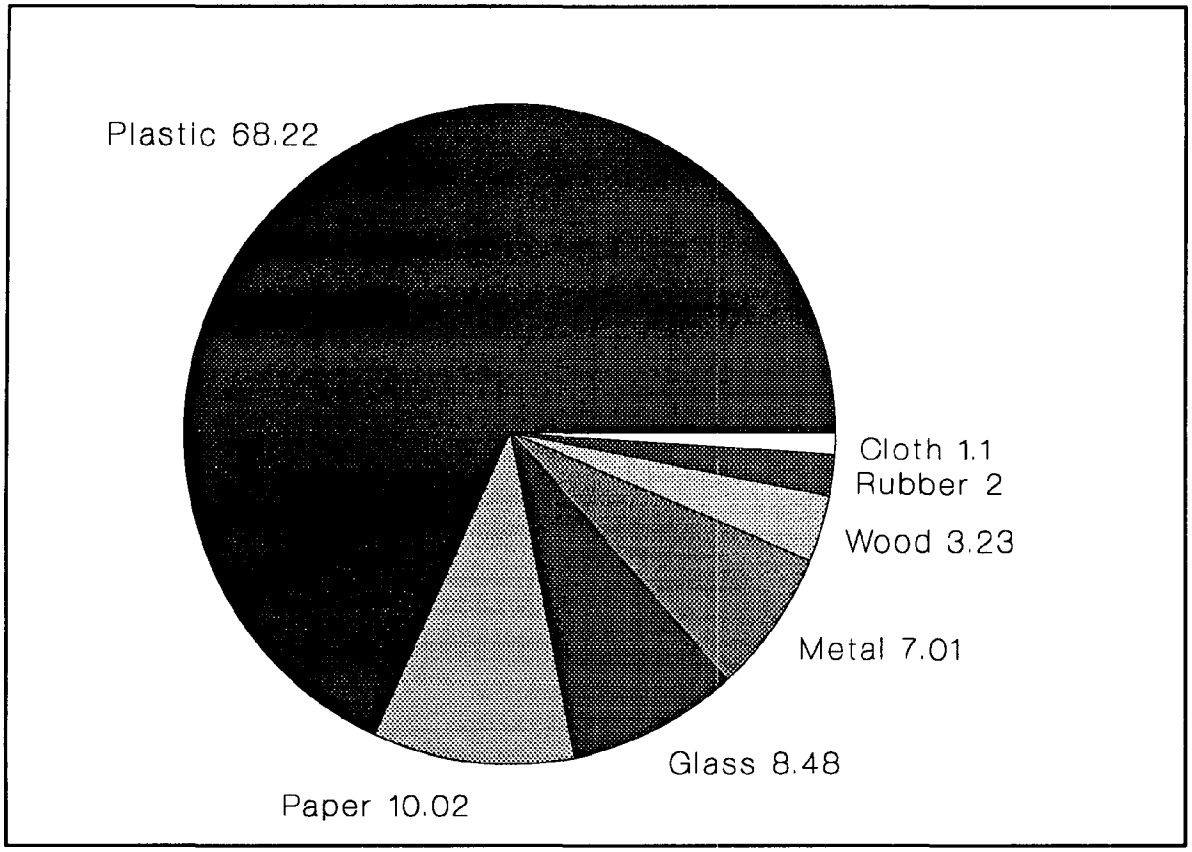
Secretary of Environmental Affairs Susan Tierney gave the welcoming remarks, along with WBZ meteorologist Barry Burbank and Massachusetts Coastal Zone Management Office (MCZM) Assistant Director Steven Bliven. MCZM is the state agency that coordinates the statewide COASTSWEEP program.

In addition to the cleanup at Revere Beach, some 80 other cleanups were held on Saturday, September 21, as well as on the previous Friday and on the following Saturday. Cleanups ranged from as far north as Salisbury on the New Hampshire border to Westport on the Rhode Island border. Several high schools, junior high schools, and elementary schools sent entire grades or classes to local beaches as public service/educational efforts. The Patriot Trail Girl Scout Council held a council-sponsored cleanup at Wollaston Beach in Quincy that attracted 250 participants from numerous troops from the Boston Metropolitan area. Battelle Ocean Sciences, a research company on the South Shore, sponsored the largest individual cleanup--some 450 individuals at five-mile-long Duxbury Beach (participants were treated to coffee and donuts, t-shirts, and a hot dog lunch after the cleanup).

Many participants noted that the beaches seemed cleaner in 1991 than in previous years, except for areas that were hit by Hurricane Bob (especially Buzzards Bay and south and east-facing beaches on Cape Cod). The mid-August hurricane swept many beach houses into the surf, scattering boards, appliances, shingles, home furnishings, and household supplies along the coast. The combination of failed septic systems, household hazardous wastes, fuels, and other materials led to the closure of many shellfishing areas.

Anne I. Smrcina

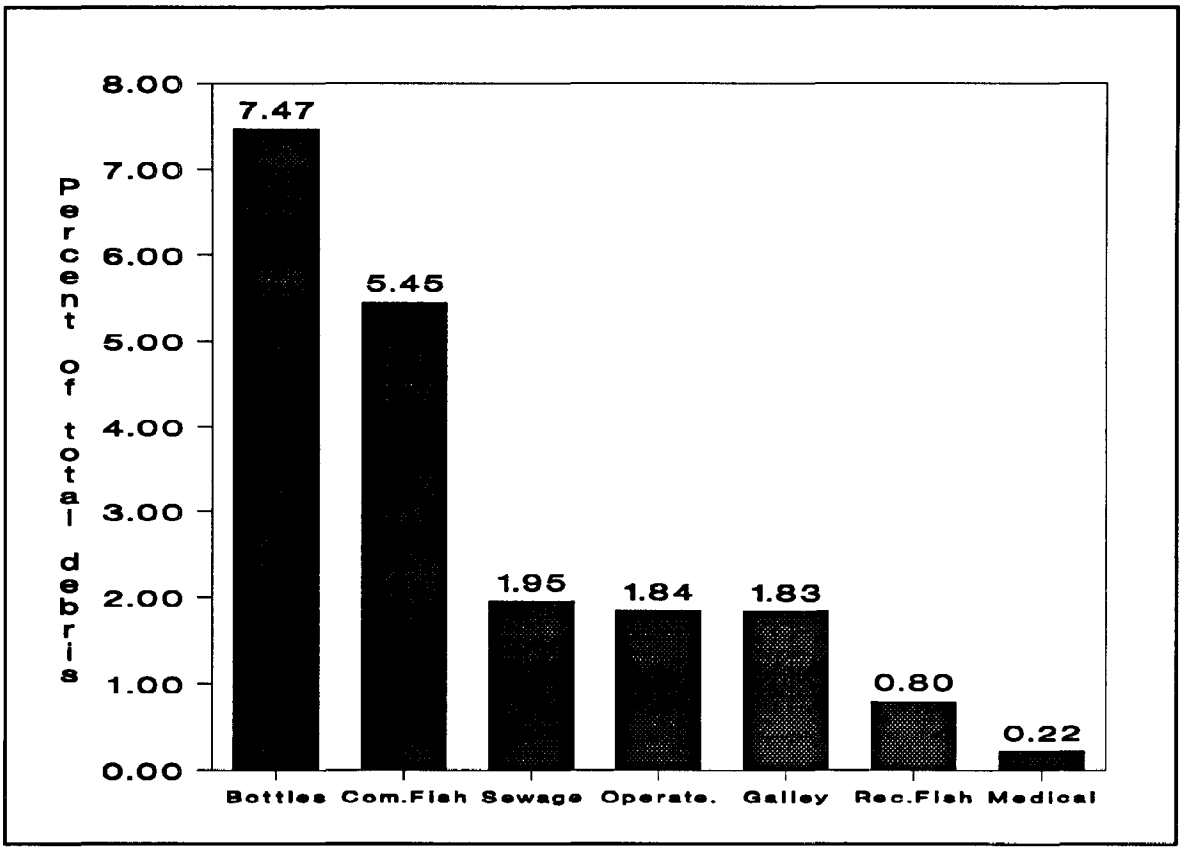
PERCENT COMPOSITION OF MASSACHUSETTS' BEACH DEBRIS:



MASSACHUSETTS' 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	60,359	19.29
2. Plastic pieces	21,104	6.75
3. Glass pieces	18,043	5.77
4. Plastic straws	14,819	4.74
5. Plastic food bags/wrappers	14,149	4.52
6. Foamed plastic pieces	13,897	4.44
7. Paper pieces	13,859	4.43
8. Plastic caps/lids	13,324	4.26
9. Plastic rope	9,512	3.04
10. Plastic cups/utensils	7,278	2.33
11. Metal beverage cans	6,956	2.22
12. Lumber pieces	6,577	2.10
Total	**199,877**	**63.89**

MAJOR TYPES AND SOURCES OF MASSACHUSETTS' BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
North Shore	68.20	Cigarette butts
Metro Boston	67.19	Cigarette butts
South Shore	69.74	Cigarette butts
Cape Cod	70.25	Cigarette butts
Buzzard's Bay	56.96	Glass pieces

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
North Shore	4 custom seals	Canada Lobster
	red tag, S-F 36-87, #044905	Canada Lobster
	plastic bands	Wang Laboratories
	plastic lid for bucket	Letica Corp., Rochester, MN
	plastic saline bottle	Armor Pharmacal
Metro Boston	plastic part label, # 71754	Marcrafts Inc., Freeport, ME

TRACEABLE DEBRIS REPORTED: (cont.)

Location	Type of Debris	Source Indicated
South Shore	100 lb. net bag	Webster Company
	plastic frame	C. E. Shepherd Co. Inc., Houston, Texas
	plastic strapping band, # 2752995	Canada New Brunswick Aquaculture
	cardboard box	Alliance Rubber Co.
	bottles	Dairy Juice Products, Verona, PA
Buzzard's Bay	lumber scraps	Tolleson Lumber Co., Perry, GA

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
North Shore	Canada	4 custom seals	Canada Lobster
		red tag, S-F 36-87, #044905	Canada Lobster
South Shore	Canada	plastic strapping band	Canada New Brunswick Aquaculture

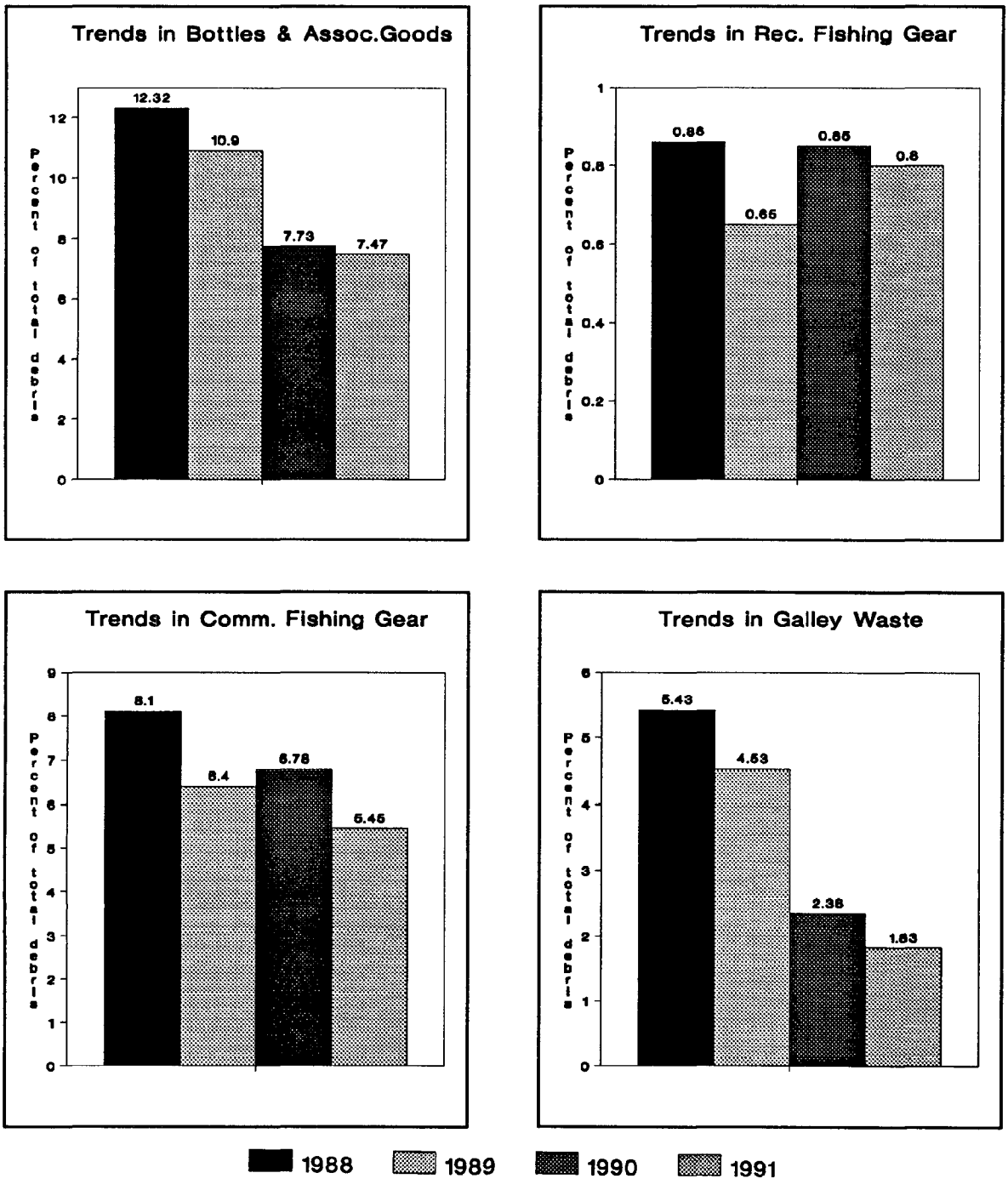
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Seagull skeleton wrapped in monofilament line	39 dead seals
Seagull caught in netting	12 dead birds
Seagull tangled in fishing wire	11 dead fish
	6 dead crabs
	1 dead lizard
	1 dead snake
	1 dead pigeon

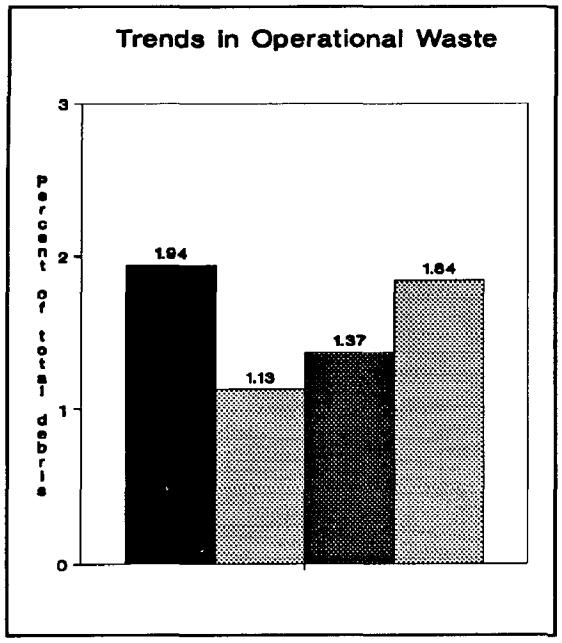
MOST PECULIAR DEBRIS ITEMS REPORTED:

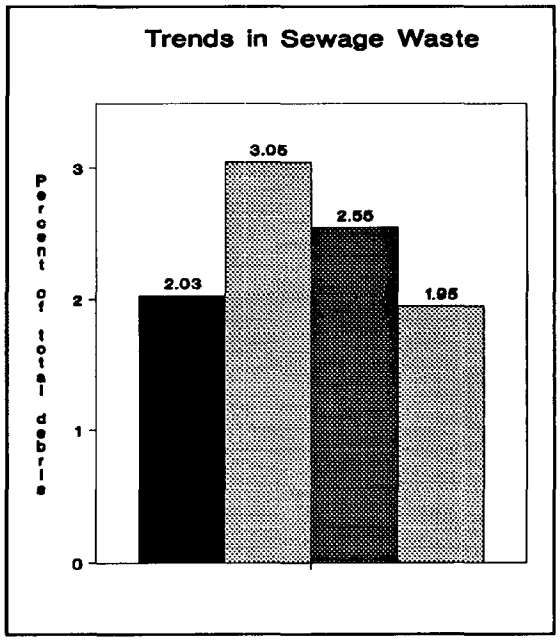
North Shore	wheel rim, I.V. tubing, medical bag, kite, golf ball, 75 lb. mowing chain, men's underwear, refrigerator door, plastic high heel, firecracker, Frisbee, broom, sleeping bag, whiskey bottle, dust pan
Metro Boston	rug, car hood and roof, driver's license and credit cards, underwear, suitcase, panty hose, bra, corn on the cob, blender and coffee maker
South Shore	battery, potty, t-shirts, boning knife, mailbox, toothpaste, tea bags, license plate, lottery ticket, lawn chair.
Cape Cod	flea collar, mop, tray, negligee, underwear, fireworks, pantyhose, mattress
Buzzard's Bay	dog collar, pillow, hose, rug, lawn furniture, plastic zipper, bed sheets, beach chair, curtains, bird house, couch, brake pads

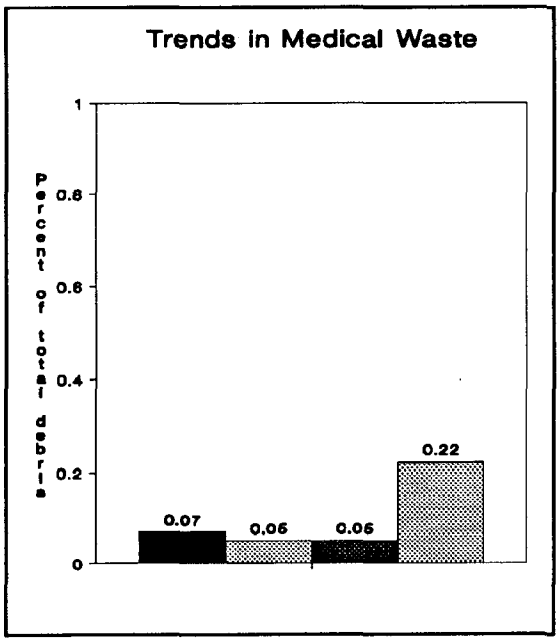
TRENDS IN MAJOR TYPES AND SOURCES OF MASSACHUSETTS' BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF MASSACHUSETTS' BEACH DEBRIS: (cont.)







FOR MORE INFORMATION ON MASSACHUSETTS' 1992 COASTAL CLEANUP CONTACT:

Anne Smrcina
Coastal Zone Management Program
100 Cambridge Street, 20th Floor
Boston, MA 02202
(617) 727-9530

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

Two young volunteers haul their finds across a Massachusetts beach.

Michigan's first cleanup was a big success thanks to volunteers like these.

1991 GREAT LAKES BEACH SWEEP

MICHIGAN

September 21, 1991
1,475 Volunteers
120.23 Miles Cleaned
8,074 Pounds of Debris Collected
318 Data Cards

Coordinated by: Tanya Cabala
Lake Michigan Federation
425 West Western, Suite 201
Muskegon, MI 49440
(616) 722-5116

The first annual Beach Sweep in Michigan, part of the first annual Great Lakes Beach Sweep, brought out 1,475 volunteers throughout the state who picked up 8,074 pounds of garbage on 120.23 miles of Great Lakes shorelines. The day, Saturday, September 21, was bright and sunny, but cold and windy. Cleanups took place in every county along the eastern shore of Lake Michigan up to the upper Peninsula, where about 500 volunteers turned out on Lake Superior shorelines and along Lake Huron. Our tremendous first time success in recruiting, organizing, and data processing is due to the dedicated efforts of an army of area coordinators.

Volunteers included environmental and conservation groups, Girl Scout troops, families, students and lots of people unaffiliated with a group, but very concerned about the Great Lakes.

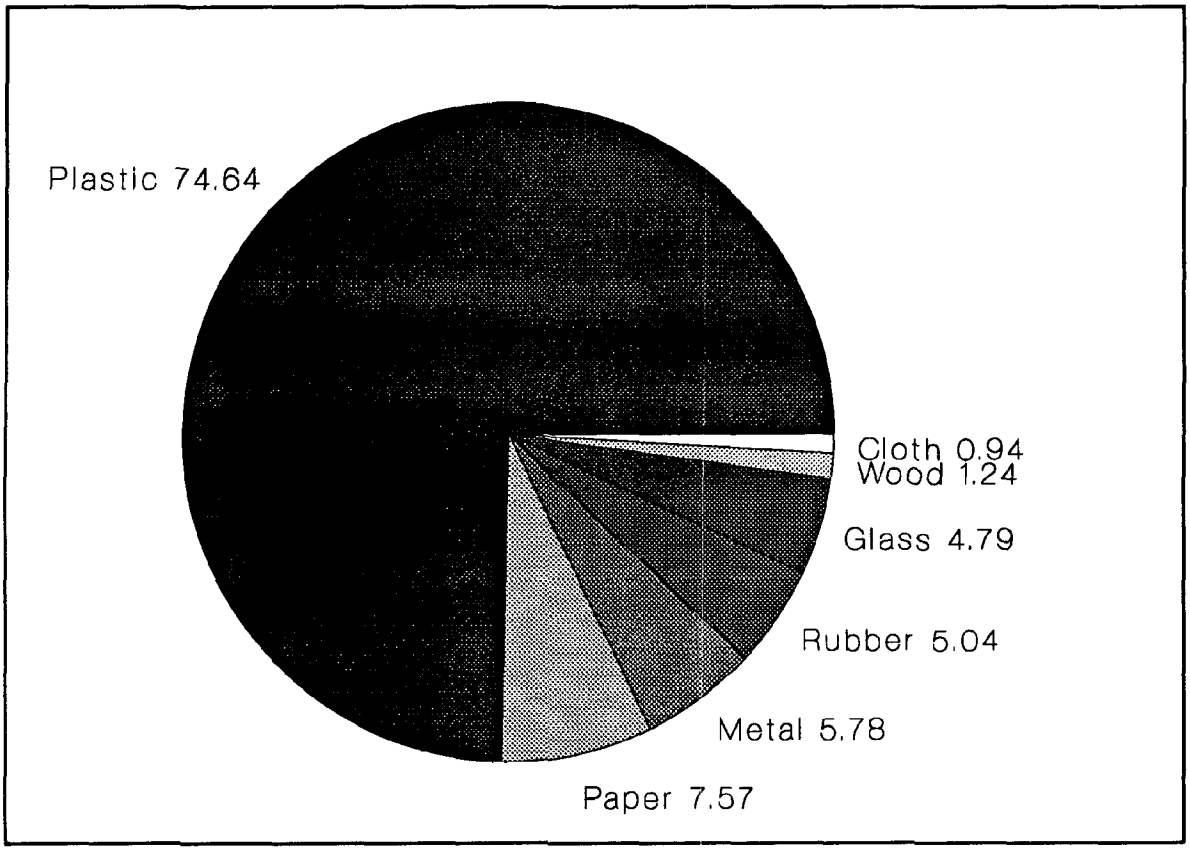
Unusual finds this year were: a gill net buoy with a turnbuckle and chain, a decontamination suit, a street bumper, a rubber garbage can, 70 tires, part of a plastic Christmas tree, part of a TV antenna, a 6-foot lead pipe and 300 pounds of broken concrete in a dune area. Some of the items found in large numbers were cigarette butts, pieces of glass, bottle caps, pieces of paper, styrofoam and plastic pieces, and plastic straws.

In one county alone, four dead animals were found entangled in trash, one in a plastic six-pack ring, and one with a balloon in its throat and attached ribbon around its neck, graphically illustrating the need to eliminate these items from our beaches and our environment.

Sponsors included First Brands Corporation, supplier of trash bags, Pioneer Industrial Products of Willard, Ohio, which donated sturdy latex gloves, and Illinois Tool Works, which funded the media kits and press releases prepared by the Shedd Aquarium public relations department.

Tanya Cabala

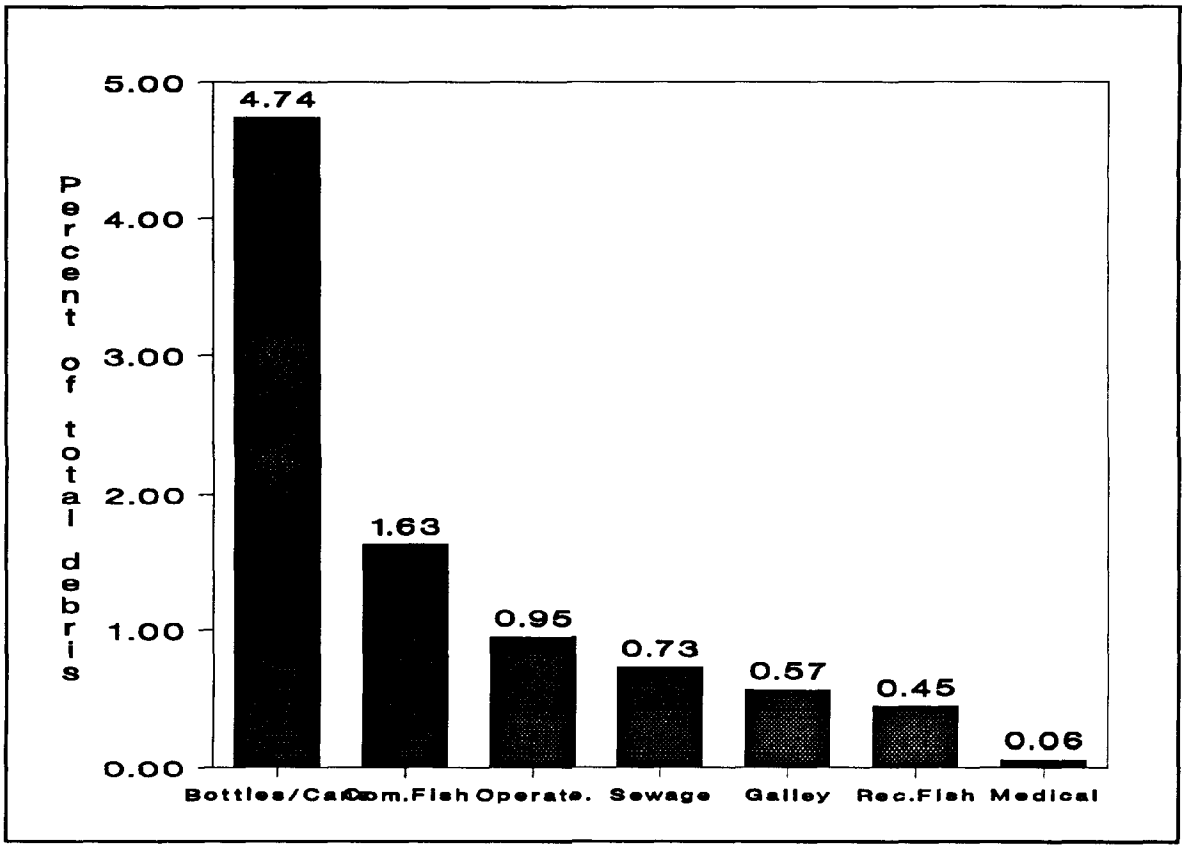
PERCENT COMPOSITION OF MICHIGAN'S BEACH DEBRIS:



MICHIGAN'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	37,370	30.02
2. Plastic pieces	15,445	12.41
3. Plastic straws	9,026	7.25
4. Plastic caps/lids	5,481	4.40
5. Balloons	5,474	4.40
6. Paper pieces	5,303	4.26
7. Glass pieces	5,089	4.09
8. Foamed plastic pieces	4,507	3.62
9. Plastic food bags/wrappers	3,372	2.71
10. Metal bottle caps	2,425	1.95
11. Clothing pieces	1,176	0.94
12. Metal pull tabs	1,157	0.93
Total	**95,825**	**76.97**

MAJOR TYPES AND SOURCES OF MICHIGAN'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Makinac	67.82	Cigarette butts
Berrien	72.91	Cigarette butts
Muskegon	77.86	Cigarette butts
Oceana	81.23	Cigarette butts
Manistee	45.18	Glass pieces
Benzie	70.73	Cigarette butts
Grand Traverse	73.46	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Makinac	cardboard box	Kings Fishing, Naubinway, MI 90647-6282
Muskegon	line leader connectors	Bear Paw Tackle Co., MI 49615

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Seagull entangled in large fishing lure	18 dead fish
Seagull entangled with six pack holder	16 dead seagulls
Bird entangled in balloon string	1 dead dog
	1 dead duck
	1 dead rabbit
	1 dead rat
	1 dead turtle

MOST PECULIAR DEBRIS ITEMS REPORTED:

Makinac	propane cylinder, bed spring, coffee pot, roofing paper, umbrella cover, lounge chair, coat hanger
Berrien	pants, shotgun shells, money, toy baby bottle, rusty door with handle
Muskegon	part of TV antenna, car bumper, 45 ft. rubber hose, panty hose, toothbrush bed sheet, head band, I Love Lucy video tape, toy gun, stove burner cover, tennis shoe
Oceana	back pack, fuel pump, money, tennis shoe, firecracker, training bra, men's underwear
Manistee	plastic sword, lamp, firecracker
Benzie	camera part, surveying tape, plow, toe nail clippers

TRENDS IN MAJOR TYPES AND SOURCES OF MICHIGAN'S BEACH DEBRIS:

Data collection from Michigan's cleanup has only been carried out for one year (1991) and therefore trends can not be assessed.

FOR INFORMATION ON MICHIGAN'S 1992 COASTAL CLEANUP CONTACT:

Tanya Cabala
Lake Michigan Federation
425 West Western, Suite 201
Muskegon, MI 49440
(616) 722-5116

CLEANUP DATE: September 12, 1992

Volunteers separate debris for recycling at Michigan's first cleanup.

A family helps clean the beach at Park Point in Duluth, Minnesota as part of the Great Lakes Beach Sweep, Minnesota.

1991 GREAT LAKES BEACH SWEEP

MINNESOTA

September 21, 1991
300 Volunteers
21 Miles Cleaned
6,260 Pounds of Debris Collected
74 Data Cards

Coordinated by: Tim Amonson
The Bluestone Company
369 Canal Park Drive
Duluth, MN 55802
(218) 722-6768

Minnesota participated in the International Coastal Cleanup for the first time in 1991 as part of the Great Lakes Beach Sweep, coordinated by the John G. Shedd Aquarium in Chicago. The cleanup area consisted of 21 miles of sand and cobble beaches and yielded 6,260 pounds of debris. Among the unusual items we picked up were a passport and a pilot's logbook from a recent plane crash in the lake, two purses with contents intact (later returned to the owners), a pontoon boat, and several mattresses.

As a first time coordinator, I severely underestimated the response to the cleanup, and I expected between 50 and 75 participants. Three hundred people turned out for the event, sending me scurrying at the last minute to come up with extra supplies. One section of beach, approximately four miles long, is bordered by residential homes. Even though the beach is considered public domain, homeowners treat it with the same respect as if they owned it. Each house along the stretch received a bag, data cards and information about the cleanup. The day of the cleanup, each resident was invited to collect beach debris in the bag, fill in the card and leave the bag by the curb. Items too large or heavy to comfortably remove could be noted on the card for collection by the city.

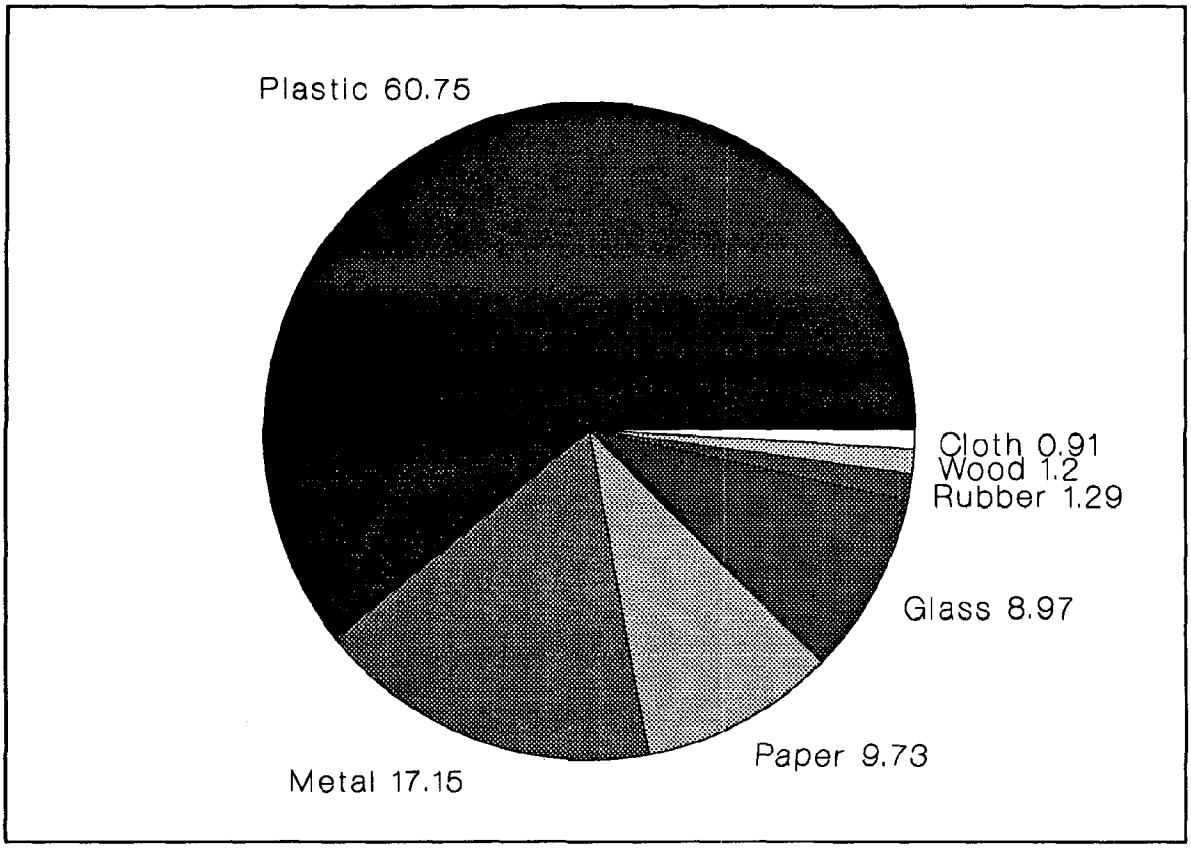
Duluth's Parks and Recreation Department was very cooperative in helping out with advertising the cleanup and providing trash collection service afterwards. The department also gave all participants guest passes to a variety of civic events in the Duluth area. Northwoods Greens, the local Greenpeace group, was another sponsor and handled recycling and trash disposal in Superior. Soft drinks were provided by the local distributor, plastic gloves by a hardware store and t-shirts by an outdoor clothing store.

Media kits were compiled by the Shedd Aquarium public relations department and funded by Illinois Tool Works. Promotion by the local media was very good before the event. Follow-up coverage, however, was poor. Next year we plan to approach one TV station and one newspaper for sponsorship, not in terms of financial support, but in media coverage before and after the cleaning.

Our great beach captains did a super job of getting everyone organized and motivated at the different beach sites. Many of the participants expressed interest in becoming beach captains next year. In 1992, we plan on adding a cleanup dive in the offshore waters. We also want to get more involvement farther up the north shore of Lake Superior. That beach area extends more than 100 miles to the Canadian border. And we are going to target the Mississippi and St. Croix rivers for cleanups. We would like to explore the possibility of getting more young people involved in the cleanup by making them aware of the beach debris problem during the early weeks of the school year, making the Beach Sweep an educational tool in their science classes. As we expand up the North Shore, we will clean some remote areas that most people don't get to. We expect to find some unusual items that may have been there for many years.

Tim Amonson

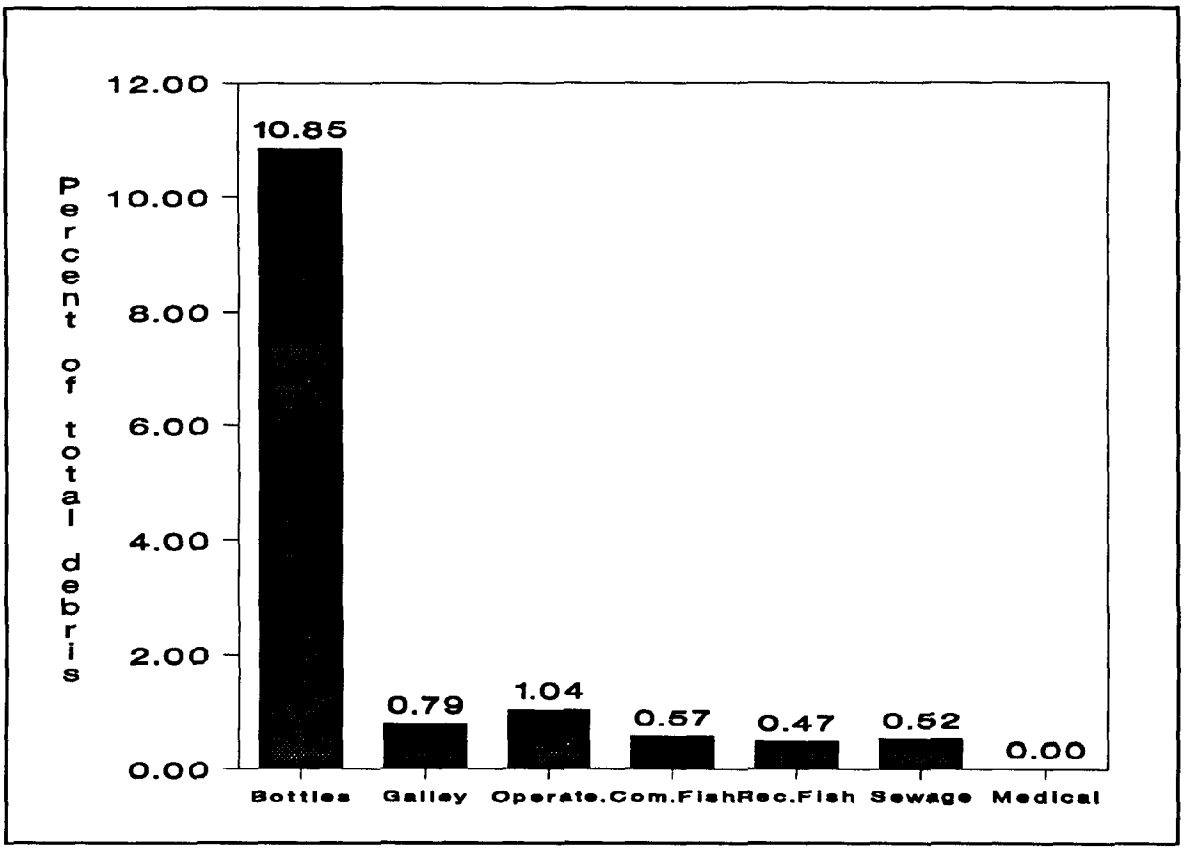
PERCENT COMPOSITION OF MINNESOTA'S BEACH DEBRIS:



MINNESOTA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	4,981	20.73
2. Foamed plastic pieces	1,866	7.76
3. Glass pieces	1,425	5.93
4. Plastic pieces	1,299	5.41
5. Plastic food bags/wrappers	1,087	4.52
6. Paper pieces	949	3.95
7. Metal beverage cans	940	3.91
8. Plastic caps/lids	702	2.92
9. Glass beverage bottles	608	2.53
10. Plastic straws	604	2.51
11. Plastic foamed cups	582	2.42
12. Metal pieces	537	2.23
Total	**15,580**	**64.83**

MAJOR TYPES AND SOURCES OF MINNESOTA'S BEACH DEBRIS:



MAJOR CHARACTERISTIC OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Duluth	62.14	Cigarette butts
Superior	51.18	Glass beverage bottles

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	*Other Reports*
Seagull tangled in fishing line	2 dead seagulls

MOST PECULIAR DEBRIS ITEMS REPORTED:

Duluth	fire extinguisher, heating duct, bed spring, dust mask, mattress, wheel, ladder, spark plug
Superior	pocket knife, fireworks, bike rim, wire, underwear

TRENDS IN MAJOR TYPES AND SOURCES OF MINNESOTA'S BEACH DEBRIS:

Data collection from Minnesota's cleanup has only been carried out for one year (1991) and therefore trends cannot be assessed.

FOR INFORMATION ON MINNESOTA'S 1992 COASTAL CLEANUP CONTACT:

Tim Amonson
The Bluestone Company
369 Canal Park Drive
Duluth, MN 55802
(218) 722-6768

CLEANUP DATE: September 19, 1992

With the Duluth skyline in the background, a cleanup team works on the city's longest individual stretch of beach, 7-Mile Point Park, during the Great Lakes Beach Sweep.

These two Mississippians join in to make Mississippi's cleanup a great success.

MISSISSIPPI

September 21, 1991
2,039 Volunteers
96.5 Miles Cleaned
45,890 Pounds of Debris Collected
354 Data Cards

Coordinated by: David Ruple
Mississippi Department of Wildlife, Fisheries, and Parks
2620 Beach Boulevard
Biloxi, MS 39531
(601) 385-5860

The Mississippi Marine Trash Task Force, with assistance of 2,039 volunteers, conducted the Mississippi Coastal Cleanup on September 21, 1991. The 1991 volunteer turnout was the largest in the states five-year history of organized coastal cleanups. Cleanup volunteers collected nearly 23 tons of trash from 96.5 miles of Mississippi beaches and shorelines. Areas cleaned included three barrier islands, as well as Mississippi's three coastal counties.

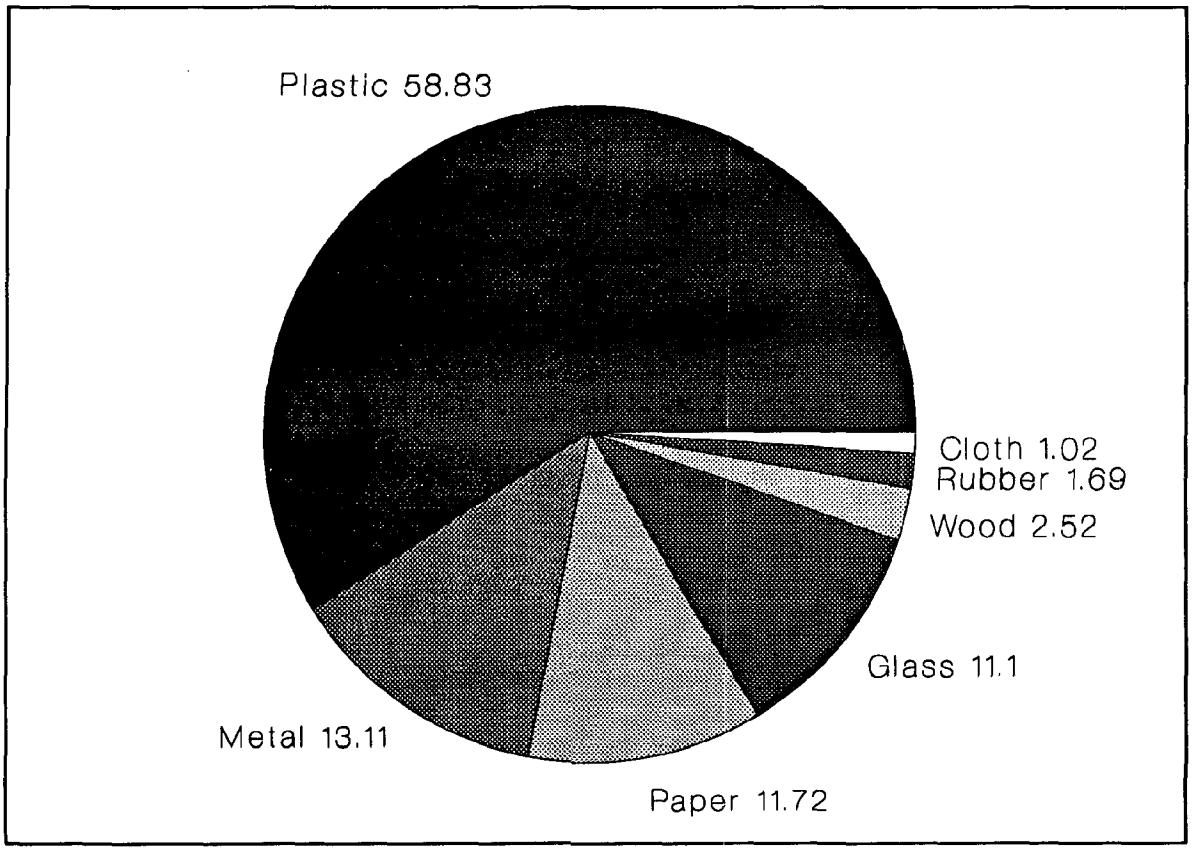
Cleanup organizers are encouraged by the increase in volunteer participation at mainland locations. While weather on September 21 was clear and sunny, it was also quite windy. The wind and subsequent heavy seas greatly reduced this number of volunteers participating in the barrier island cleanups. Only about one-third of the volunteers that had planned to clean the barrier islands were able to participate.

Increased promotion of this year's cleanup helped to focus local attention on the problems associated with marine debris. Billboards and radio and television spots helped to spread the word about the cleanup.

In addition to the dedication of volunteers and organizers, many businesses and corporations provided support for the cleanup in the form of cash donations, pencils, food, gloves, transportation, printing, artwork, mailing, fuel, drinks, trash bags, t-shirts, promotion and trash disposal. For this support, we are most appreciative.

David Ruple

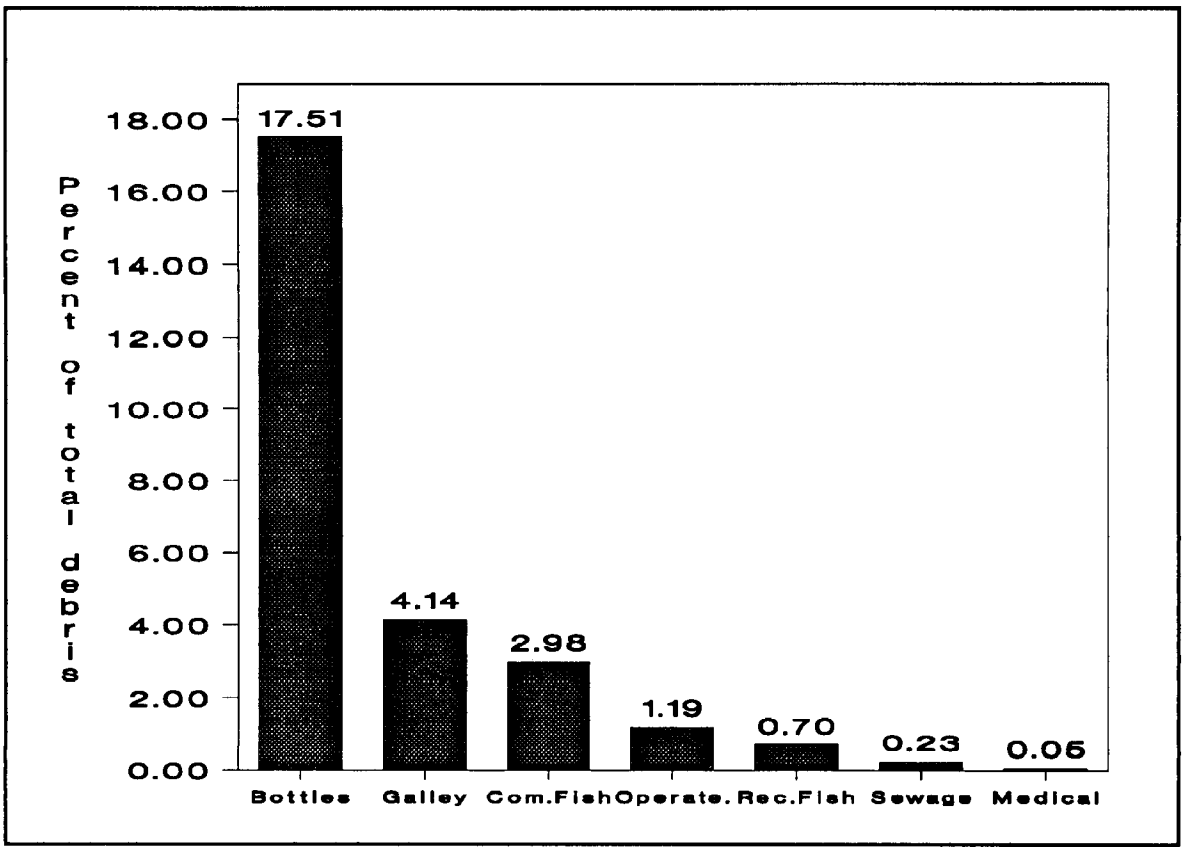
PERCENT COMPOSITION OF MISSISSIPPI'S BEACH DEBRIS:



MISSISSIPPI'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	5,775	10.95
2. Glass pieces	2,948	5.59
3. Plastic pieces	2,932	5.56
4. Paper pieces	2,931	5.56
5. Metal beverage cans	2,708	5.14
6. Foamed plastic foamed pieces	2,467	4.68
7. Plastic caps/lids	2,336	4.43
8. Plastic food bags/wrappers	2,089	3.96
9. Glass beverage bottles	1,893	3.59
10. Foamed plastic cups	1,808	3.43
11. Plastic beverage bottles	1,773	3.36
12. Metal bottle caps	1,414	2.68
Total	**31,074**	**8.93**

MAJOR TYPES AND SOURCES OF MISSISSIPPI'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Jackson County	56.99	Cigarette butts
Harrison County	56.47	Cigarette butts
Hancock County	59.05	Cigarette butts
Nearshore Islands	67.54	Metal beverage cans
Barrier Islands	62.21	Plastic caps/lids

TRACEABLE DEBRIS REPORTED:

Location	Types of Debris	Sources Indicated
Harrison County	receipt paper	Dave's Auto Service
	label	Garcia's & Sons Seafood, Texas

FOREIGN DEBRIS ITEMS REPORTED:

None reported

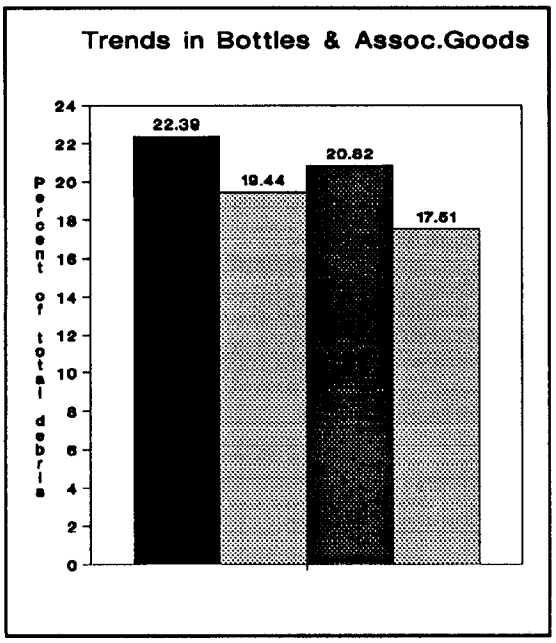
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

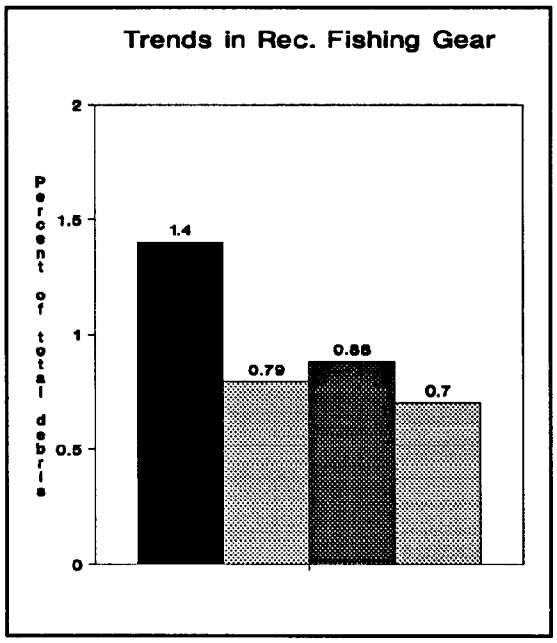
Debris Related	Other Reports
Dead catfish with plastic ring tied around the neck	13 dead fish
Dead hermit crabs found in plastic bag	10 dead crabs
	7 dead seagulls
	4 dead birds
	3 dead turtles
	2 dead catfish
	2 dead dogs
	1 dead juvenile dolphin
	1 dead raccoon
	1 dead sting ray
	1 squirrel

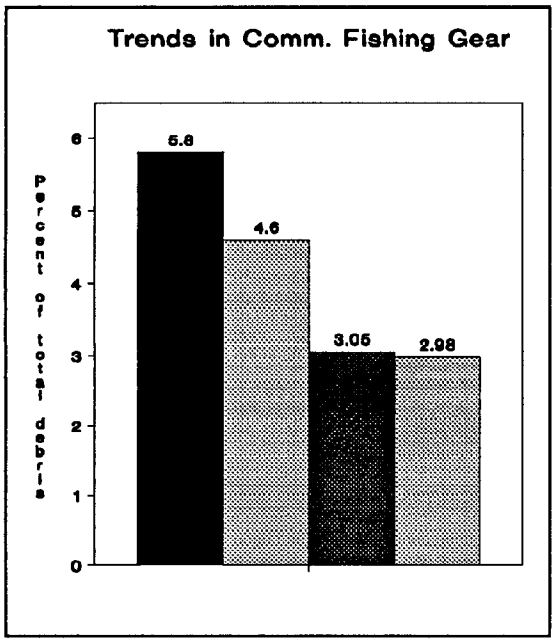
MOST PECULIAR DEBRIS ITEMS REPORTED:

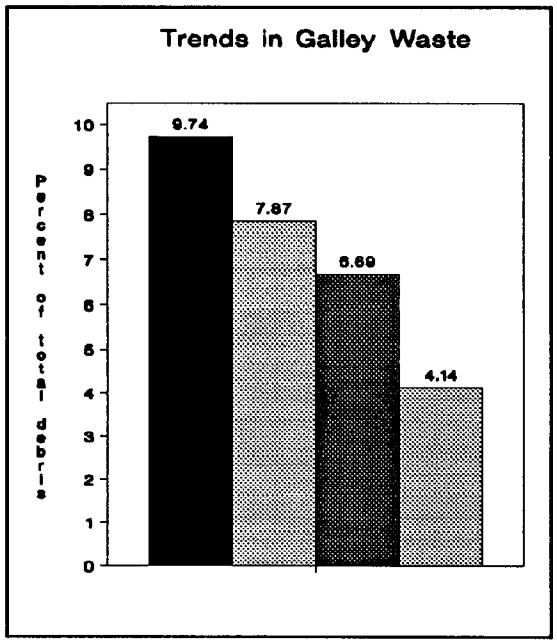
Jackson County	Oriental rug, men's underwear, pantyhose, plastic ball, firecracker, TV, house roofing, table, chain, book bag, car mirror, broom, douche bottle, trophy top, bag of dog food, floormat
Harrison County	big broom, toothpaste top, used fireworks, door knob, Barbie coat hanger, $1, shotgun shell
Hancock County	refrigerator, car seat, lawn chair
Nearshore Islands	water heater, suitcase, life jacket
Barrier Islands	flashlight, refrigerator, Frisbee

TRENDS IN MAJOR TYPES AND SOURCES OF MISSISSIPPI'S BEACH DEBRIS:

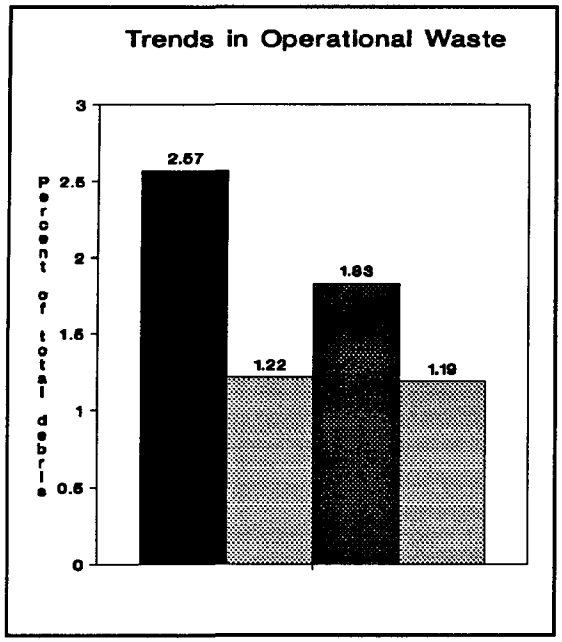


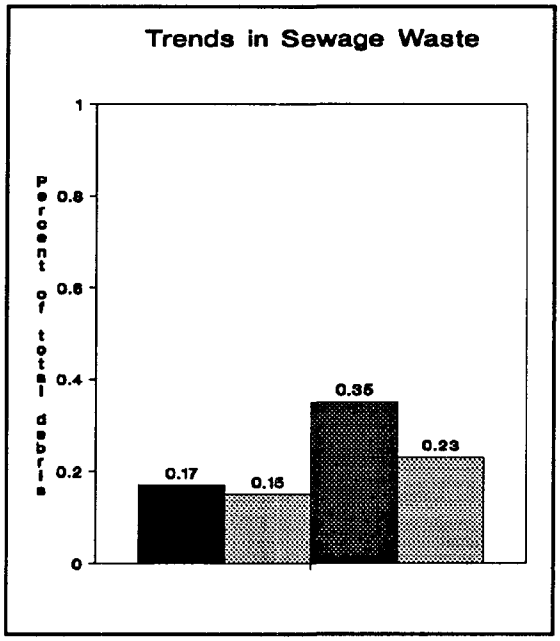


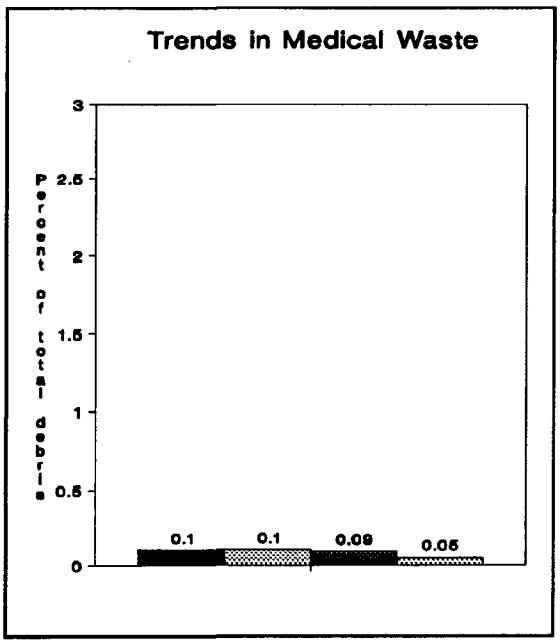




TRENDS IN MAJOR TYPES AND SOURCES OF MISSISSIPPI'S BEACH DEBRIS:(cont.)







FOR INFORMATION ON MISSISSIPPI'S 1992 COASTAL CLEANUP CONTACT:

David Ruple
Mississippi Department of Wildlife, Fisheries, & Parks
2620 Beach Blvd.
Biloxi, MS 39531
(601) 385-5860

CLEANUP DATE: September 19, 1992

Teamwork pays off for these two Mississippians.

NEBRASKA

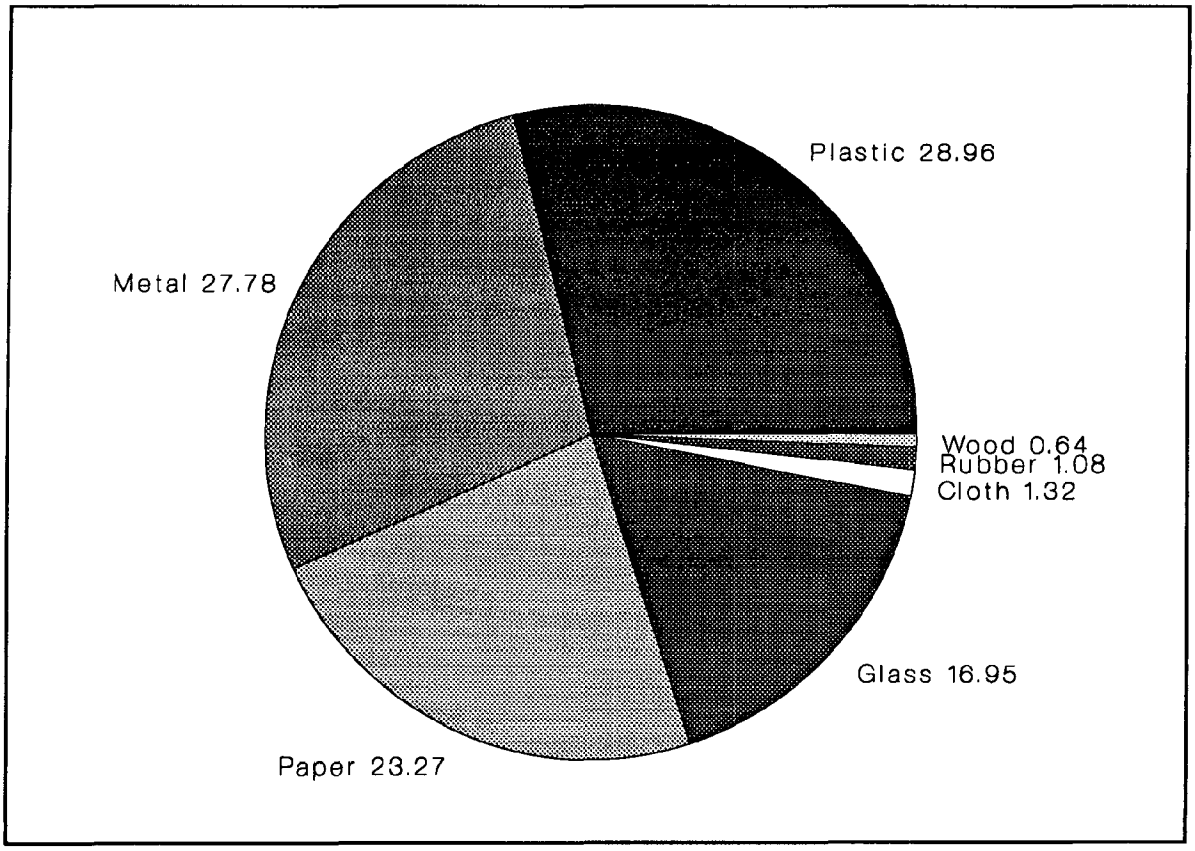
September 15, 1991
45 Volunteers
3 Miles Cleaned
300 Pounds of Debris Collected
3 Data Cards

Coordinated by: Nebraska Women of Today

One of the most striking differences between Nebraska's data and the coastal states information is the percentage of plastic. Nebraska seems to have a much lower percent of plastic than most coastal areas. The Dirty Dozen list seems to support this, with only one of the top five items being composed of plastic. These types of differences help to determine problems specific to either coastal or inland areas or perhaps problems that are common to both. As inland cleanups continue to grow, so will our understanding of the differences and similarities.

Lisa K. Younger
Coordinator
International Coastal Cleanup

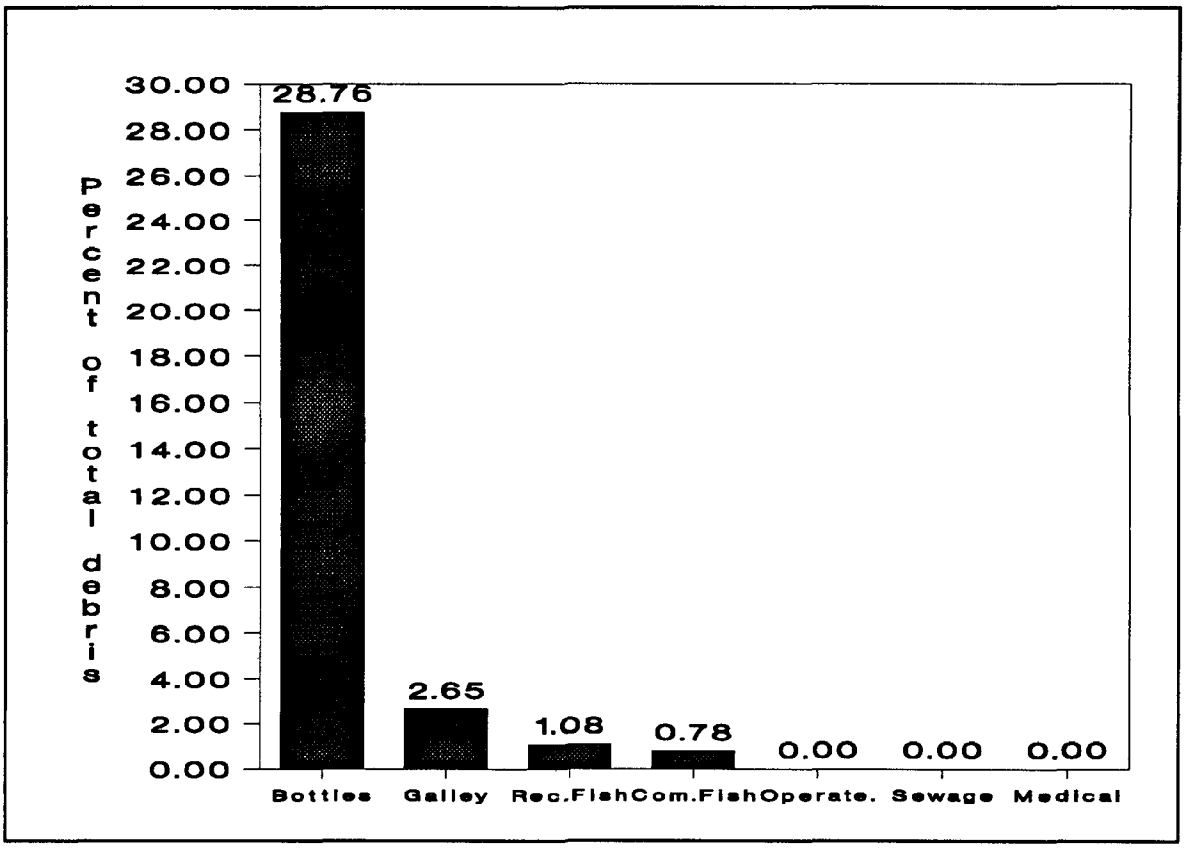
PERCENT COMPOSITION OF NEBRASKA'S WATERWAY DEBRIS:



NEBRASKA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Paper pieces	388	19.01
2. Glass pieces	255	12.49
3. Metal beverage cans	231	11.32
4. Plastic pieces	201	9.85
5. Metal bottle caps	121	5.93
6. Metal pull tabs	105	5.14
7. Glass beverage bottles	89	4.36
8. Plastic cups/utensils	83	4.07
9. Plastic caps/lids	55	2.69
10. Metal pieces	47	2.30
Plastic trash bags	47	2.30
11. Cardboard	33	1.62
12. Foamed plastic cups	31	1.52
Total	**1,686**	**82.61**

MOST TYPES AND SOURCES OF NEBRASKA'S WATERWAY DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Lake Maloney	35.99	Glass pieces
Bass Way	29.94	Paper pieces
Enders Reservation	24.76	Paper pieces

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF NEBRASKA'S WATERWAY DEBRIS:

Data collection from Nebraska's cleanups has only been carried out for one year (1991) and therefore trends cannot be assessed.

Just like these New Hampshire volunteers marine debris comes in all shapes and sizes.

NEW HAMPSHIRE

UNIVERSITY OF NEW HAMPSHIRE
COOPERATIVE EXTENSION
Helping You Put Knowledge And Research To Work

SEA GRANT

October 5, 1991
526 Volunteers
19 Miles Cleaned
10,000 Pounds of Debris Collected
173 Data Cards

Coordinated by: Joanne Barret
and Ray Hetchka
University of New Hampshire Sea Grant
Kingman Farm
Durham, NH 03824
(603) 749-1565

This year's Coastal Cleanup in New Hamspshire showed us that local organizations can carry the weight of this program and provide the concerted effort that we need to clean every mile of our coast. With the strength of these groups and the added support of individual citizens, the beaches were cleaned of over five tons of debris and several hundred pounds of recyclable plastic, aluminum and glass.

For a second year, the Swiftwater Girl Scout Council sponsored a day-long environmental program which focused their 319 scouts on the cleanup of the northern end of Odiorne Point State Park. Other coastal areas and the shoreline of the Great Bay and along Seabrook Harbor were cleaned thanks to the efforts of the NH Coastal Program, Portsmouth Naval Shipyard, Sierra Club, UNH Sea Grant, UNH Marine Mammal Stranding Team, UNH Alpha Phi Omega, Great Bay Watch, Great Bay Estuarine Research Reserve, Plymouth Regional High School, Rivier College, Exeter Jr. Women's Club, League of Women Voters, NH Yankee, Granite State Boardsailing Association, Rockingham County 4-H Explorers, and citizens of Jenness Beach.

On the whole, we did as well as last year, despite the grey windy weather. The data shows some understandable trends. The cleanup sites along the Great Bay and all rocky shorelines reflect more debris from boats. At all of our sandy beach sites, cigarette butts were the top debris item. The rocky areas trap boat debris, but the majority of New Hampshire's beaches would be much cleaner if beach goers picked up after themselves and citizens realized that cigarette butts are plastic and not biodegradable. "BEACH does not spell ashtray," to quote one of our young volunteers.

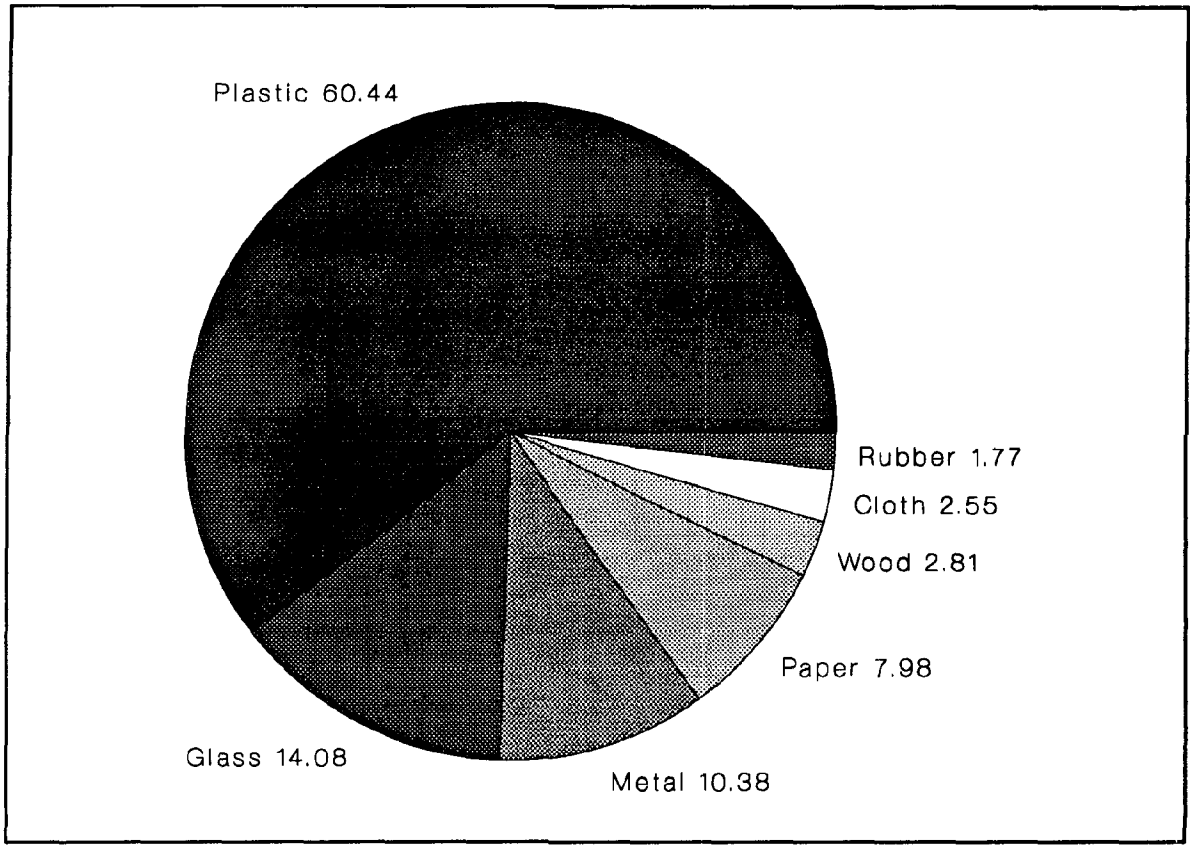
Browning Ferris Industries, once again, donated dumpsters to all but a few smaller sites, which makes our work much easier. We also received support from Pepsi Cola Bottling of Portsmouth, Hampton Shop and Save, Annabelle's Ice Cream Inc., and the Big Dipper. They provided us with soda, ice cream, and cones to refresh our volunteers.

For the first year, New Hampshire had a cleanup logo contest for junior high and high school students. The winning logo, shown above, was designed by Kathleen Callahan of Deerfield Community School, Deerfield, New Hampshire.

Thank you all, it was a tremendous effort!

Joanne Barret

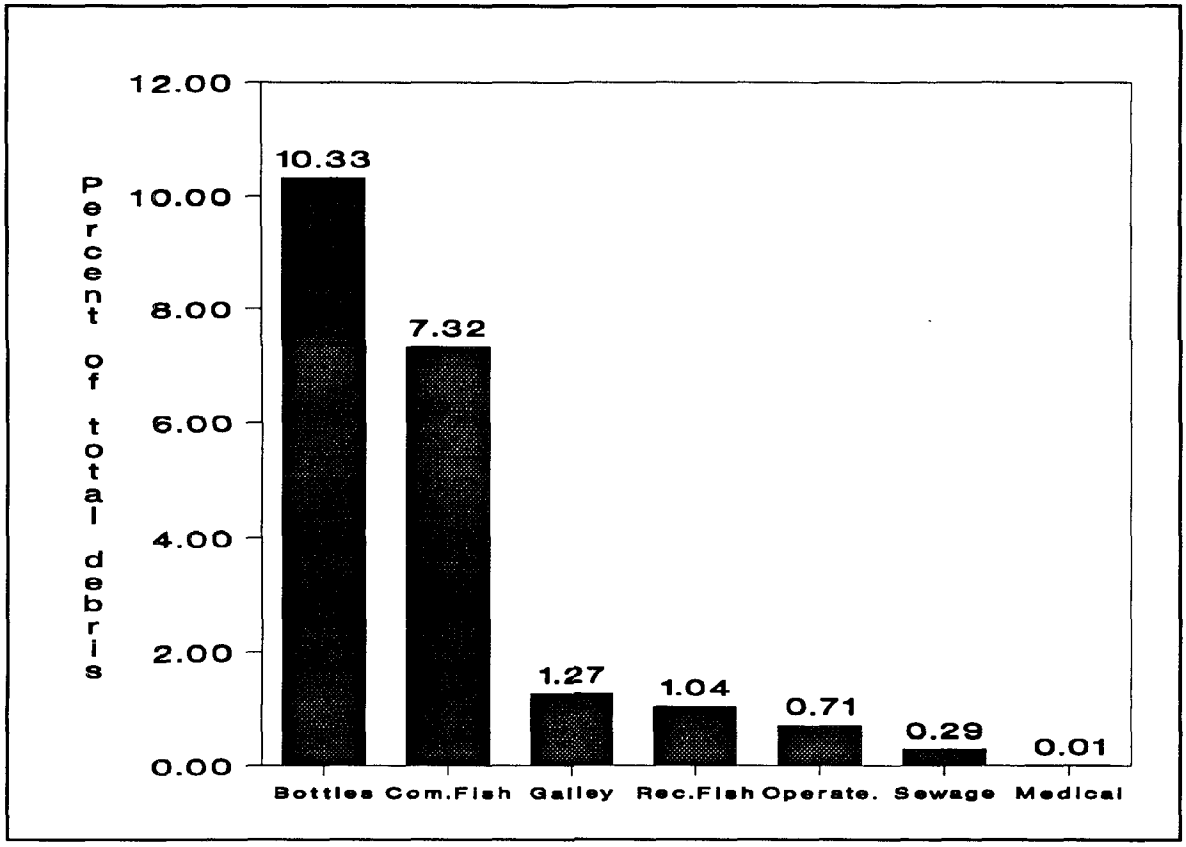
PERCENT COMPOSITION OF NEW HAMPSHIRE'S BEACH DEBRIS:



NEW HAMPSHIRE'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	6,181	18.37
2. Glass pieces	3,538	10.51
3. Foamed plastic pieces	2,388	7.10
4. Plastic pieces	2,054	6.10
5. Plastic rope	1,837	5.46
6. Metal beverage cans	1,659	4.93
7. Paper pieces	1,515	4.50
8. Plastic food bags/wrappers	1,075	3.19
9. Clothing	857	2.55
10. Plastic caps/lids	741	2.20
11. Plastic straws	707	2.10
12. Glass beverage bottles	698	2.07
Total	23,250	69.09

MAJOR TYPES AND SOURCES OF NEW HAMPSHIRE'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Great Bay	85.44	Foamed plastic packaging
Newcastle Beach	63.51	Cigarette butts
Pierce Island	33.40	Glass pieces
Odiorne Point S.P.	56.66	Plastic rope
Wallis Sands	69.21	Cigarette butts
Rye Beach	75.66	Cigarette butts
Jenness Beach	74.18	Cigarette butts
Northampton Beach	73.99	Cigarette butts
North Beach	68.83	Cigarette butts
Hampton Beach	59.67	Paper pieces
Seabrook Harbor	67.82	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Hampton Beach	menu	Chowderhead's Restaurant

FOREIGN DEBRIS ITEMS REPORTED:

None reported

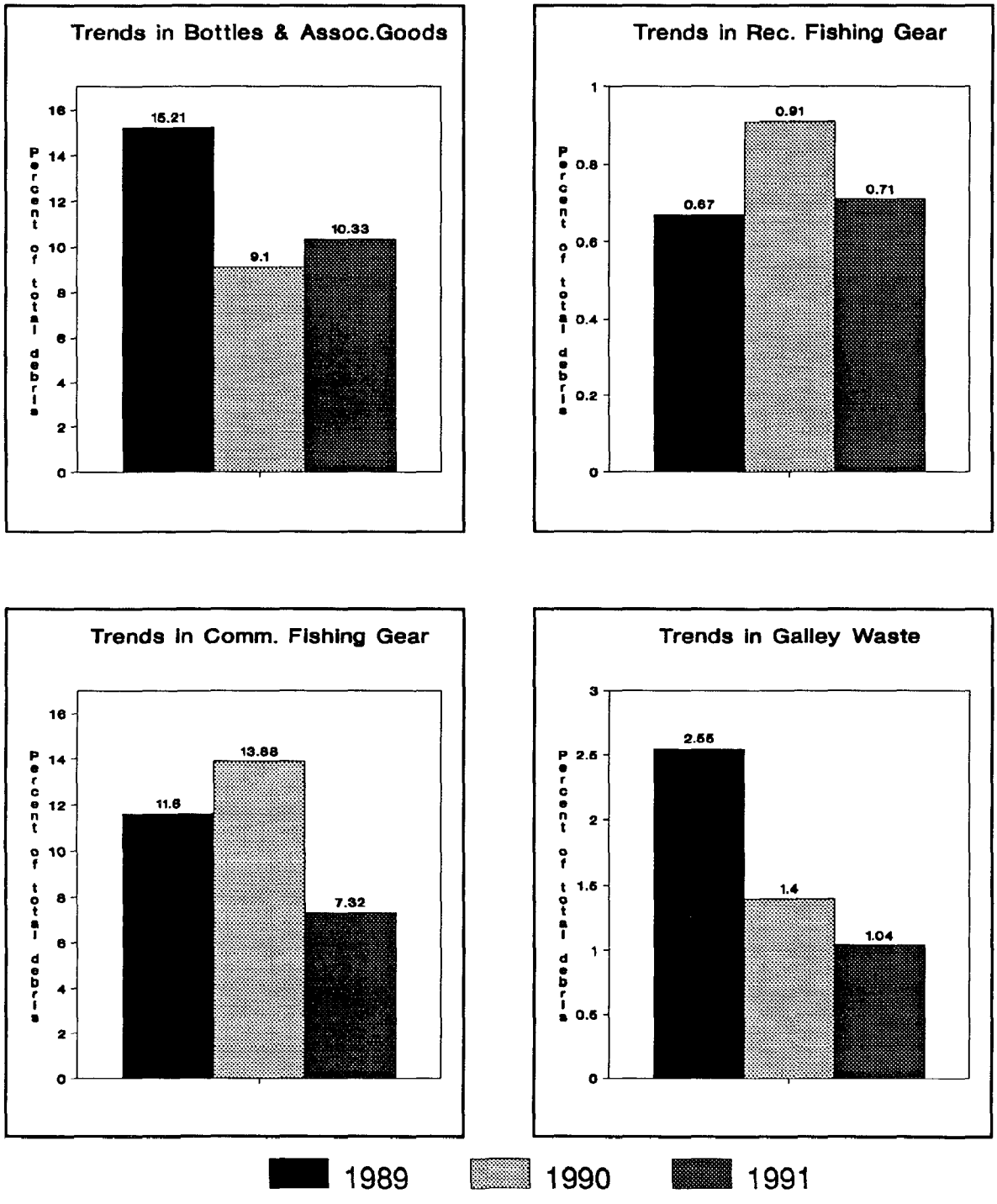
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Seagull wrapped in fishing line	14 dead seagulls
Mice found in plastic bottle	1 dead mouse
	1 dead bird

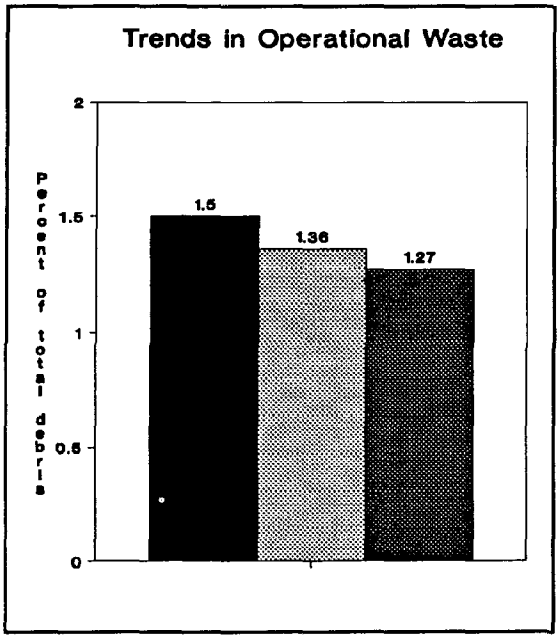
MOST PECULIAR DEBRIS ITEMS REPORTED:

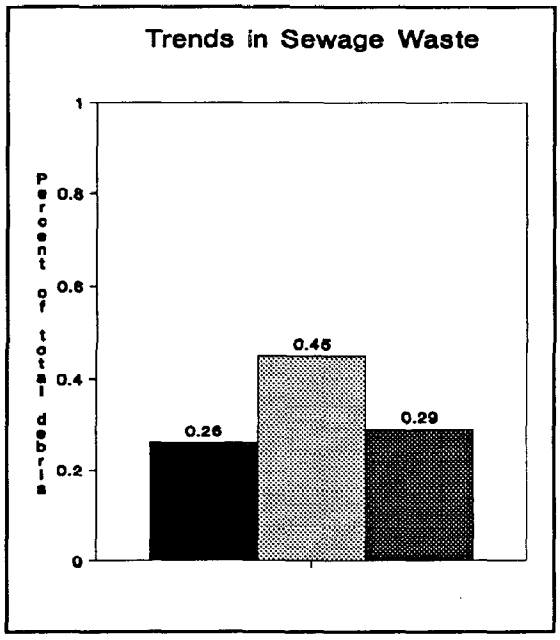
Newcastle Beach	golfball, panty liners, carpet, chair
Pierce Island	swimming pool, underwear, flip flop
Odiorne Point S.P.	rug, brush, eye glasses, gloves, underwear, ice pack, fireworks
Wallis Sands	coathanger
Rye Beach	hair curler, golf tee
Jenness Beach	shirt, refrigerator door
North Beach	firecrackers, refrigerator magnet
Hampton Beach	cushions, foot stool, catsup bottle, orange peel, telephone bill from Massachusetts, bra size 32
Seabrook Harbor	underwear, antifreeze bottle

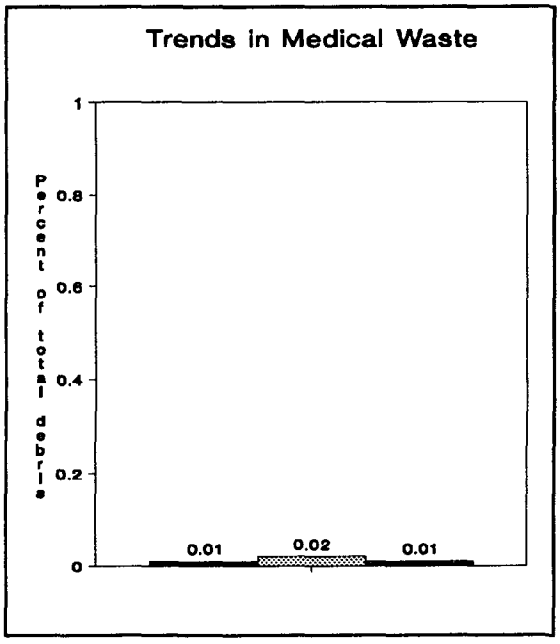
TRENDS IN MAJOR TYPES AND SOURCES OF NEW HAMPSHIRE'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF NEW HAMPSHIRE'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON NEW HAMPSHIRE'S 1992 COASTAL CLEANUP CONTACT:

Joanne Barret
Office of State Planning Coastal Program
152 Court Street
Portsmouth, NH 03801
(603) 436-6342

CLEANUP DATE: September 19, 1992

1989 1990 1991

A smile amongst the debris on New Hampshire's coastline.

Alliance For a Living Ocean members are careful to mark down every piece of debris they find, in Beach Haven, New Jersey.

NEW JERSEY

September 21, 1991
873 Volunteers
26 Miles Cleaned
14,010 Pounds of Debris Collected
450 Data Cards

Coordinated by: Susie Feiring/Tim Merkel
Clean Ocean Action
Box 505, Bldg. 18, Hartshorne Drive
Highlands, NJ 07732
(908) 872-0111

Ginnie and Earl Gottshall
Alliance for a Living Ocean
P.O. Box 95
Ship Bottom, NJ 08008
(609) 492-0222

Clean Ocean Action organized two statewide beach cleanups in 1991, working in conjunction with a vast network of citizens, educators, and students from all concerns of the state. Organized cleanups were held at more than 50 locations on April 28 for Earth Day 1991, and the September cleanup included four of them. Over 600 concerned citizens, students, and Governor Florio cleaned more than ten miles of beaches including Sandy Hook, Belmar, Margate, and Cape May City on September 21. Volunteers picked up over 30 cubic yards (between six and seven tons) of trash.

Most of the debris collected came from non-point or "pointless" sources. COA has educational materials, lesson plans, and videos which are available to school and scout groups which target pointless pollution sources (including how to organize beach cleanups).

Both cleanups were made possible by a grant from the V.S.E.P.A. sponsored by the Asbury Park Press and the EPA. Findings from the cleanups were reported on Universal 9, CBS News, NBC News, New Jersey Network, Storer and TKR cable stations, Monmouth Cablevision, *The Asbury Park Press, Bergen Record, Newark Star Ledger, The Atlantic City Press, The New York Times, New Jersey Monthly Magazine,* and many local newspapers and radio stations.

Susie Feiring and Tim Merkel

The entire New Jersey coastline is an almost unbroken chain of beach-front resort towns constituting a vital tourist industry. From June through September these individual municipalities religiously clean their beaches, starting before dawn seven days a week. Most use major machinery which removes every trace of debris. This explains New Jersey's lower-than-might-be-expected figures, and vacationers in 1991 have extolled the cleanliness of the beaches and ocean and have reported increased dolphin and whale sightings.

Therefore, the 345 persons (three times that of last year!) who turned in data cards to the Alliance for a Living Ocean (ALO) deserve special thanks for their enthusiastic response. ALO is a non-profit, citizen's volunteer group on Long Beach Island and is not in a position to give gifts or souvenirs to volunteers, so their work is done solely for the love of the environment, and we feel our volunters deserve halos!

Individuals working on Long Beach Island were joined by the mainland's Southern Regional High Ecology Club, the Interact Club, the Lenape Association, Holy Trinity Lutheran Church, Girl Scout

Troops 235, 294, and 373, Boy Scout Troops 77 and 539, and, all the way from Pennsylvania, LaSalle High School's Environmental Club.

Participants at the rally following the cleanup were happy to hear from Congressman Jim Saxton and Bob Schoelkopf, Director of the Marine Mammal Stranding Center in Brigantine, two popular supporters of the cleanups.

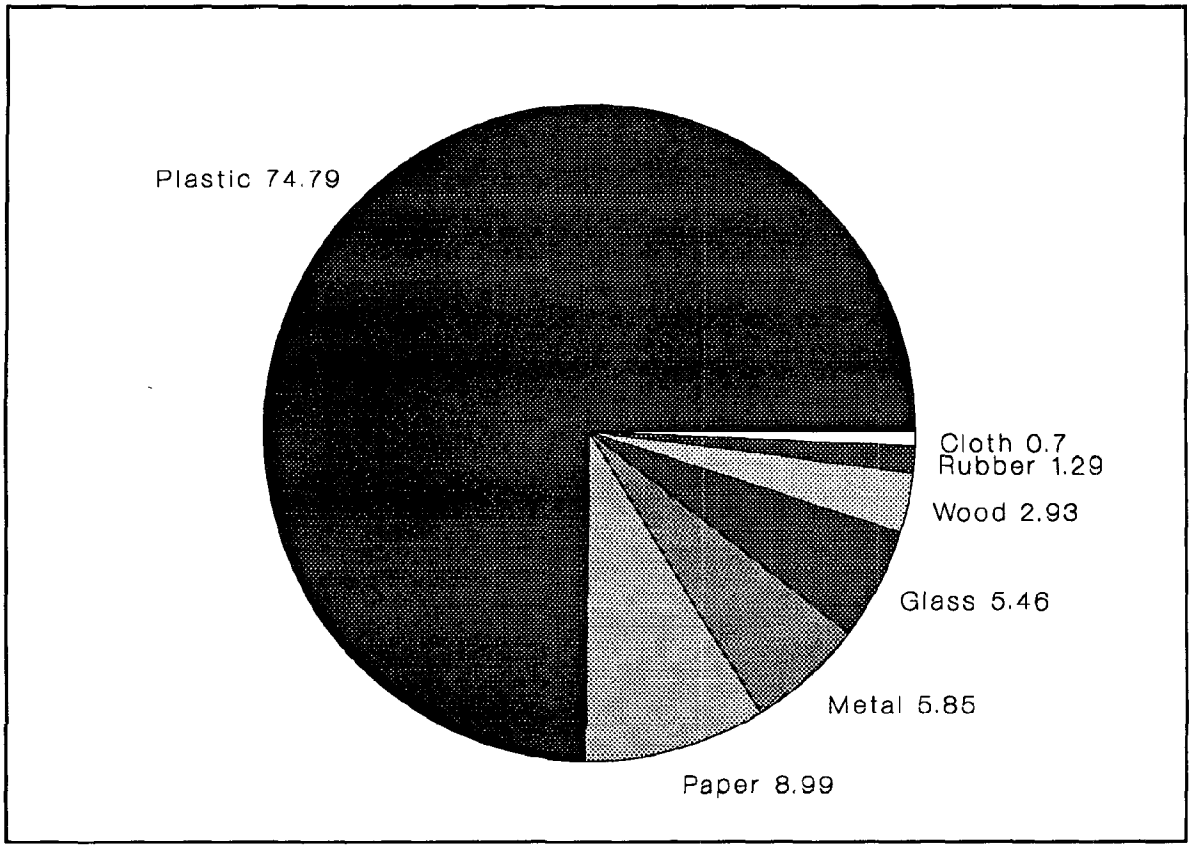
ALO's cleanup participants cleaning beaches other than Long Beach Island included Chatham Methodist's Youth who cleaned on Lavallette; Wildwood Catholic High's Environmental Club in North Cape May; Tom's River North High's club, S.T.O.P., cleaning at Ortley; plus individuals in North Cape May, Avalon, Strathmere, Ocean City, Margate, and Brigantine.

Great support and coverage of the cleanup was given by the *Sandpaper*, the *Beachcomber*, the *Beach Haven Times*, the *Atlantic City Press*, the *Asbury Park Press*, the *Philadelphia Inquirer*, TKR Cable, Southeast Jersey's seven radio stations plus Philadelphia's WHYY Radio, and by *New Jersey Outdoors*, a beautiful magazine produced by the NJ Department of Environmental Protection and Energy.

Ginnie and Earl Gottshall

New Jersey Governor James Florio speaking to over 600 student cleanup volunteers.

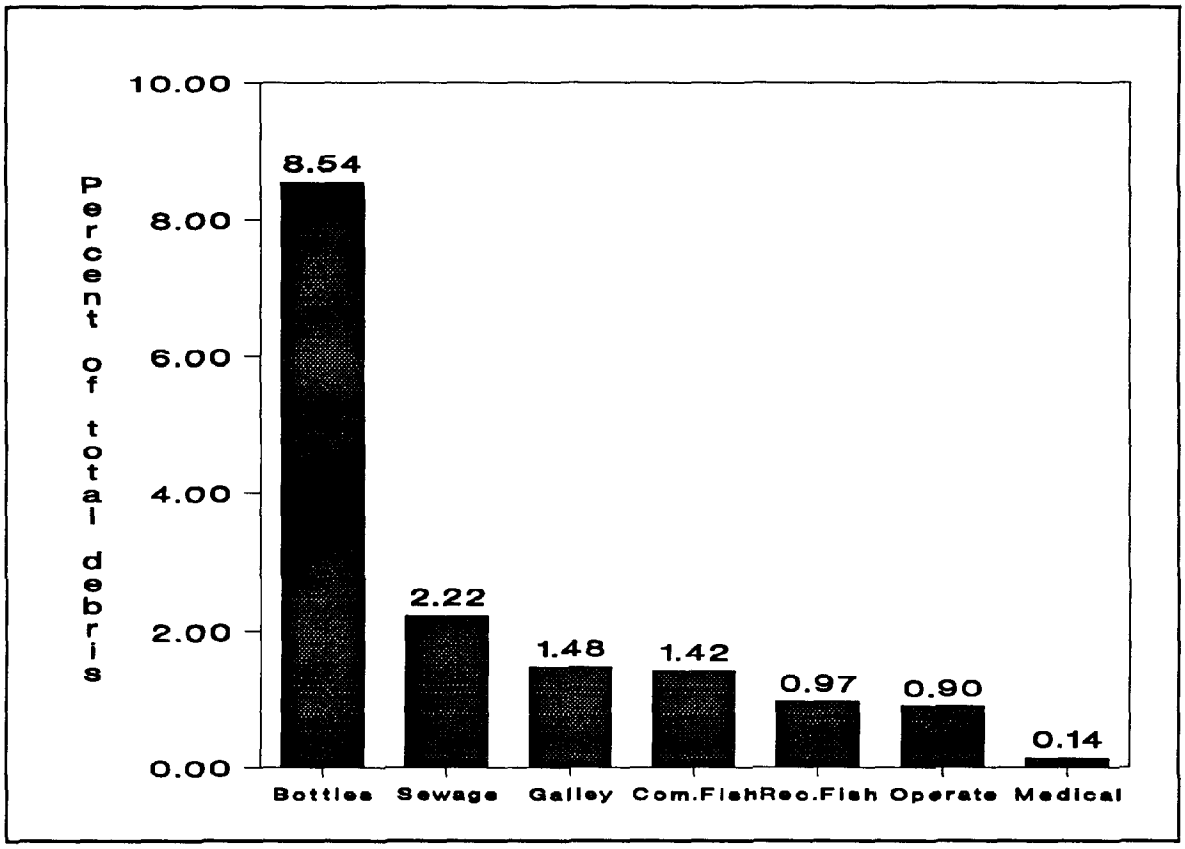
PERCENTAGE COMPOSITION OF NEW JERSEY'S BEACH DEBRIS:



NEW JERSEY'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	19,726	17.34
2. Plastic straws	10,705	9.41
3. Plastic pieces	9,985	8.78
4. Plastic food bags/wrappers	7,052	6.20
5. Plastic lids/caps	6,424	5.65
6. Paper pieces	5,604	4.93
7. Foamed plastic pieces	5,354	4.71
8. Plastic utensils/cups	3,562	3.13
9. Glass pieces	3,297	2.90
10. Metal beverage cans	3,211	2.82
11. Glass beverage bottles	2,456	2.16
12. Plastic tampon applicators	2,383	2.09
Total	**79,759**	**70.12**

MAJOR TYPES AND SOURCES OF NEW JERSEY'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Sandy Hook	80.30	Plastic straws
Pt. Pleasant Canal	76.37	Cigarette butts
Lavallette	65.79	Cigarette butts
Ortley Beach	73.03	Plastic straws
Long Beach Island	71.71	Cigarette butts
Brigantine	51.64	Plastic food bags/wrappers
Margate	32.14	Glass pieces
Ocean City	68.37	Cigarette butts
Strathmere	55.48	Cigarette butts, paper pieces
Avalon	71.93	Cigarette butts
North Cape May	54.60	Paper pieces

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Sandy Hook	shipping crate	Dellwood Shipping Food Co.
Long Beach Island	balloon	Dr. David C. Dickson III Yalich Clinic of Timanlium (301) 561-1940
	balloon	Bill Justin
	balloon	Friendly Ice Cream
	balloon	Commercial Bank
	balloon	Pizza Hut
	balloon	McDonalds
	balloon	Chicago Club
	red balloon	Pizza Hut
	2 balloons	Blockbuster Video
	balloon	DCA Dunleith United Family Fun Festival
	balloon	Johns Hopkins Childrens Center
	balloon	Purple Moose Saloon, Ocean City, MD
	balloon	The Record
	balloon	Sona's Reha Program
	balloon	Wendy's
	balloon	Olden 1265 B'way at 33rd St. NY, NY 10001
	balloon	US Healthcare
	balloon	Fiesta Zone Canteen of the 90's
	balloon	Ground Round
	balloon	Tyson Ford
	balloon	The Fun Ships
	balloon	Home Federal Savings Bank
Brigantine	balloon	Fantasy Island Amusement Park
Avalon	cardboard carton	Caspack Corp.

FOREIGN DEBRIS ITEMS REPORTED:

None Reported

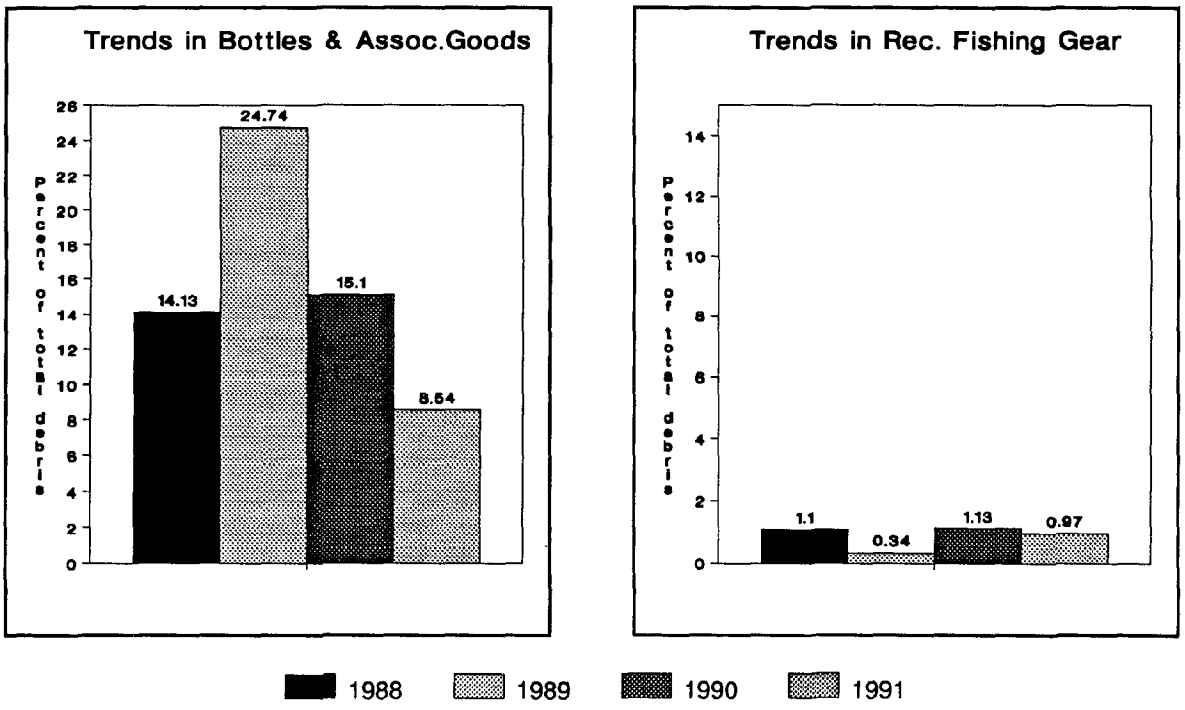
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Large bird wing entangled in fishing line.	5 dead seagulls 2 dead birds 1 dead heron 1 dead duck

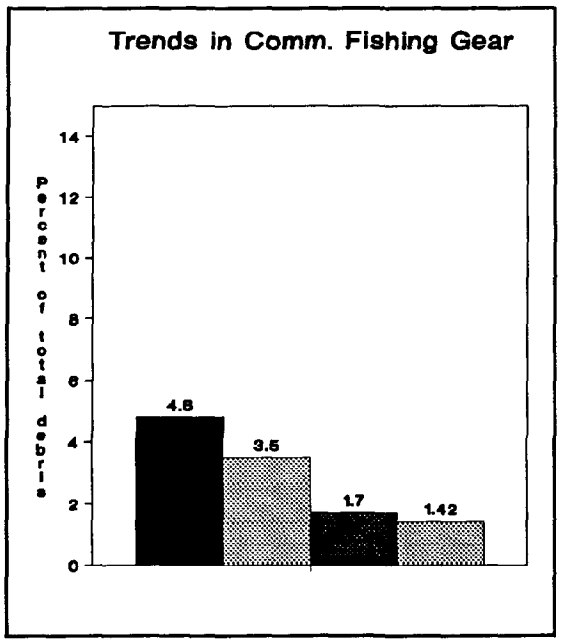
MOST PECULIAR DEBRIS ITEMS REPORTED:

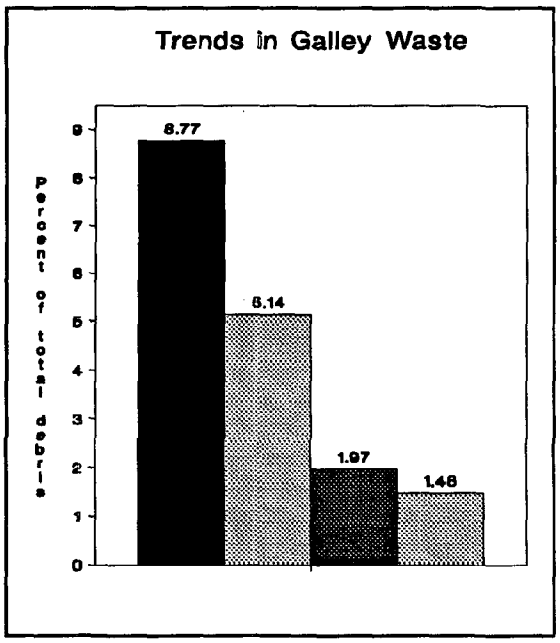
Sandy Hook	rusty WD-40 can, bed springs, t-shirt, shotgun shell, broom brush, table top, toothbrush, blue jeans, hair clip, umbrella, lamp, battery
Ortley Beach	foamed mattress
Long Beach Island	chair pad, umbrella, eyeglasses, leather and rubber shoe, airline ticket, hammer, dog collar, underwear, fireworks
Ocean City	pennies
Avalon	a large pair of men's briefs
North Cape May	doghouse, swimming pool, shotgun casing

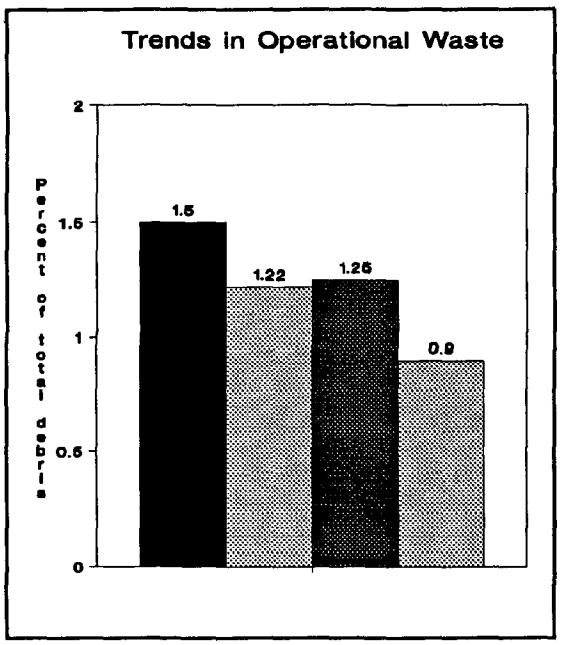
TRENDS IN MAJOR TYPES AND SOURCES OF NEW JERSEY'S BEACH DEBRIS:

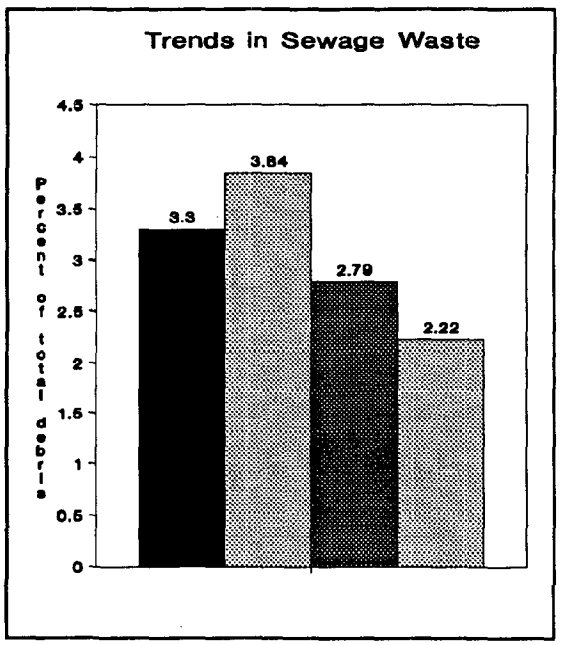


TRENDS IN MAJOR TYPES AND SOURCES OF NEW JERSEY'S BEACH DEBRIS: (cont.)

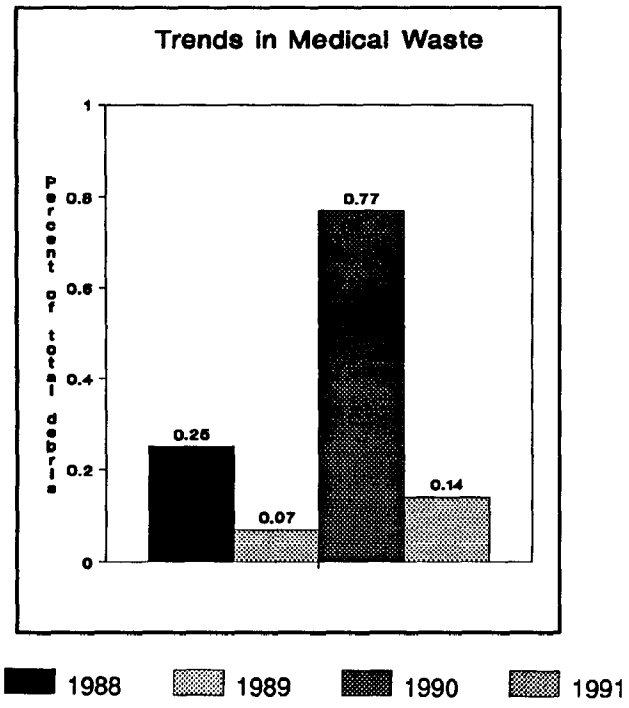








TRENDS IN MAJOR TYPES AND SOURCES OF NEW JERSEY'S BEACH DEBRIS: (cont.)



FOR INFORMATION ON NEW JERSEY'S 1992 COASTAL CLEANUP CONTACT:

Dianne Zeigler
Clean Ocean Action
Box 505, Bldg. 18, Hartshorne Drive
Highlands, NJ 07732
(908) 872-0111

OR

Ginnie and Earl Gottshall
Alliance for a Living Ocean
P.O. Box 95
Ship Bottom, NJ 08008
(609) 492-0222

CLEANUP DATE: September 19, 1992

This is just a minute portion of the marine debris collected during New York's cleanup.

NEW YORK

September 22, 1991
2,700 Volunteers
142 Miles Cleaned
40,000 Pounds of Debris Collected
617 Data Cards

Coordinated by: Roberta Weisbrod/Marion Roet
NY State Dept. of Environmental Conservation
Hunters Point Plaza
Long Island City, NY 11101
(718) 482-4992

Don Riepe
American Littoral Society
28 West 9th Road
Broad Channel, NY 11693
(718) 634-6467

Beach cleanups in New York State in 1991 were again a great success. Captains and volunteers demonstrated great enthusiasm for the project. Many environmental and civic groups participated, as did an increased number of youth and student groups. This reflects a greater awareness of environmental concerns on the part of the general population and especially our younger citizens.

Over 2,700 people of all ages worked together to clear 142 miles of shoreline on the Atlantic, Long Island Sound, Hudson River, and Great Lakes.

Many inland communities participated in cleaning the banks of streams, rivers and lakes, locations which have been subject to the illegal dumping of household and construction materials.

Overall, we still find crack vials, tires, cigarette butts, and plastic straws on our shorelines. A pistol and part of a Oujii board were found at Jamaica Bay.

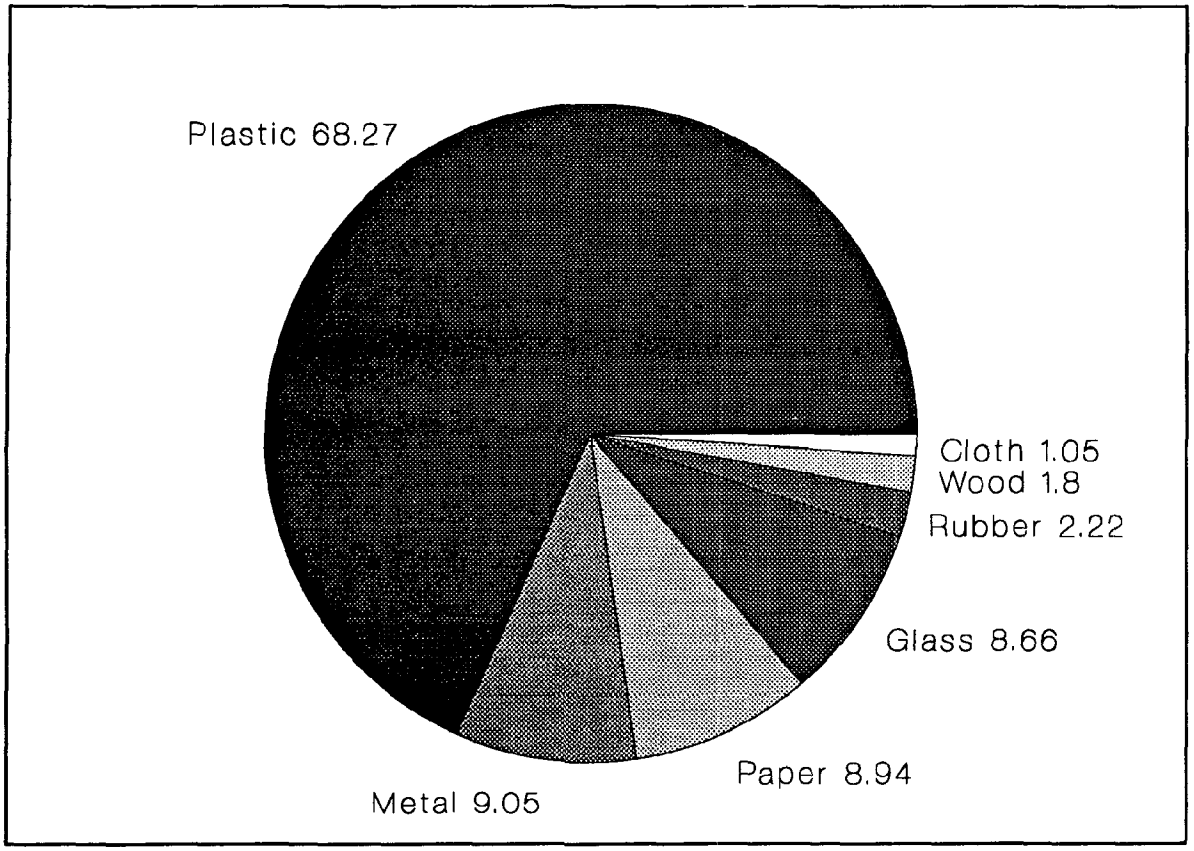
Recycling of the cleared debris now has become the norm in New York State. Many of the communities in which the cleanups were made have a recycling program already in place. At all locations groups deposited the materials at acceptable recycling stations.

State Senator Owen Johnson led 150 people in a cleanup at Robert Moses State Park. Congresswoman Nita Lowey visited several Westchester County sites. These elected officials have been consistently responsive to the Beach Cleanup for the past few years.

Finally, we are pleased about the participation of our international partners and looking forward to working next year with Israel, Greece, Cyprus, and New Zealand as well as other nations.

Roberta Weisbrod

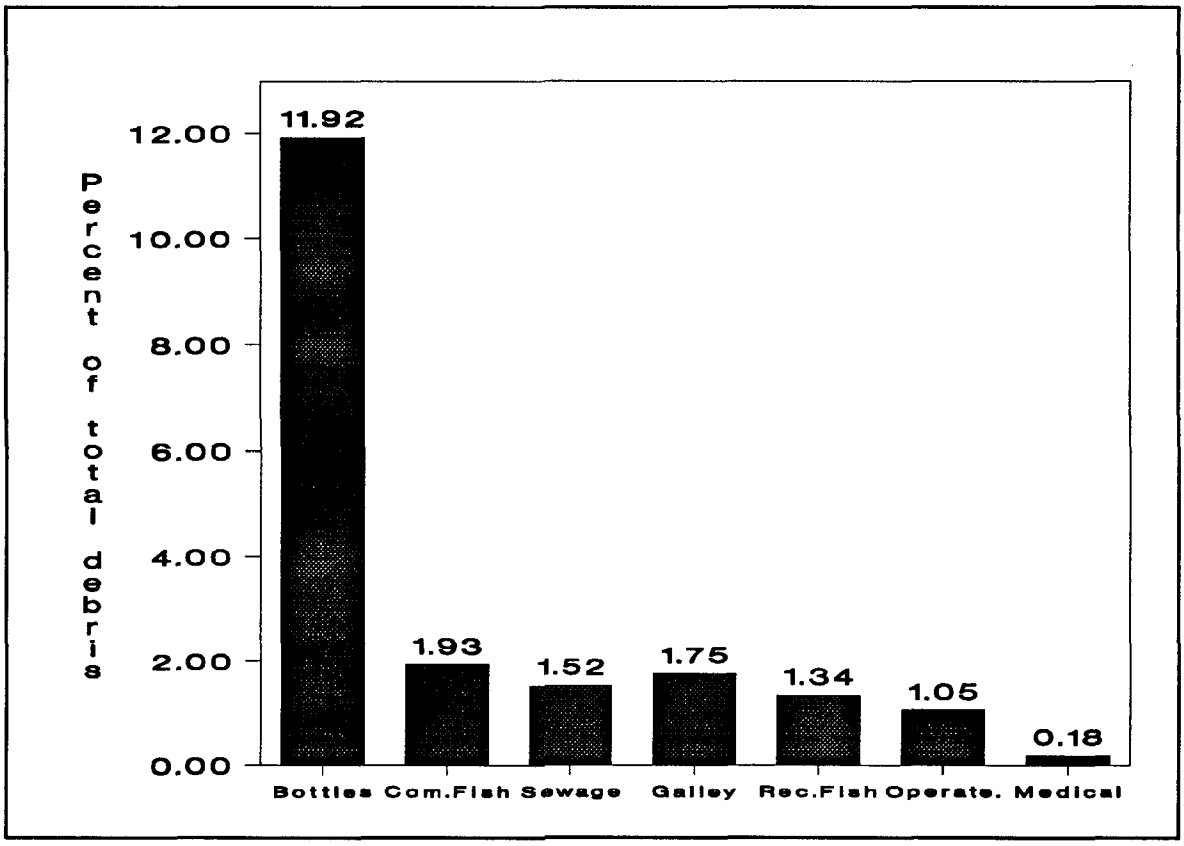
PERCENT COMPOSITION OF NEW YORK'S BEACH DEBRIS:



NEW YORK'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	20,333	11.01
2. Plastic straws	15,894	8.61
3. Plastic pieces	12,258	6.64
4. Glass pieces	10,623	5.75
5. Plastic food bags/wrappers	9,711	5.26
6. Foamed plastic pieces	9,337	5.06
7. Plastic caps/lids	8,418	4.56
8. Paper pieces	7,185	3.89
9. Plastic cups/utensils	6,369	3.45
10. Plastic beverage bottles	5,967	3.23
11. Metal beverage cans	4,750	2.57
12. Foamed plastic cups	4,738	2.57
Total	**115,583**	**62.60**

MAJOR TYPES AND SOURCES OF NEW YORK'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Rockland	51.91	Glass beverage bottles
Westchester	72.34	Cigarette butts
New York City	67.37	Plastic straws
Nassau	68.55	Cigarette butts
Suffolk	69.44	Plastic food bags/wrappers
Lake Ontario	73.93	Plastic pieces
Lake Erie	65.50	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Types of Debris	Sources Indicated
Westchester	plastic "caution" strip/wire	The Irwin Co., Wilmington, Ohio

TRACEABLE DEBRIS REPORTED: (cont.)

Location	Types of Debris	Sources Indicated
New York City	I.D. band	Brooklyn Medical Center
	TLC hospital bath bottle	Ploy Chem Corp., New Haven, CT
Lake Erie	hard plastic cap	Ce De Candy Co., Union, NJ 02383
	balloon	Olive Branch Restaurant
	balloon	Paxton Hospital
	fishing lure box	Fabrique Inverin Co., Galway, Ireland
	sour cream	Sunnyside Dairy Co., Ltd. Canada
	large mug w/cloth insulator	Cruzin Bar & Sports Grill, West Palm Beach
	milk container	Auit Foods Limited, Toronto, Canada

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
New York City	France	wheel guard	Geismar, France
	Mexico	coveralls clothing	Kappler, Mexico
	Taiwan	plastic spoon	
Lake Erie	Canada	sour cream	Sunnyside Dairy Co., Ltd
		milk container	Auit Foods Limited, Toronto, Canada
		cigarette pack	Du Maurier, Canada
	Ireland	fishing lure box	Fabrique Inverin Co., Galway, Ireland

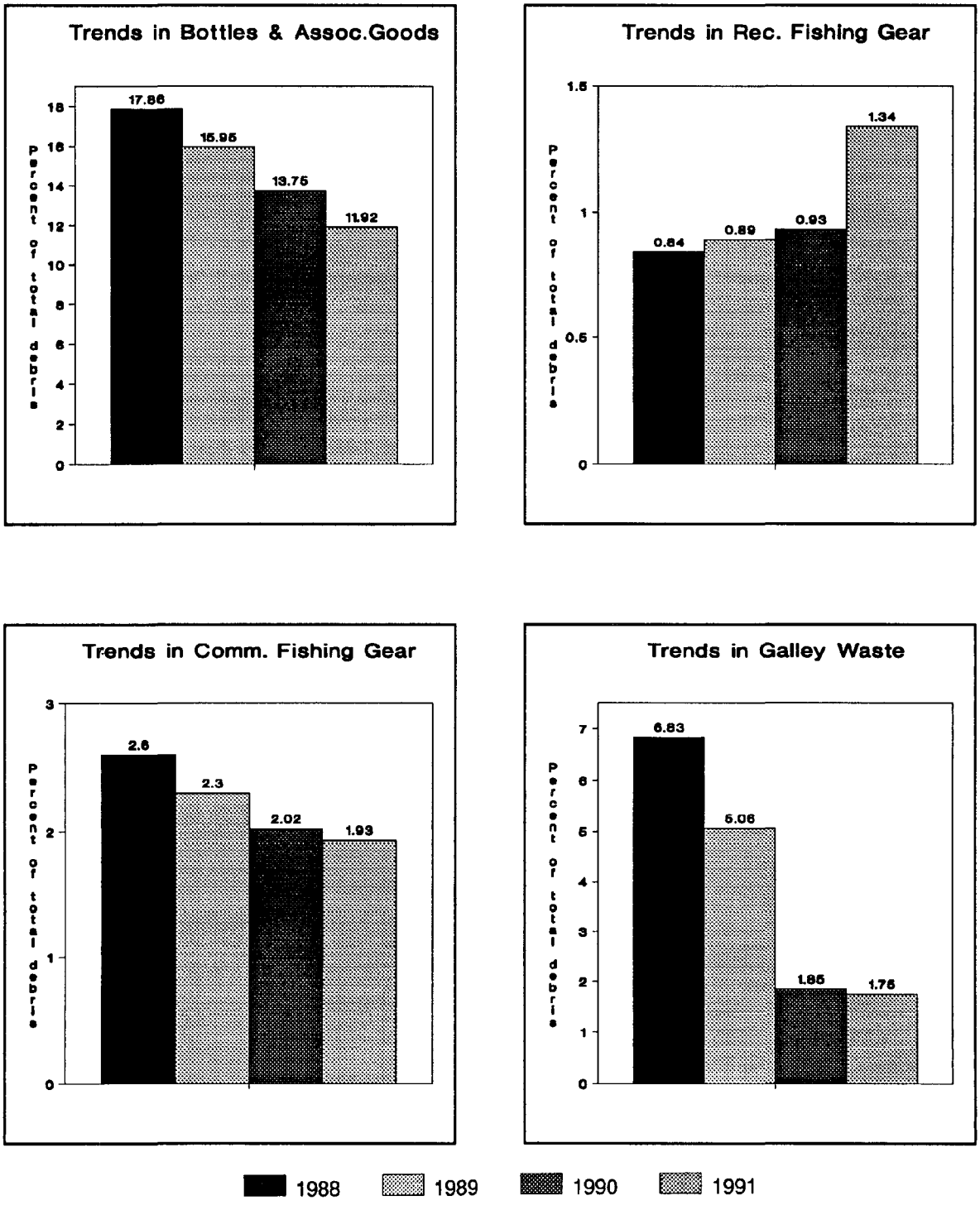
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Two seagulls entangled in fishing line	135 dead fish
Two crabs entangled in fishing line	21 dead seagulls
	8 dead birds
	2 dead ducks
	2 squirrels
	1 dead deer
	1 dead pigeon
	1 dead rat

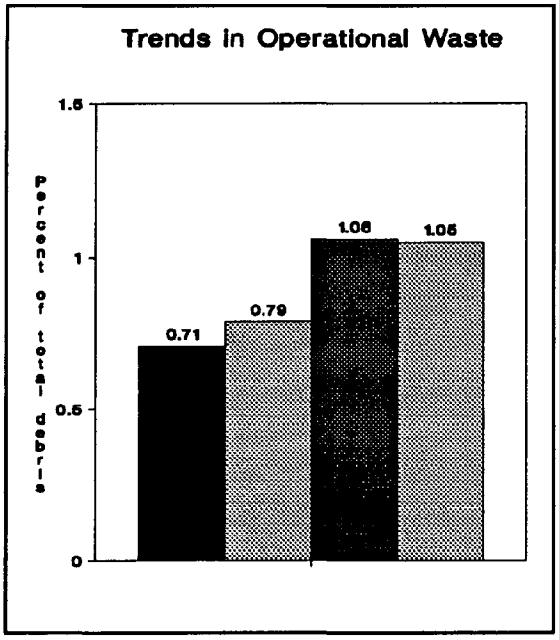
MOST PECULIAR DEBRIS ITEMS REPORTED:

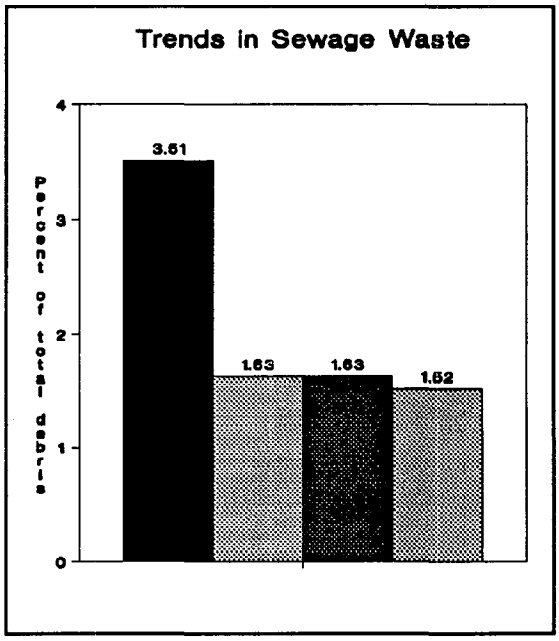
Rockland	parking meter
Westchester	shotgun shells, boomerang, mailbox, Barbie doll, toilet paper holder, underwear
New York City	pistol, child's sneaker, rusted key and key chain, douche bottle, dentures, credit card
Nassau	purse, blanket, shotgun shells, antenna, doll baby
Suffolk	car battery, toothpaste, shopping cart, broom
Lake Ontario	Big Wheel, eyeglasses
Lake Erie	hat, toothbrush, tires, snowmobile, knife, auto transmission, sunglasses, business cards, 38-C bra, shoulder pad, sink

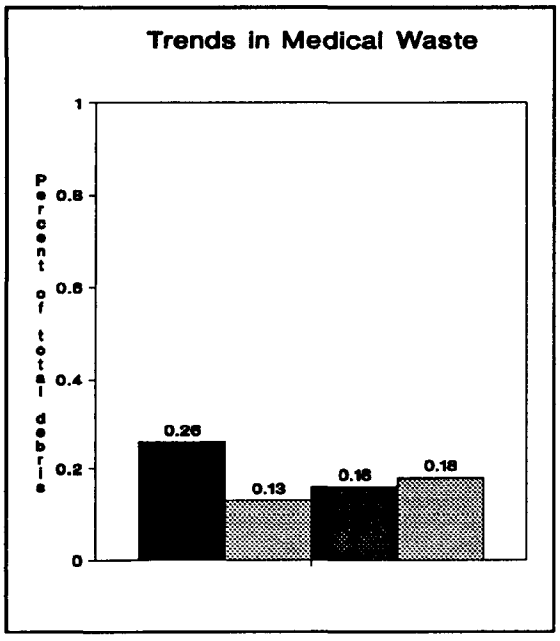
TRENDS IN MAJOR TYPES AND SOURCES OF NEW YORK'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF NEW YORK'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON NEW YORK'S 1992 COASTAL CLEANUP CONTACT:

Marion Roet
Garlen Road
Kotanah, NY 10536
(914) 232-3394

OR

Don Riepe
American Littoral Society
28 West 9th Road
Broad Channel, NY 11693
(718) 634-6467

CLEANUP DATE: September 19-20, 1992

Students from North Carolina celebrate after picking up lots of debris on Lake Raleigh.

NORTH CAROLINA

September 21, 1991
12,500 Volunteers
400 Miles Cleaned
420,000 Pounds of Debris Collected
1771 Data Cards

Coordinated by: Lundie Spence/Kathy Hart
University of North Carolina
Sea Grant College Program
Box 8605
Raleigh, NC 27695
(919) 515-2454

Blue skies and warm temperatures helped make North Carolina's 1991 waterway cleanup our biggest and best to date. More than 12,000 volunteers swept the state, from the southern mountains to the coastal plains to the beaches. For the first time ever, we worked with a title sponsor, First Citizens Bank. With the bank's assistance, we were able to expand the Big Sweep to 75 of North Carolina's 100 counties.

First Citizens Bank's 330 bank branches provided a terrific distribution system for brochures. A large number of the bank's employees turned out to participate in the cleanup efforts.

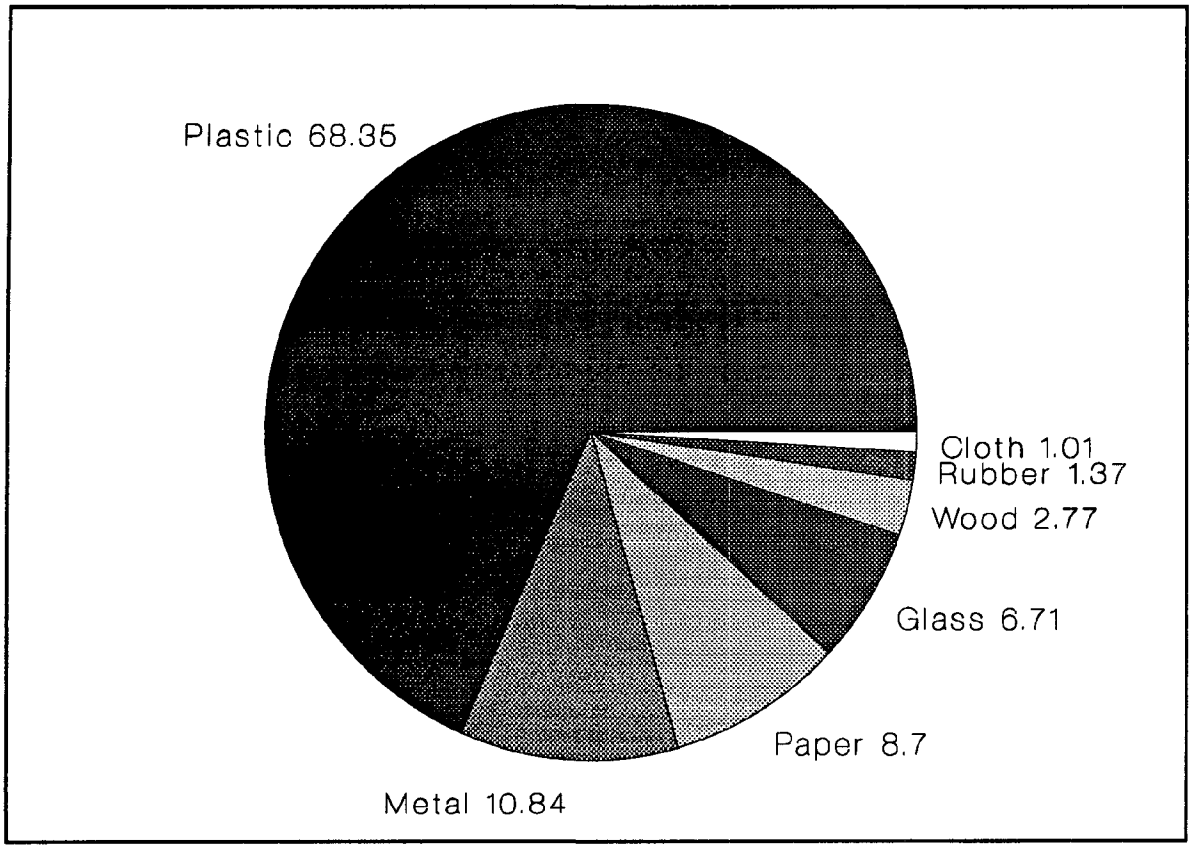
At nearly 300 sites across the state, volunteers picked up 212 tons of litter and witnessed the results and hazards of our throwaway society. Along the beaches and riverbanks, they found cigarette butts by the thousands. They also bagged scores of plastic bags and bottles, miles of monofilament line, and mountains of tires. Volunteers found waterways clogged with refrigerators, stoves, sofas, TV's, shopping carts, bed frames and box springs, car batteries, and toilets.

Our education efforts expanded to a two-pronged approch. *Ripples*, an activity guide to litter in the aquatic environment, was distributed to 12,000 educators and shared with six other states. Our new program targeted the adult recreational fisherman and boater. Five thousand copies of a brochure showing fishing line entanglement were distributed to 1,500 bait shops and piers. R. J. Reynolds Tobacco company provided support with their "Don't Leave Your Butt on the Beach" campaign. A consortium of North Carolina power companies agreed to help Big Sweep produce a series of posters to help educate the adult recreational fishermen and boaters. Big Sweep snagged NASCAR driver Richard Petty as our poster spokesperson, enabling us to target a new audience for '92.

The First Citizens Bank Big Sweep '91 was one of the most widely publicized events in the state. Thanks to extensive coverage from our six television sponsors (including PSAs, "cross talk", and features), hundreds of thousands of people got the Big Sweep message. Other publicity efforts included posters, T-shirts, and 27 news releases. Also, UNC Public TV is preparing a 15-minute documentary on Big Sweep and the problems of litter. Thus, our program and goals will reach thousands of viewers in their homes.

Lundie Spence

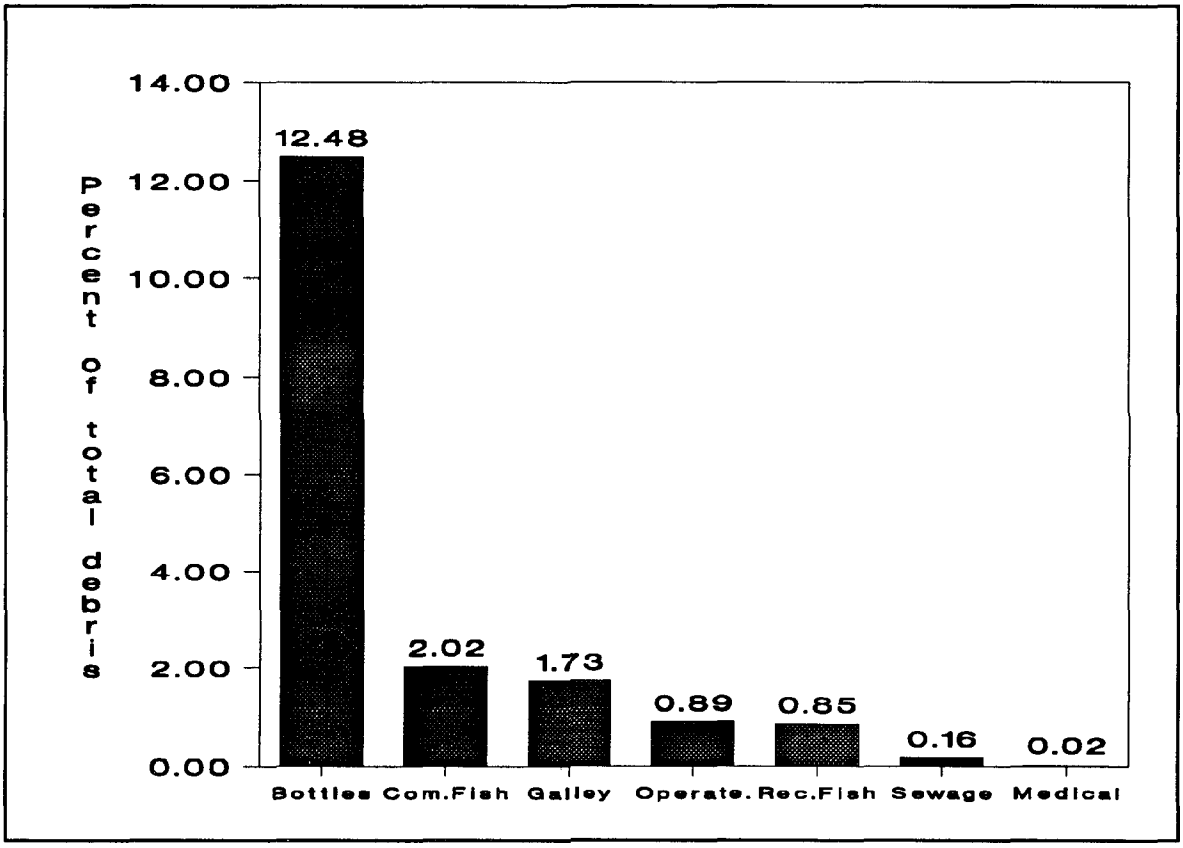
PERCENT COMPOSITION OF COASTAL NORTH CAROLINA'S BEACH DEBRIS:



COASTAL NORTH CAROLINA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	82,114	27.26
2. Metal beverage cans	17,118	5.68
3. Plastic pieces	15,524	5.15
4. Plastic food bags/wrappers	14,597	4.82
5. Foamed plastic pieces	14,136	4.69
6. Paper pieces	13,557	4.50
7. Plastic beverage bottles	12,720	4.22
8. Glass beverage bottles	11,413	3.79
9. Plastic cups/lids	9,956	3.30
10. Foamed plastic cups	7,899	2.62
11. Plastic straws	7,686	2.55
12. Lumber pieces	6,035	2.00
Total	**212,755**	**70.62**

MAJOR TYPES AND SOURCES OF COASTAL NORTH CAROLINA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Dare/Currituck	58.73	Cigarette butts
Hyde	52.10	Cigarette butts
Beaufort	63.56	Cigarette butts
Pamlico	48.00	Plastic beverage bottles
Craven	43.30	Cigarette butts
Carteret	75.57	Cigarette butts
New Hanover	70.18	Cigarette butts
Brunswick	73.10	Cigarette butts

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Carteret	Ireland	wrapper	Kilkan Candy Co. Ireland

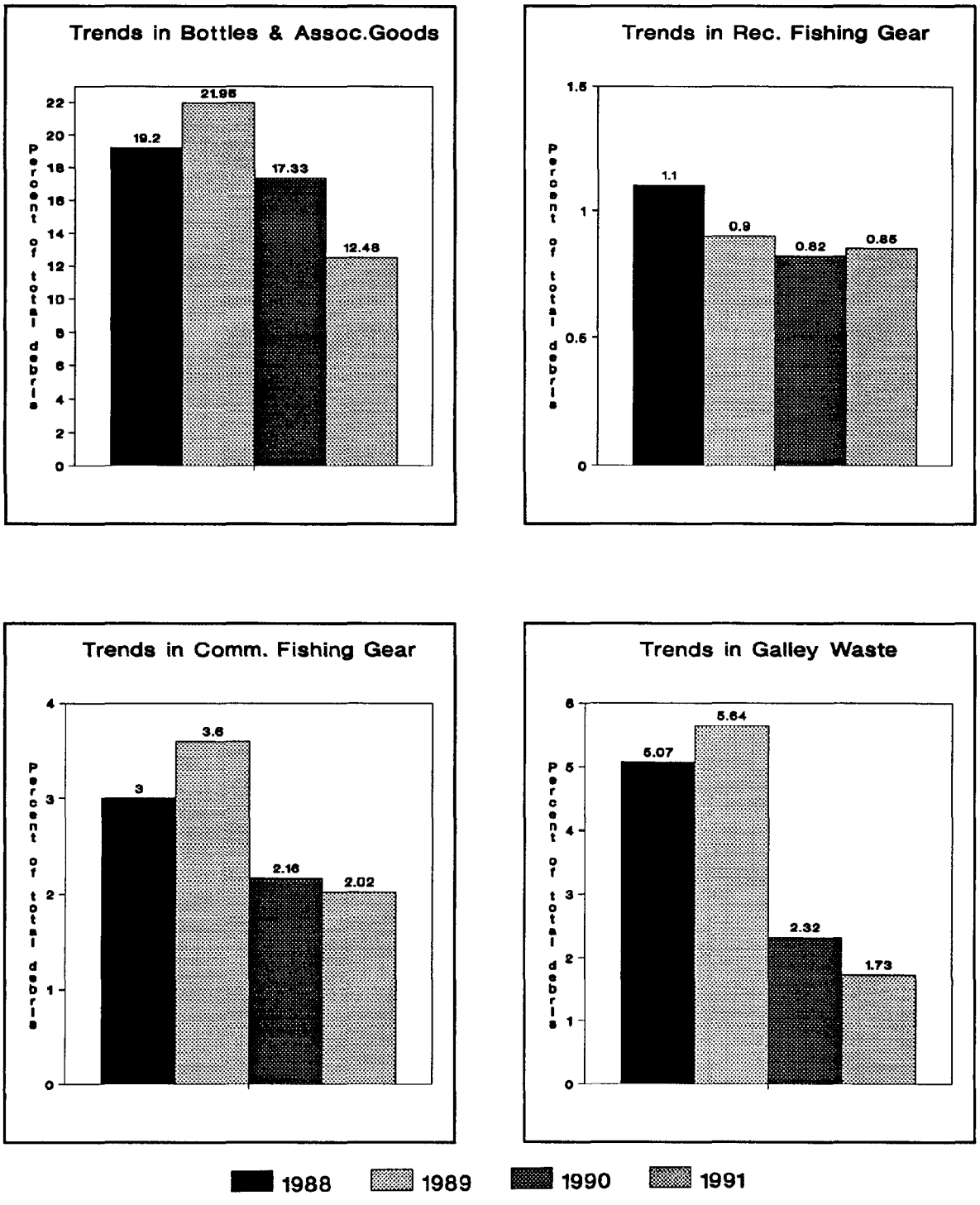
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Heron with fishing line entangled in its tail	12 dead fish
Seagull entangled in fishing line	8 dead birds
Dead sea bird entangled in monofilament	5 dead sea gulls
Dead pigeon entangled in fishing line	3 dead sharks
Crab entangled in fishing line and net	3 loggerhead sea turtles
	3 dead snakes
	1 dead deer
	1 dead turtle

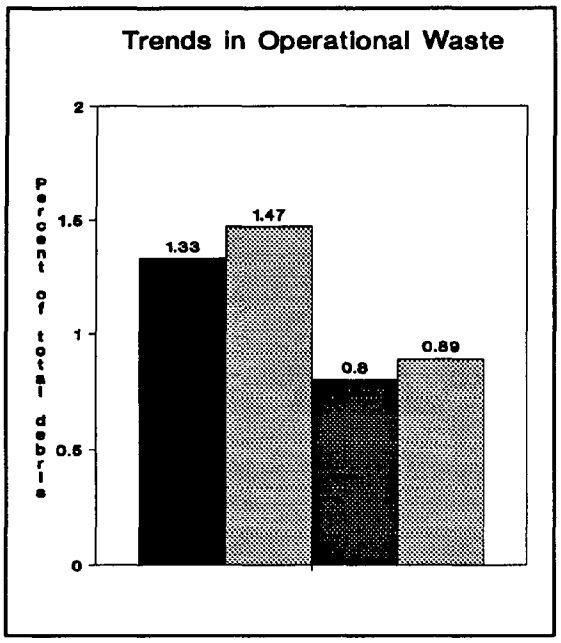
MOST PECULIAR DEBRIS ITEMS REPORTED:

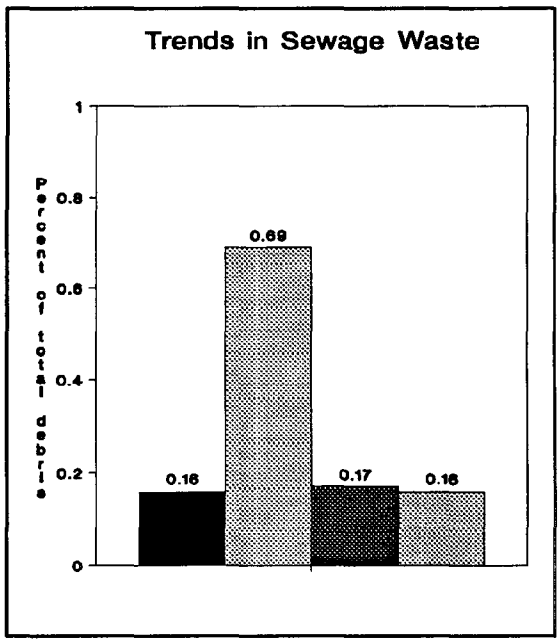
Beaufort	battery, tire, douche bottle, heater
Brunswick	steering wheel, underwear, coat hanger, toothbrush, bottle of mustard, car parts, rusted gas can
Carteret	nylon hose, kitchen sink, buffer pad, shotgun shells, horseshoe, toilet seat, contact lens case, fan, rubber stamp, metal electronic device, real estate sign, an anchor, loaf of bread, jelly donut, window screen, iron, hair comb, asthma inhaler
Craven	mattress, air pump
Dare/Currituck	bra pad, curtains, underwear, baby swimming pool, birth certificate, toothbrush, library card, fireworks, car jack, driver's license, TV set, microphone, saw blade, grill, money, boomerang, bed frame
New Hanover	rubber bumper, chopsticks, alarm clock, hair pick, street sign, bike frame, freezer, stove, wire fence
Pamlico	sneaker, gas can, book bag

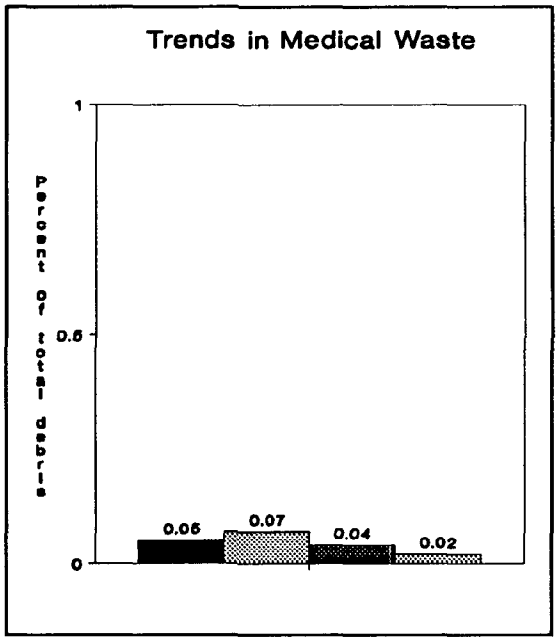
TRENDS IN MAJOR TYPES AND SOURCES OF COASTAL NORTH CAROLINA'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF COASTAL NORTH CAROLINA'S BEACH DEBRIS: (cont.)

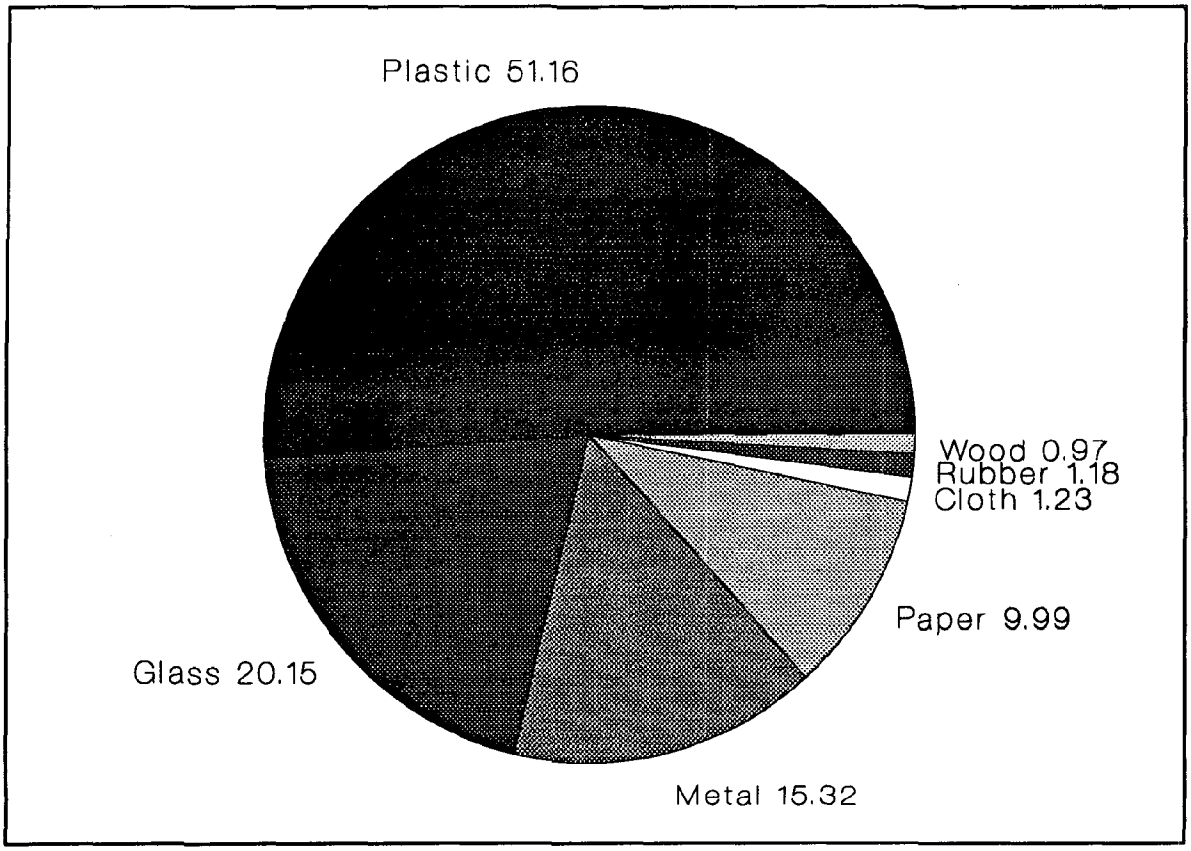






1988 1989 1990 1991

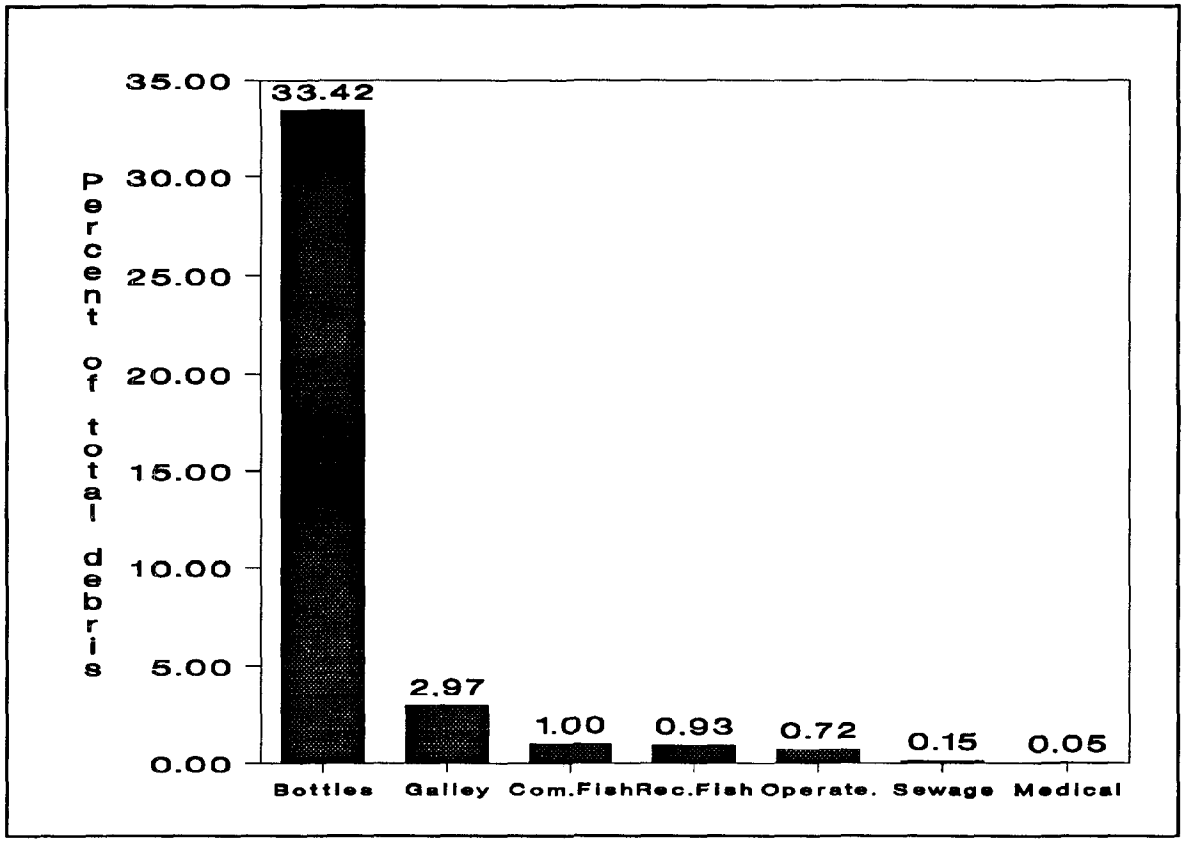
PERCENT COMPOSITION OF INLAND NORTH CAROLINA'S BEACH DEBRIS:



INLAND NORTH CAROLINA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Glass beverage bottles	25,807	12.83
2. Plastic beverage bottles	17,191	8.55
3. Metal beverage cans	14,787	7.53
4. Cigarette butts	12,943	6.44
5. Foamed plastic cups	9,599	4.77
6. Paper pieces	8,938	4.44
7. Plastic food bags	8,456	4.20
8. Foamed plastic pieces	8,442	4.20
9. Glass pieces	8,368	4.16
10. Plastic pieces	6,126	3.05
11. Metal bottle caps	5,886	2.93
12. Plastic caps/lids	5,028	2.50
Total	**131,571**	**65.42**

MAJOR TYPES AND SOURCES OF INLAND NORTH CAROLINA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Alamance	11.20	Metal bottle caps
Beaufort	45.19	Metal beverage cans
Bladen	48.15	Glass beverage bottles
Buncombe	51.79	Plastic beverage bottles
Chowan	5.81	Metal beverage cans
Clay	25.49	Paper bags
Craven	40.45	Glass pieces
Edgecombe	36.90	Glass beverage bottles
Forsythe	46.01	Glass beverage bottles
Franklin & Vance	51.43	Glass beverage bottles
Gaston	57.03	Plastic beverage bottles
Guilford	51.67	Cigarette butts
Halifax	45.15	Glass beverage bottles
Henderson	47.72	Paper pieces
Hyde	43.73	Paper pieces
Iredell	52.44	Plastic beverage bottles

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Jones	14.70	Paper pieces
McDowell & Burke	42.38	Glass beverage bottles
Mecklenburg	50.87	Glass beverage bottles
Mitchell	59.70	Foamed plastic pieces
Montgomery & Stanley	50.37	Metal beverage cans
Nash	38.96	Glass beverage bottles
New Hanover	57.09	Cigarette butts
Pasquotank	56.26	Cigarette butts
Pitt	56.06	Cigarette butts
Richmond & Anson	18.70	Glass beverage bottles
Rowan	50.71	Glass beverage bottles
Stokes	30.66	Cigarette butts
Vance	44.28	Cigarette butts
Wake	46.90	Metal beverage cans
Watauga & Ashe	51.01	Plastic beverage bottles
Wayne	45.89	Cigarette butts
Wilson	48.26	Glass beverage bottles

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Buncombe	wheel	Carolina Auto Parts

FOREIGN DEBRIS ITEMS REPORTED:

None Reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Fish trapped in tire	30 dead fish 3 dead turtles 2 dead birds 2 dead rabbits 1 dead mouse 1 dead cat 1 dead duck 1 snake 1 stray cat

MOST PECULIAR DEBRIS ITEMS REPORTED:

Beaufort	$1, fan, hat, rubber gasket
Bladen	car speaker, bra, nightgown
Buncombe	chair, boots, lawn mower handle
Craven	eyeglasses, firecracker
Edgecombe	electric motor, rug
Forsythe	toilet seat, baby pacifier, sewing machine, tea kettle
Gaston	car battery, suitcase, stove top
Guilford	shopping carts, computer circuit board
Franklin & Vance	t-shirts, freezer lid, dustmask
Halifax	shopping cart, baby seat, high chair, toilet seat, shower curtain
Iredell	basketball, mattress spring
Mecklenburg	rusted boxspring, sterling silver bracelet, bed spring, toilet bowl float, car hood, refrigerator, safe door, car seat, headlight, purse
Montgomery & Stanley	canister, car radio
New Hanover	Vicks Inhaler, battery, hub caps
Pasquotank	TV, carpet, shorts
Rowan	shotgun shells, tire, gas can, boat battery, large drum, underwear, headlight, can of mace
Vance	underwear, old sign
Wake	desk, shoes, potty seat, shopping carts
Wilson	toilet bowl, tire, carpet, star for tree, hub cap

TRENDS IN MAJOR TYPES AND SOURCES OF NORTH CAROLINA'S BEACH DEBRIS:

Data collection from North Carolina's inland areas has only been carried out since 1990 and therefore trends cannot yet be assessed.

FOR INFORMATION ON NORTH CAROLINA'S 1992 CLEANUP CONTACT:

Lundie Spence or Kathy Hart
University of North Carolina
Sea Grant College program
Box 8605
Raleigh, NC 27695
(919) 515-2454

OR

Susan Bartholomew
Big Sweep Executive Director
P. O. Box 550
Raleigh, NC 27602
(919) 856-6686

CLEANUP DATE: September 19, 1992

Teens from the B'nai B'rith Youth Organization cleanup Mentor Headlands Metropark on Lake Erie, near Cleveland, Ohio, during the Great Lakes Beach Sweep

1991 GREAT LAKES BEACH SWEEP

OHIO

September 22, 1991
32 Volunteers
2 Miles Cleaned
10 Pounds of Debris Collected
8 Data Cards

Coordinated by: Rachel Covensky
B'nai B'rith Youth Organization
163 Roche Way
Boardman, OH 44512
(216) 758-0190

Ohio was involved in the International Coastal Cleanup for the first time in 1991 through the newly inaugurated Great Lakes Beach Sweep, coordinated by John G. Shedd Aquarium in Chicago. Although I am not the state coordinator, I organized the one Ohio Beach Sweep. Through the B'nai B'rith Youth Organization, 32 teens went to the Mentor Headlands Metropark on the shores of Lake Erie. All volunteers pitched in and bagged trash, recording all the debris we found on the special data cards.

Because this was the first beach cleanup effort in Ohio, our results are lower than other states. In addition, Mentor Headlands Beach was very clean and required little picking up. We collected about ten pounds of debris.

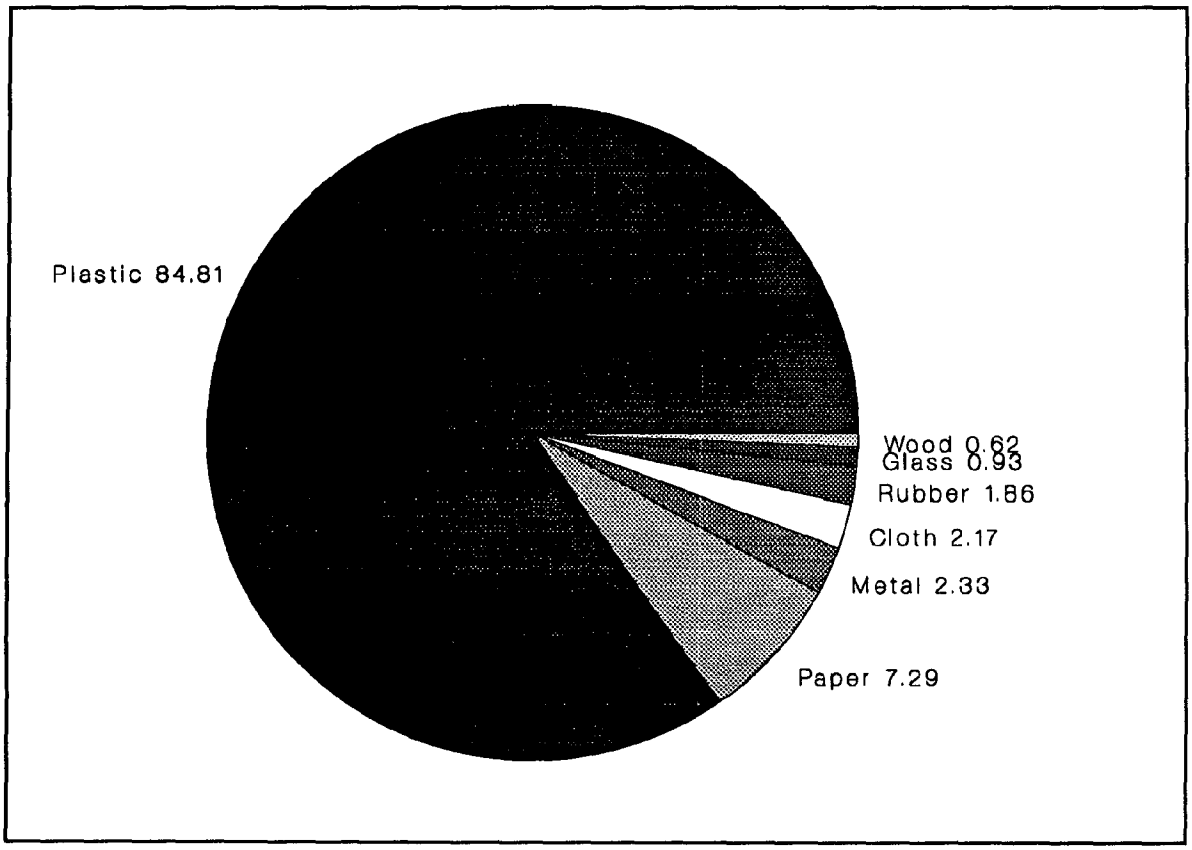
The most unusual find was a balloon with a tag attached identifying it from a major balloon release by the Boy Scouts of America in Ann Arbor, Michigan, almost 200 miles away. Thankfully, no stray or dead animals were found. No chemical or dangerous substances were discovered, either. Among the most abundant items found were pieces of glass and thousands of cigarette butts. Also retrieved from the beach were some tampon applicators which were properly "disposed" into the envelopes provided by CMC for forwarding to Congress. We hope these will convince Congress of the need for stricter waste treatment laws.

Our plastic bags were donated by the First Brands Corporation, and the latex gloves were provided to the volunteers by Tillotson Rubber Co.

In future Great Lakes Beach Sweeps in Ohio, we hope more members of B'nai B'rith will volunteer, as well as members of other youth groups, clubs, and organizations.

Rachel Covensky

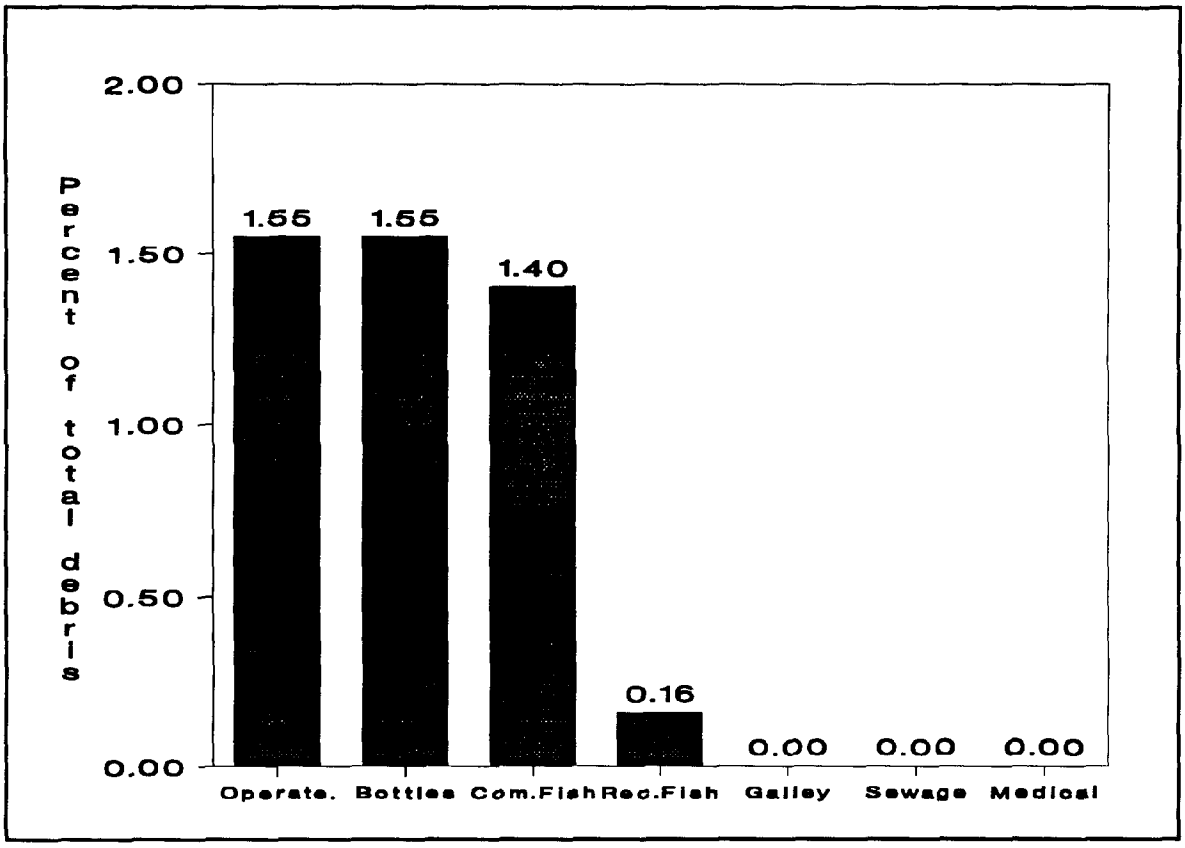
PERCENT COMPOSITION OF OHIO'S BEACH DEBRIS:



OHIO'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	329	51.01
2. Plastic pieces	81	12.56
3. Plastic straws	37	5.74
4. Paper pieces	30	4.65
5. Plastic food bags/wrappers	26	4.03
6. Plastic caps/lids	19	2.95
7. Plastic cups/utensils	16	2.48
8. Clothing pieces	14	2.17
9. Foamed plastic pieces	7	1.08
10. Plastic strapping bands	6	0.93
Plastic rope	6	0.93
11. Metal bottle caps	5	0.78
Glass pieces	5	0.78
Paper cups	5	0.78
Newspapers	5	0.78
12. Balloons	4	0.62
Pipe thread protectors	4	0.62
Total	**599**	**92.87**

MAJOR TYPES AND SOURCES OF OHIO'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Data was collected for only one zone, Mentor Headlands Metropark.

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Mentor Headlands Metropark	balloon	Tiger Cubs, Ann Arbor, MI

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF OHIO'S BEACH DEBRIS:

Data collection from Ohio's areas has only been carried out since 1991 and therefore trends cannot yet be assessed.

Armed with trash bags and data cards these Ohio beach sweepers clean up the shores of Lake Erie.

These cleanup volunteers receive a hard-earned hot dog after cleaning beaches in Oregon.

OREGON

September 28, 1991
2,940 Volunteers
135 Miles Cleaned
35,051 Pounds of Debris Collected
781 Data Cards

Coordinated by: Bill Hastie and Jack McGowan
Oregon Department of Fish and Wildlife
Marine Science Drive, Building 3
Newport, OR 97365
(503) 867-4741

A record number of volunteers showed up for the Eighth Annual Beach Cleanup on September 28, and they found considerably less trash on Oregon beaches. Almost 3,000 took part in the affair, sponsored by the Oregon Department of Fish and Wildlife and Stop Oregon Litter and Vandalism (SOLV). Preliminary results show that 35,051 pound of trash were collected, well short of the 44,000 collected in 1990.

This is the first year we've had such a large reduction in the amount of trash collected. But we hope it's the beginning of a trend.

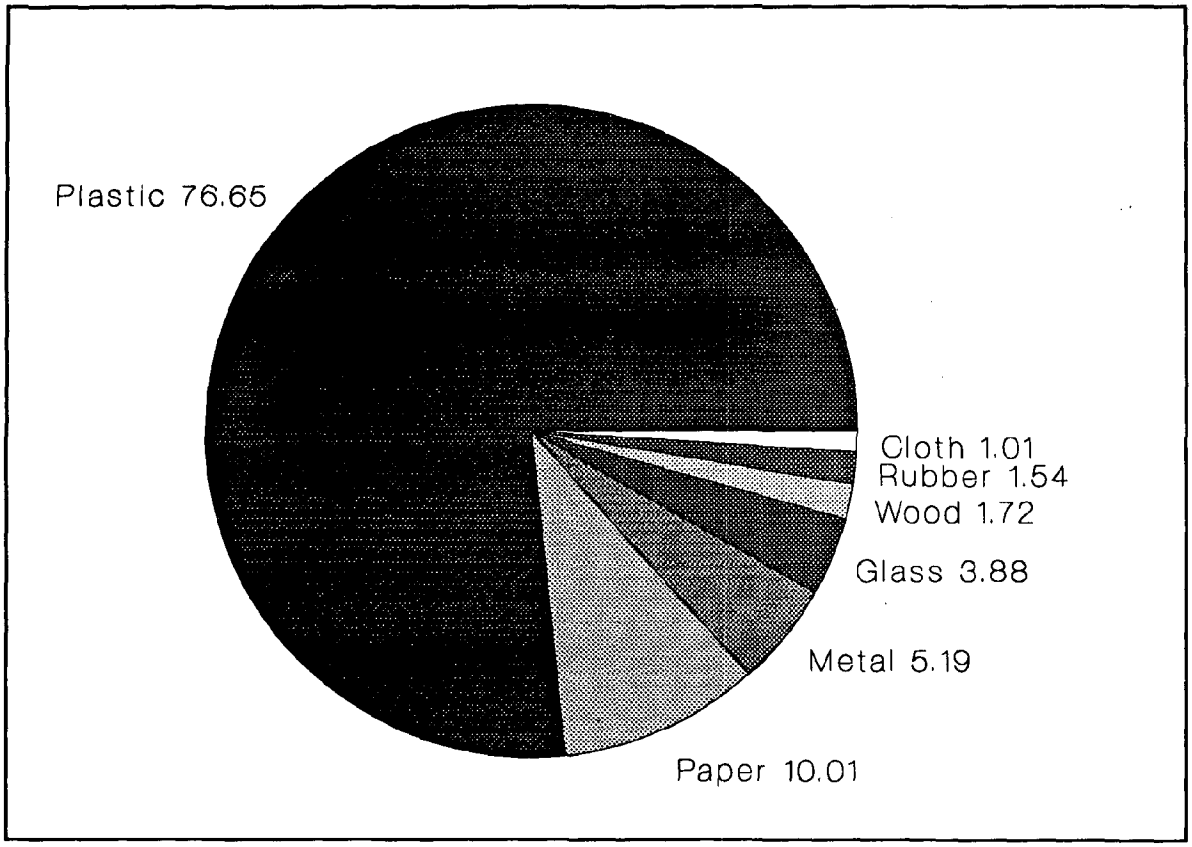
Cigarette butts, as usual, accounted for a large number of trash items. One volunteer noted that he picked up 81 butts in a very small area of one beach on the central coast. The most unusual items found included a full-sized refrigerator with Asian writing on it, a toilet in "good shape," and a very heavy gas bottle that had apparently spent lots of time at sea. One volunteer even found a dollar bill, proving that cleaning beaches can pay off.

Birds and mammals are still showing up entangled in strapping material and fishing line. Discarding these materials in the ocean is a behavior we haven't quite rid ourselves of yet.

It was a typical beach cleanup - "people were enthusiastic, energetic, and concerned," commented Sue Riemer, Zone Coordinator for the Newport area. "The real value of this event is the awareness it fosters in people about the harmful effects of plastic and other debris on wildlife. It's that awareness that changes behavior."

Bill Hastie

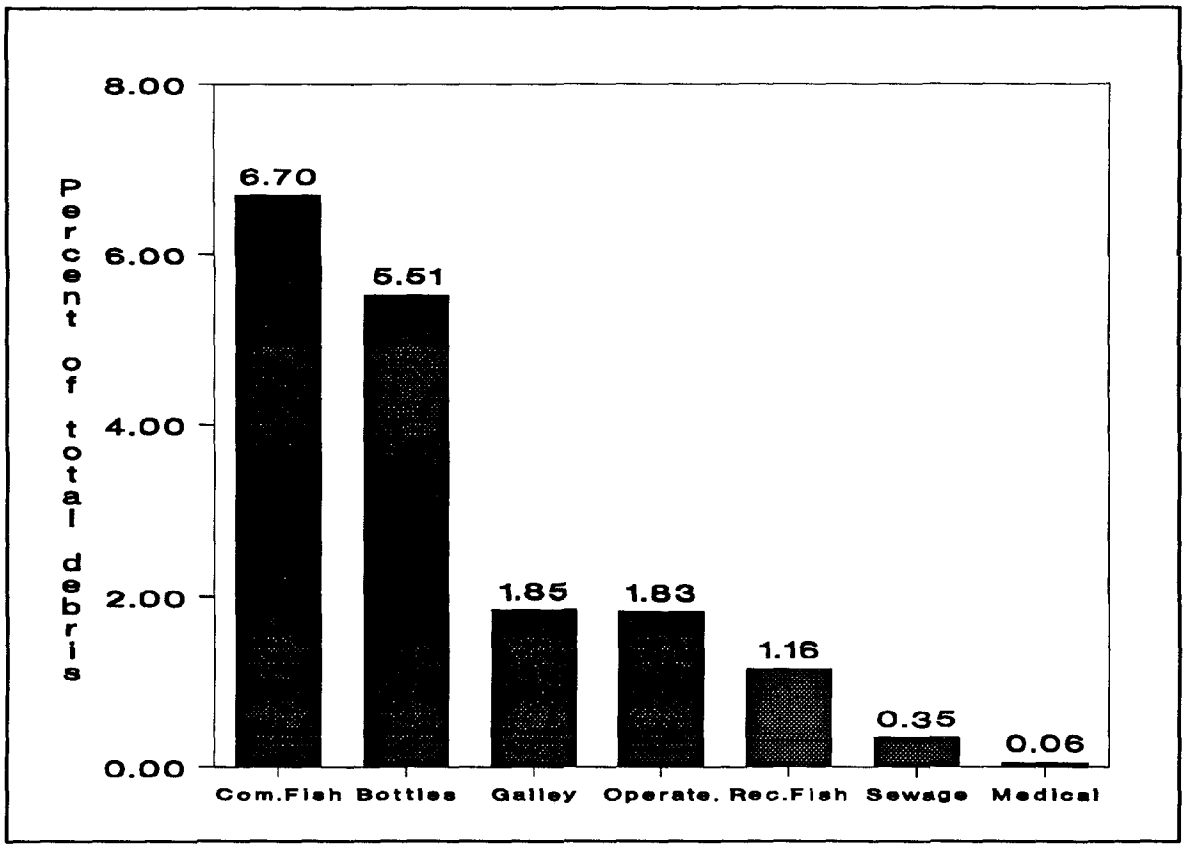
PERCENT COMPOSITION OF OREGON'S BEACH DEBRIS:



OREGON'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	26,526	20.47
2. Plastic pieces	14,771	1.40
3. Foamed plastic pieces	11,892	9.18
4. Plastic rope	7,199	5.56
5. Plastic food bags/wrappers	6,869	5.30
6. Paper pieces	6,074	4.68
7. Plastic caps/lids	5,830	4.50
8. Glass pieces	2,434	1.88
9. Foamed plastic cups	2,104	1.62
10. Metal bottle caps	1,832	1.41
11. Metal beverage cans	1,620	1.25
12. Glass beverage bottles	1,612	1.24
Total	**88,763**	**68.49**

MAJOR TYPES AND SOURCES OF OREGON'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Columbia River - Arch Cape	74.18	Cigarette butts
Arch Cape - Bay City	70.93	Cigarette butts
Bay City - Sand Lake	73.25	Cigarette butts
Sand Lake - Cascade Head	82.16	Cigarette butts
Cascade Head - Depoe Bay	80.95	Cigarette butts
Depoe Bay - Waldport	80.44	Foamed plastic pieces
Waldport - Yachats	78.70	Cigarette butts
Yachats - Florence	87.04	Plastic pieces
Florence - Reedsport	76.79	Plastic food bags/wrappers
Coos Bay - Sixes River	74.41	Cigarette butts
Sixes River - Ophir	69.06	Plastic pieces
Ophir - CA Border	67.28	Foamed plastic pieces

TRACEABLE DEBRIS REPORTED:

Location	Types of Debris	Sources Indicated
Columbia River - Arch Cape	pallet	Chiquita Bananas
Bay City - Sand Lake	55 gallon drum	Caltex
Cascade Head - Depoe Bay	cardboard box	RP Rondell Products, Inc.
Yachats - Florence	plastic bag, frozen herring	Narrows
	55 gallon drum	BP
Florence - Reedsport	large plastic bag for fish	Puget Sound Herring Sales

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Types of Debris	Other Remarks
Columbia River - Arch Cape	Japan	plastic wrapper	
		mosquito repellant	
Arch Cape - Bay City	Japan	food wrapper	
Sand Lake - Cascade Head	Korea	tea bag wrapper	
	Japan	oil bottle	
Depoe Bay - Waldport	Iceland	plastic bottle	Maalox Plus
	Japan	plastic disc	
Waldport - Yachats	Korea	rice noodle package	
Yachats - Florence	Asia	plastic food wrapper	
Florence - Reedsport	Germany	container	Gouldband Koffie Melk Vlag
	Japan	plastic drink bottle	
		plastic aerosol lid	
	Mexico	plastic bottle	Mexsana Polvo Plough
Coos Bay - Sixes River	"Oriental"	cigarette lighter	
Sixes River - Ophir	Japan	light bulb	
	USSR	light bulb	

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead seal, entangled in rope and cord	478 dead birds
5 dead birds, entangled in fishing line	129 dead sea gulls
3 dead birds, entanglement around neck	23 dead birds
2 dead birds, entangled in plastic	11 dead sand pipers
Dead sea gull, entangled in fishing line	11 dead murres
Dead sea gull, entangled in plastic bag and rope	11 dead seals
Dead sea gull, hook embedded in stomach,	8 dead sharks/rays
swallowed hook with line and float	7 dead sea lions
Dead brown pelican, entangled in plastic line	5 dead fish
Dead bird, entangled in plastic bag and rope	3 dead cormorants
Dead bird, entangled in fish net	2 dead grebes
Dead bird, entangled in plastic strapping	1 dead duck
Dead bird, entangled in string	1 oil covered cormorant
Dead bird, entangled in rope	1 dead loon
Dead bird, entangled in rope and string	1 stranded bird in oil - released

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED: (cont.)

Debris Related	Other Reports
Dead bird, entangled in kite string	1 sea gull with broken wing
Dead bird, entangled in multi-hooked fish line	1 dead pelican

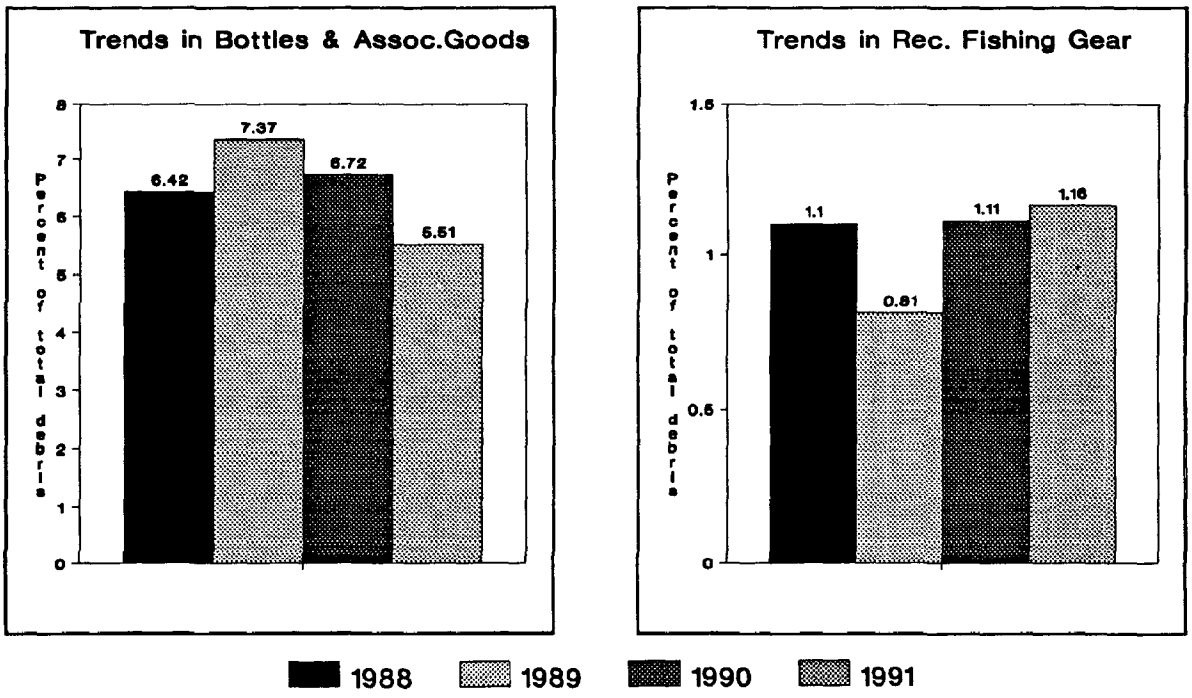
MOST PECULIAR ITEMS REPORTED:

Columbia River - Arch Cape	metal casing, 1900's hand blown bottle, watch band, melted solder, shotgun casings, couch spring, block of sidewalk, coat hangers, boot heel, drinking glass, corn on the cob, metal fork, curtain rod, metal barn door track, fountain pen, Chinese food package, toothbrush, bag with girl's purse and clothes in it, onion, medical ID bracelet, porta-potty, underwear and socks, 2 pant legs, nylons, sleeping bag, can of Copenhagen snuff, plastic ampules, fireworks, candles, maxi pad, tire ring, full beer, 2 unused postage stamps, light switch, penny, pants, 3 pink bedspreads, Fisher Price toy person, ear plug, part of a couch, rose, jar of pickles, frog, fence, jar of cocaine
Arch Cape - Bay City	panty hose, unopened quart and can of beer, shoe insole, tricycle, orange sandle, sleeping bag, leather purse, pillows, blankets, imitation flower, metal bed springs, personalized pen, "high explosives" container pieces, rubber boot, smelly sock, propane can, shotgun wads, rubber plugs, $1, men's underwear, 1/2 bottle of 190 proof liquor, rubber band w/metal clips, 8 foot piece of pipe, bait bag w/maggots, tent peg, Nike shoe, refrigerator door, wood-handled fishing knife, drain mat, bottom of a car or trailer, a "Chinese thing", Quaker Chewi box, toilet paper, seat covers, box of gourding supplies, hub caps from Chevy and Olds, box spring, plastic tarp, 10 lbs. hard pottery clay
Bay City - Sand Lake	toothbrush, medicine bottle, hat, horse skull, Nike tennis shoe, 3 thongs, shoulder pad from dress or blouse, old 45 record, broom, exploded gun cartridge, sheet metal
Sand Lake - Cascade Head	panty hose, miniature baseball cap, wish bone, shot gun casings, dog leash, kayak paddle, waterbed cap, film cartridge
Cascade Head - Depoe Bay	plastic bag full of dead birds, television, golf ball, 49 1/2 foot rubber scrub rail from boat, plastic appliance cover, fireworks, roof drain pipe, ketchup in bottle, $ 1, tar paper, full unopened can of 7-Up, full can of beer, Woodsy the Owl bag, large plastic propeller 3 feet from plastic plane, firehose attached to dock pieces used for a fender, lady's underwear, horse rope, rubber flashlight, exhaust pipe, toy bat, arrow, fiberglass from hot tub
Depoe Bay - Waldport	brick, roofing shingles, plastic trash can, metal table bottom, knotted plastic bag, treasure hunt note, sardine can, underwear, corn cobs, skull, douche, plastic cigar tube, swim flipper, twin size rubber sheet, fireworks, bike pedal, vinyl upholstery, message in a bottle sent from Vancouver, Washington on 5-24-91, baseball card
Waldport - Yachats	auto engine, plastic banana, enamel container, hatch cover for fishing boat, material used to clean oil spills off of rocks, roofing tin, 1/2 full charcoal lighter can, much of the lining of a boat

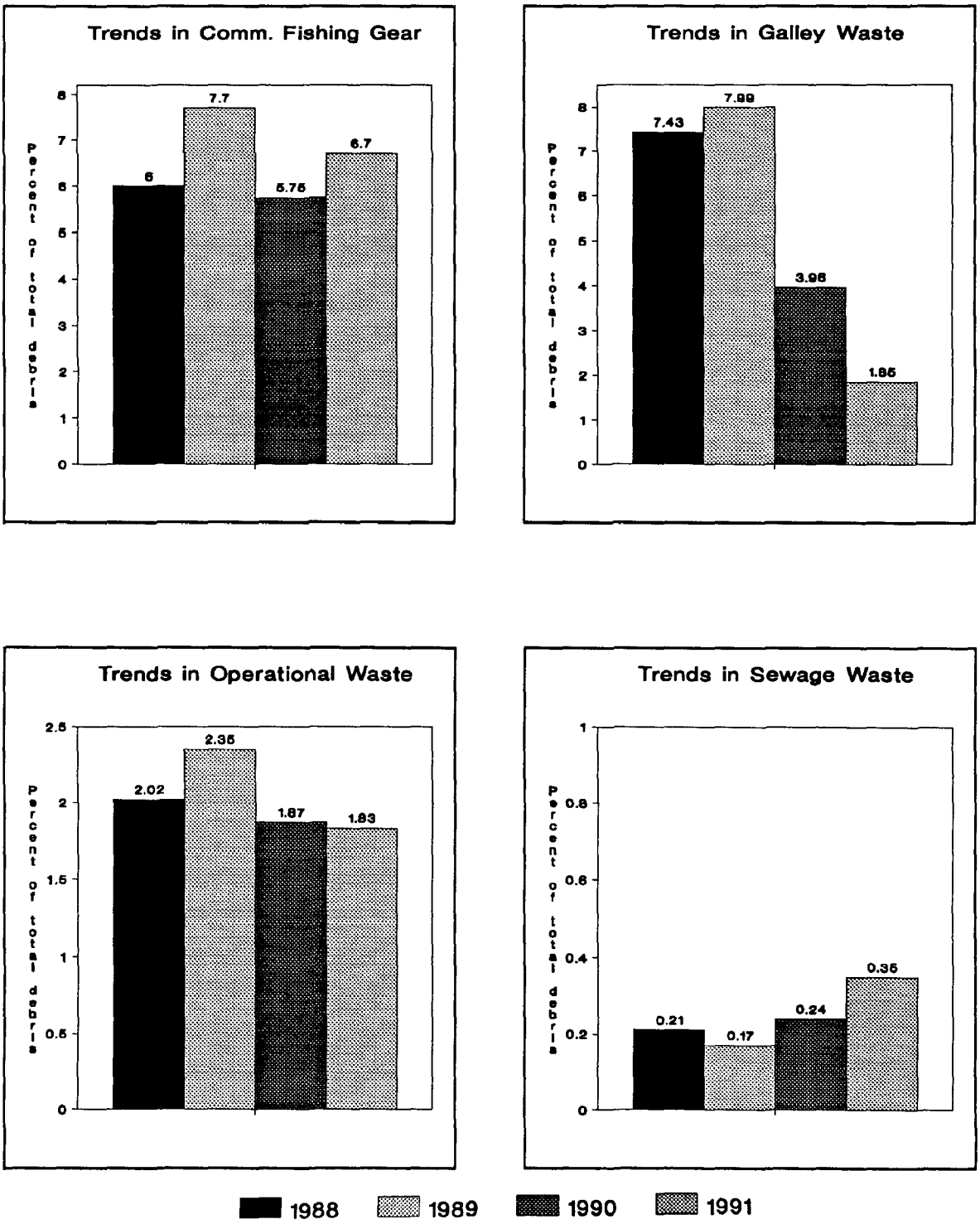
MOST PECULIAR ITEMS REPORTED: (cont.)

Yachats - Florence	bullet casing, iron rack-part of ship, mop, tire hose from something w/nails in it, several pounds of nails in a pile, 15-20 shotgun wads, blue plastic shoe, metal oxygen tank, $1.50, cassette tape, rubber/canvas fire hose used for dock fender w/nails, full size blanket, small white bag with human excrement, champagne bottle, Swiss army knife in good condition, 2 sticks of sandlewood incense, plastic funnel with holes in top, engine intake manifold
Florence - Reedsport	round type television picture tube, jar of pickled mushrooms, men's shorts, windshield wiper, curtain rods, Nerf football, boat fender, 2 new Nike shoes
Coos Bay - Sixes River	afro comb, toothbrush, $1, one thin dime, hemp boat fender, rose encapsulated in plastic vase, Chrysler hubcap, dope baggie, nylon netting, indoor/outdoor carpet, glass eye, lantern, complete Sunday paper 2-25-91
Sixes River - Ophir	unopened and empty Pepsi can, pair of shoes, fiberglass insulation
Ophir - CA Border	piece of baby bottle, sponge, ice chest, sealed seam headlight, paint pan and brush, day backpack, tea bag, garbage can, plastic pillow, golf ball, alternator, toy elephant, sneaker, 30' of weather stripping, used toilet paper, toilet, new tennis shoe, blue tarp

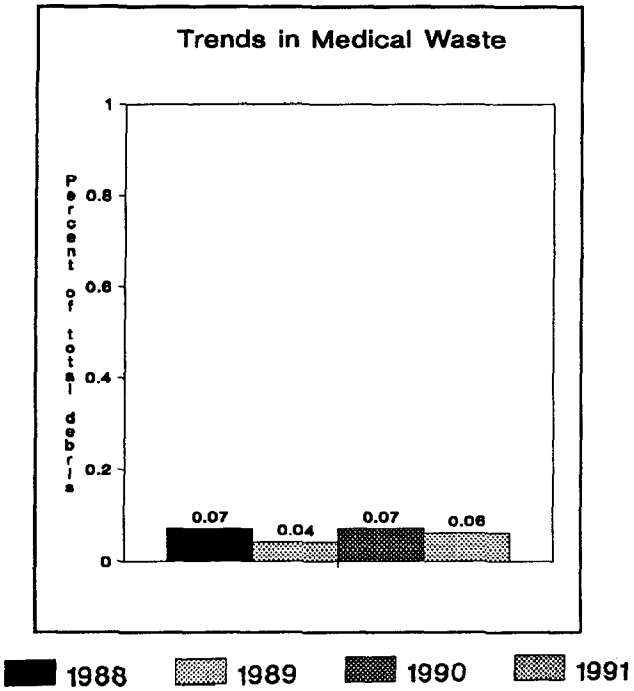
TRENDS IN MAJOR TYPES AND SOURCES OF OREGON'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF OREGON'S BEACH DEBRIS: (cont.)



TRENDS IN MAJOR TYPES AND SOURCES OF OREGON'S BEACH DEBRIS: (cont.)



FOR INFORMATION ON OREGON'S 1992 COASTAL CLEANUP CONTACT:

Bill Hastie
Oregon Department of Fish and Wildlife
Marine Science Drive, Building 3
Newport, OR 97365
(503) 867-4741

OR

Jack McGowan
Stop Oregon Litter and Vandalism (SOLV)
P.O. Box 1235
Hillsborough, OR 97123
(503) 647-9855

CLEANUP DATE: October 3, 1992

Stop Oregon Litter and Vandalism (SOLV) provided garbage bags for Oregon's cleanup.

Three Brownies, Kristian, Braudis, and Ashley, make cleaning Pennsylvania's beach a joint effort.

1991 GREAT LAKES BEACH SWEEP

PENNSYLVANIA

September 28, 1991
31 Volunteers
5.5 Miles Cleaned
144 Pounds of Debris Collected
12 Data Cards

Coordinated by: Francis Stein
and Cheryl Tylkowaski
Department of Environmental Resources
Presque Isle State Park
P.O. Box 8510
Erie, PA 16505
(814) 871-4251 or (814) 838-8776

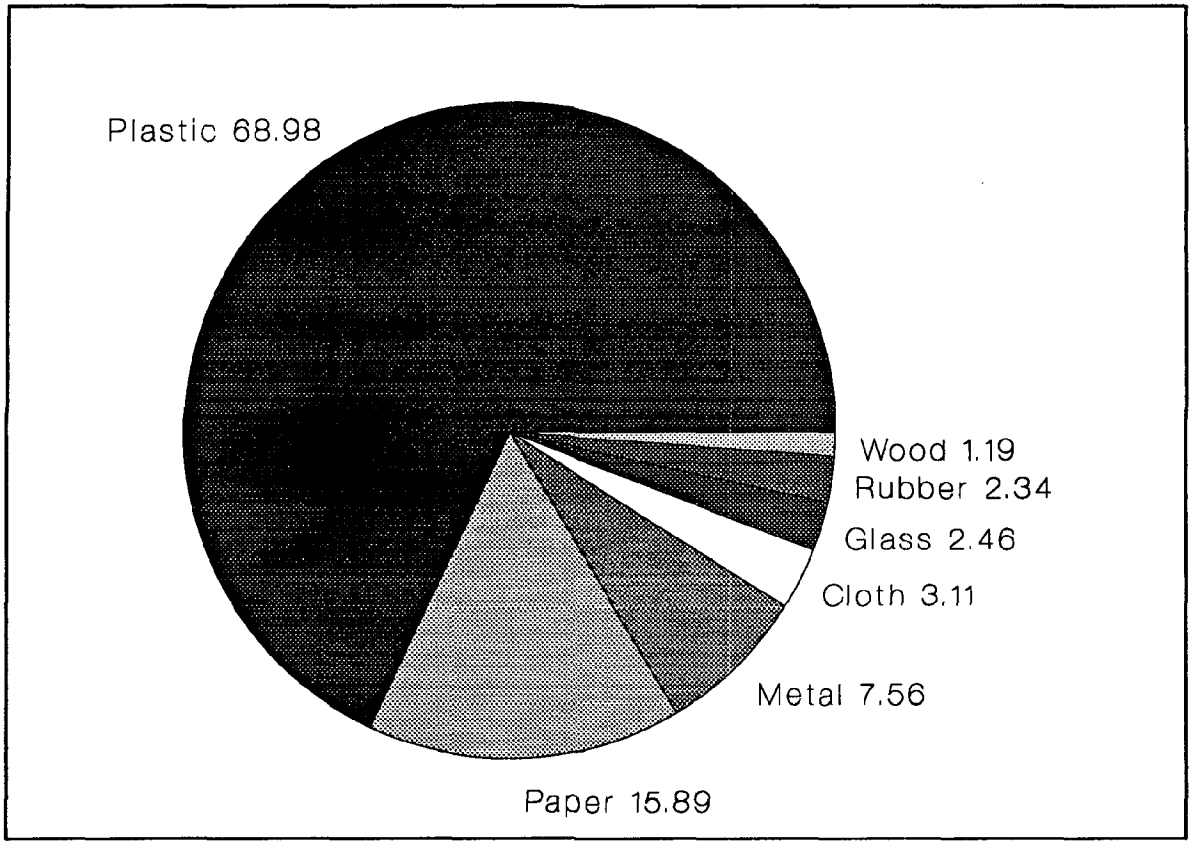
This was the fourth annual International Coastal Cleanup at Presque Isle State Park. This year we joined forces with other Great Lakes states as part of the Great Lakes Beach Sweep.

Thirty-one volunteers participated in the three-hour cleanup of 5.5 miles of beaches. We collected 144 pounds of debris, approximately one third of which consisted of aluminum, glass, and plastic, which was recycled. The amount of debris on the beaches appeared to be less than in previous years (maybe the effort is making an impact).

Finds included a bottle of fish attractor and a metal tripod, as well as plastics, balloons, and "too many to count" cigarette butts. Sponsors of the cleanup were Burger King, which provided hamburgers and drinks, and First Brands Corporation, which provided Glad trash bags.

Francis Stein

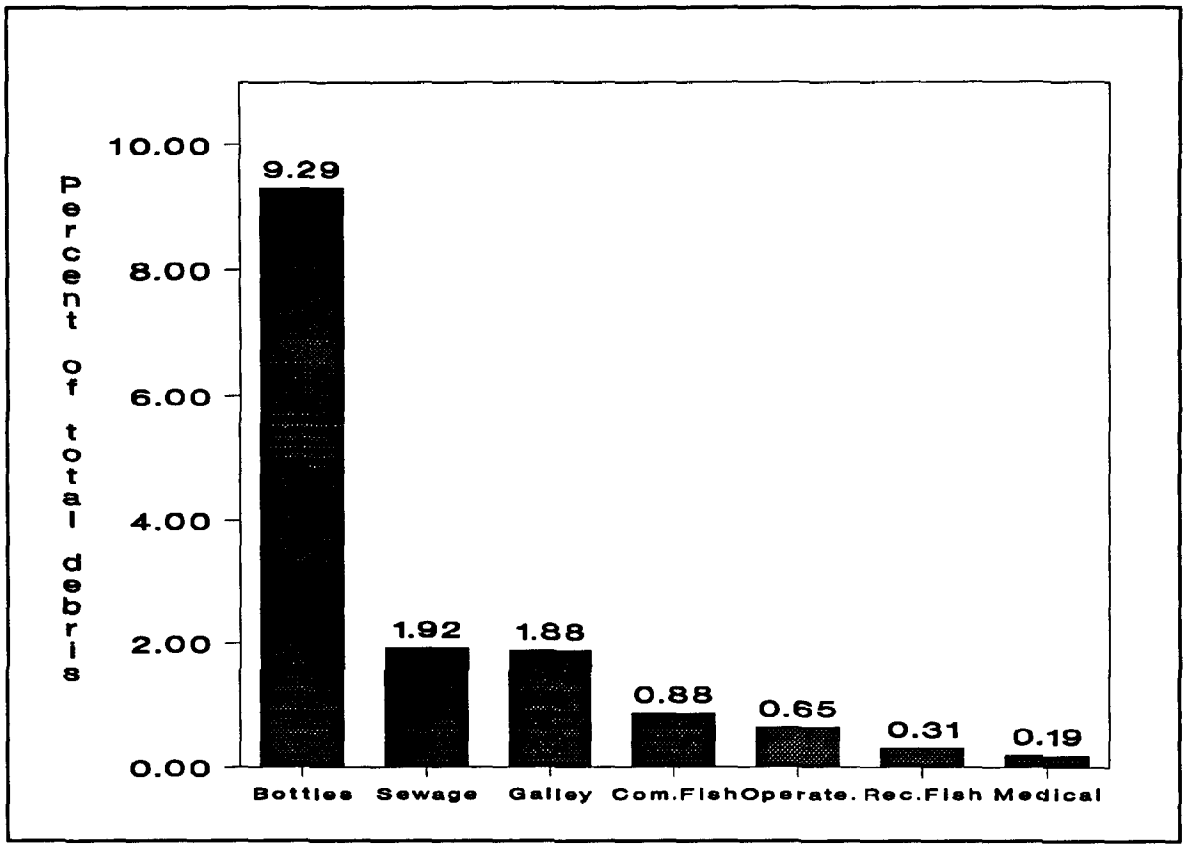
PERCENT COMPOSITION OF PENNSYLVANIA'S BEACH DEBRIS:



PENNSYLVANIA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic pieces	424	16.28
2. Plastic caps/lids	218	8.37
3. Cigarette butts	208	7.98
4. Paper pieces	177	6.79
5. Plastic straws	155	5.95
6. Plastic food bags/wrappers	128	4.91
7. Foamed plastic cups	100	3.84
8. Metal beverage cans	92	3.53
9. Foamed plastic pieces	75	2.89
10. Plastic cups/utensils	56	2.15
11. Plastic tampon applicators	50	1.92
12. Metal bottle caps	41	1.57
Total	**1,724**	**66.18**

MAJOR TYPES AND SOURCES OF PENNSYLVANIA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Barracks Beach	71.22	Plastic pieces
Lighthouse Beach	59.60	Plastic pieces
Mill Road Beaches	44.05	Paper pieces
Stone Jetty	73.48	Plastic cups/lids
Budney Beach	76.32	Plastic pieces
Beach Six	62.01	Cigarette butts

TRACEABLE DEBRIS REPORTED:

Location	Types of Debris	Source Indicated
Lighthouse Beach	balloon with ribbon	Sarnia Clearwater Police

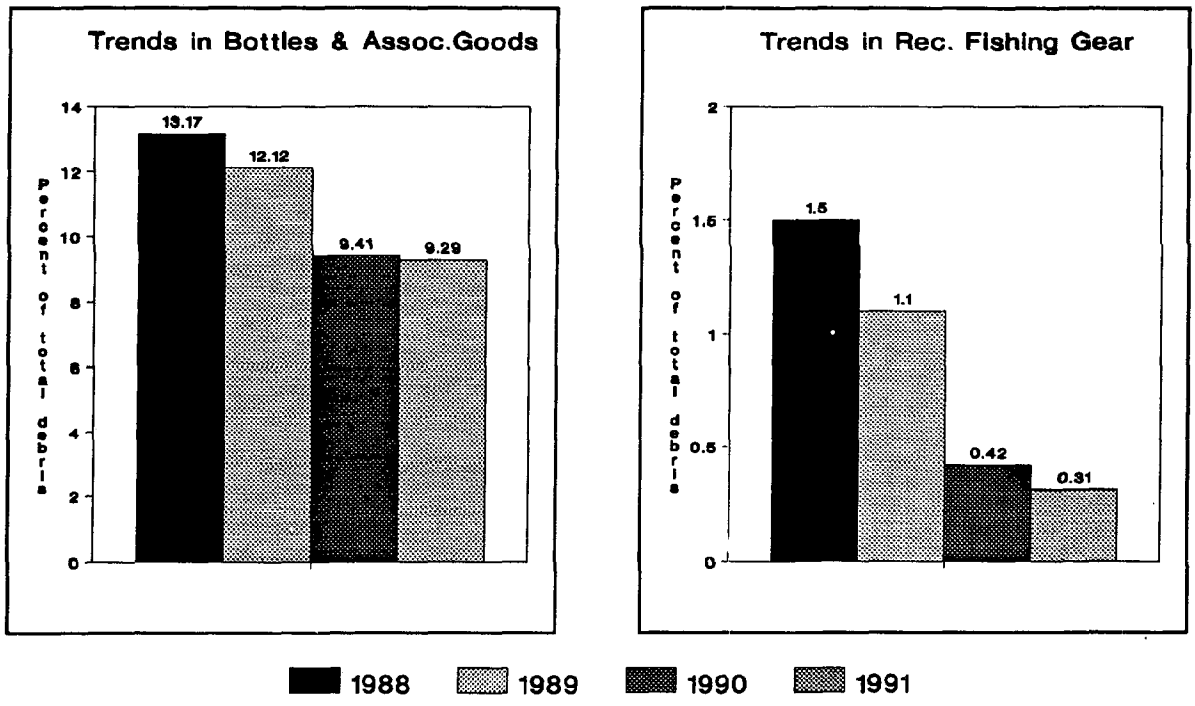
FOREIGN DEBRIS REPORTED:

None reported

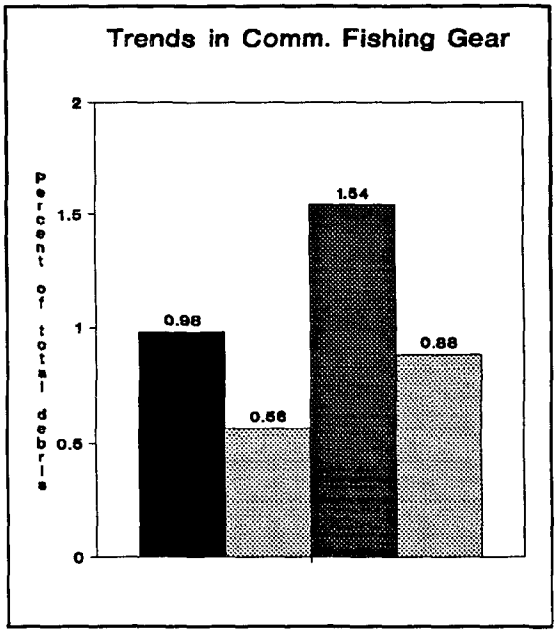
MOST PECULIAR DEBRIS ITEMS REPORTED:

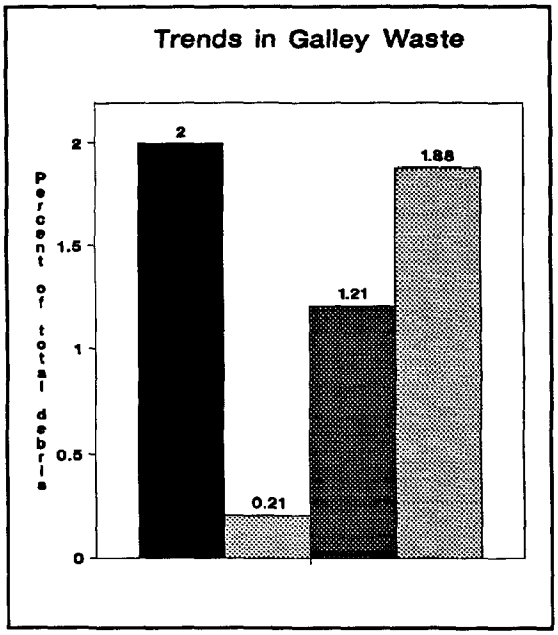
Barracks Beach	metal tripod with chains on it
Mill Road Beaches	metal seat supporter
Budney Beach	plastic bottle of fish attractor

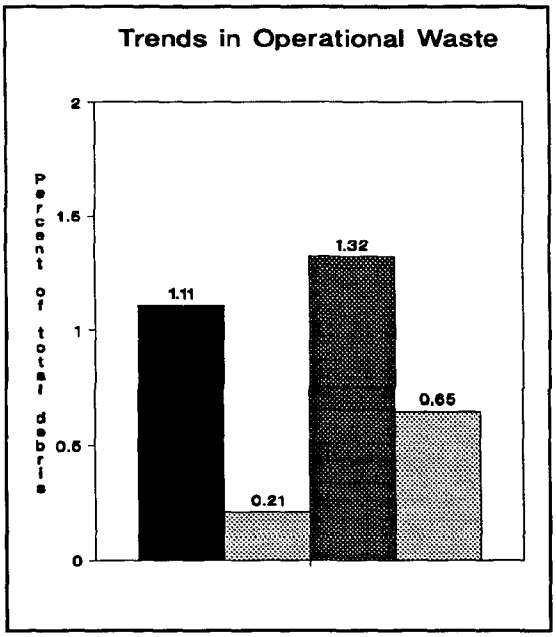
TRENDS IN MAJOR TYPES AND SOURCES OF PENNSYLVANIA'S BEACH DEBRIS:

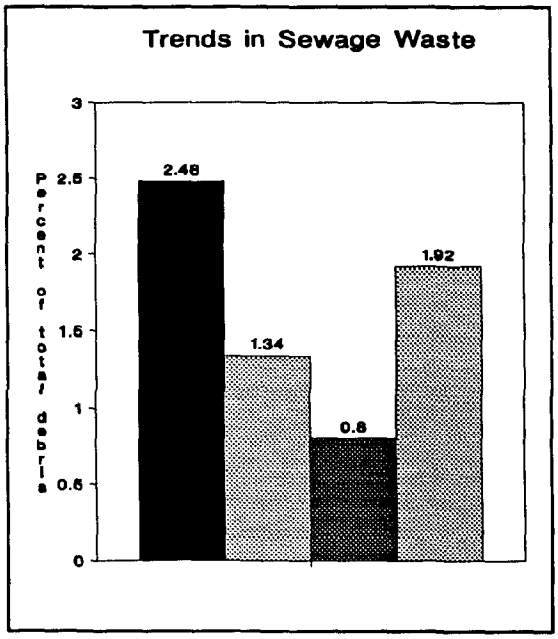


TRENDS IN MAJOR TYPES AND SOURCES OF PENNSYLVANIA'S BEACH DEBRIS: (cont.)

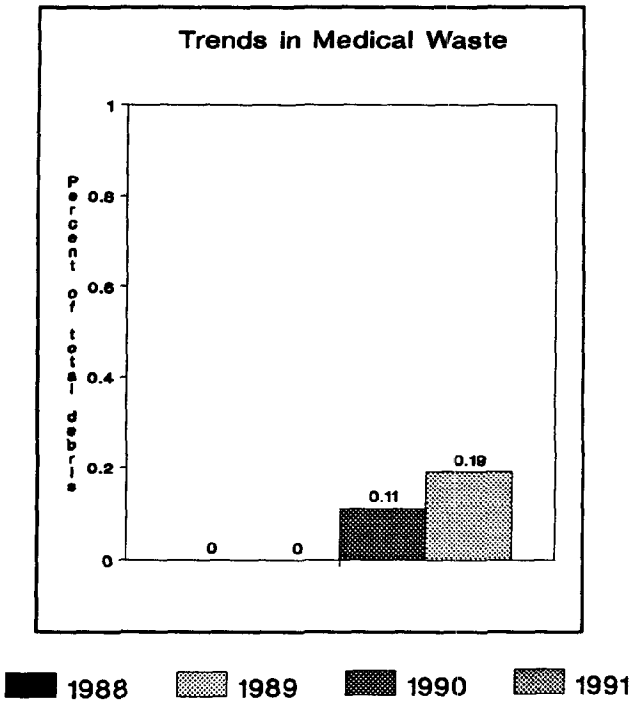








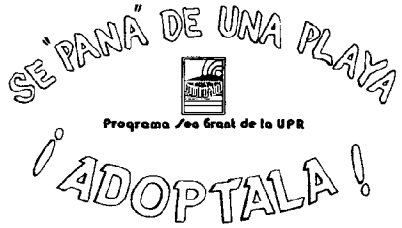
TRENDS IN MAJOR TYPES AND SOURCES OF PENNSYLVANIA'S BEACH DEBRIS: (cont.)



FOR MORE INFORMATION ON PENNSYLVANIA'S 1992 COASTAL CLEANUP CONTACT:

Frances Stein
Department of Environmental Resources
Presque Island State Park
P.O. Box 8510
Erie, PA 16505
(814) 871-4251 or (814) 838-8776

CLEANUP DATE: September 19, 1992



PUERTO RICO

COASTWEEKS
3,000 Volunteers
76.62 Miles Cleaned
80,000 Pounds of Debris Collected
22 Data Cards

Coordinated by: Ruperto Chaparro
University of Puerto Rico, Sea Grant
RUM-UPR, P. O. Box 5000
Mayaguez, PR 00709-5000
(809) 832-8045

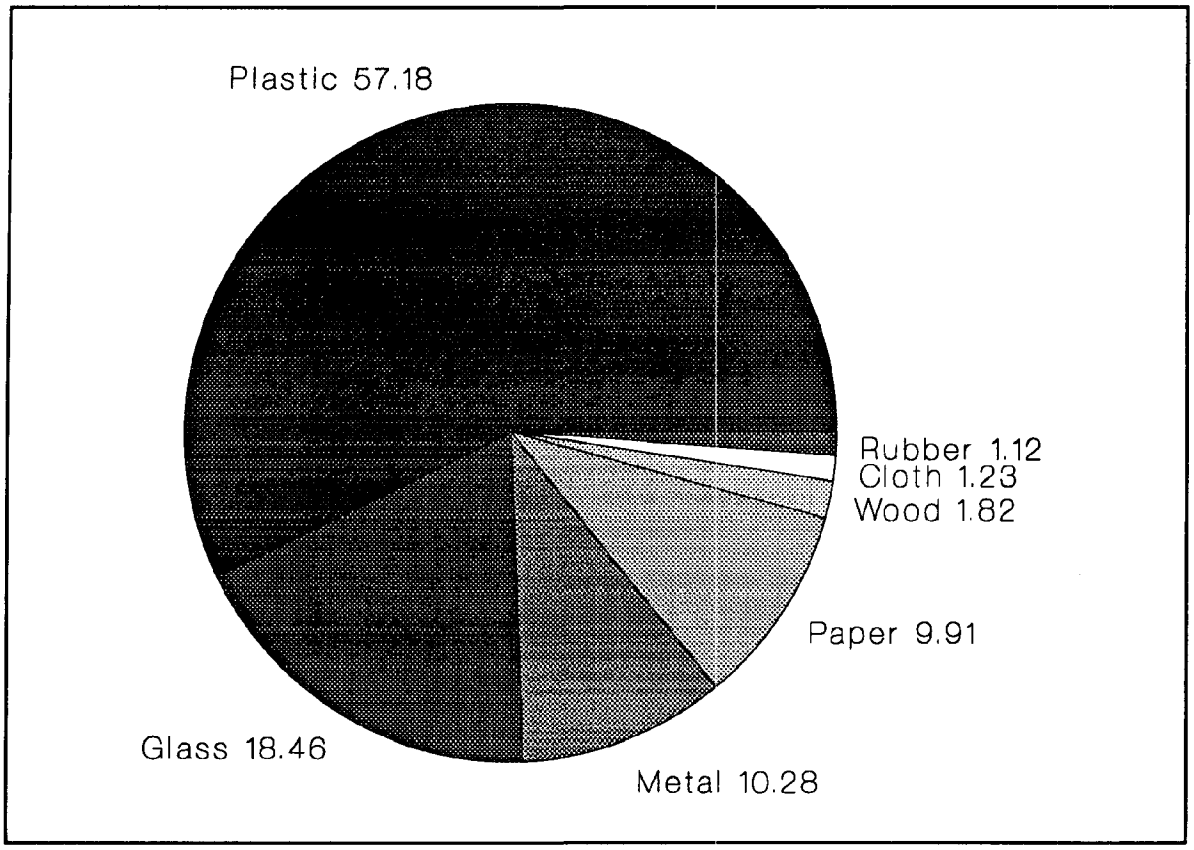
The International Coastal Cleanup coordinated by the Puerto Rico Hotel and Tourism Association and the University of Puerto Rico Sea Grant College Program was a complete success. Hundreds of volunteers cleaned and surveyed marine debris and trash at 25 beaches around the island. This has been the most successful effort realized in Puerto Rico to clean our beaches and educate the marine resource users.

A total of 3,000 volunteers collected tons of marine debris including plastics, foam, papers, and metals which have been known to kill some endangered species, from our coastal waters. The volunteer groups consisted of university students, tourists, residents, environmental organizations, governmental agencies, municipal governments, and private industry who provided transportation and food.

The big success of the 1991 Beach Cleanup was the result of the monumental effort realized by the volunteers and sponsors who brought their time and resources for the fulfillment of this important activity. We really hope that the 1992 Beach Cleanup will be bigger than the one from last year. We also expect that activities like this will help to change the attitudes of the people for the conservation of our natural resources.

Ruperto Chaparro

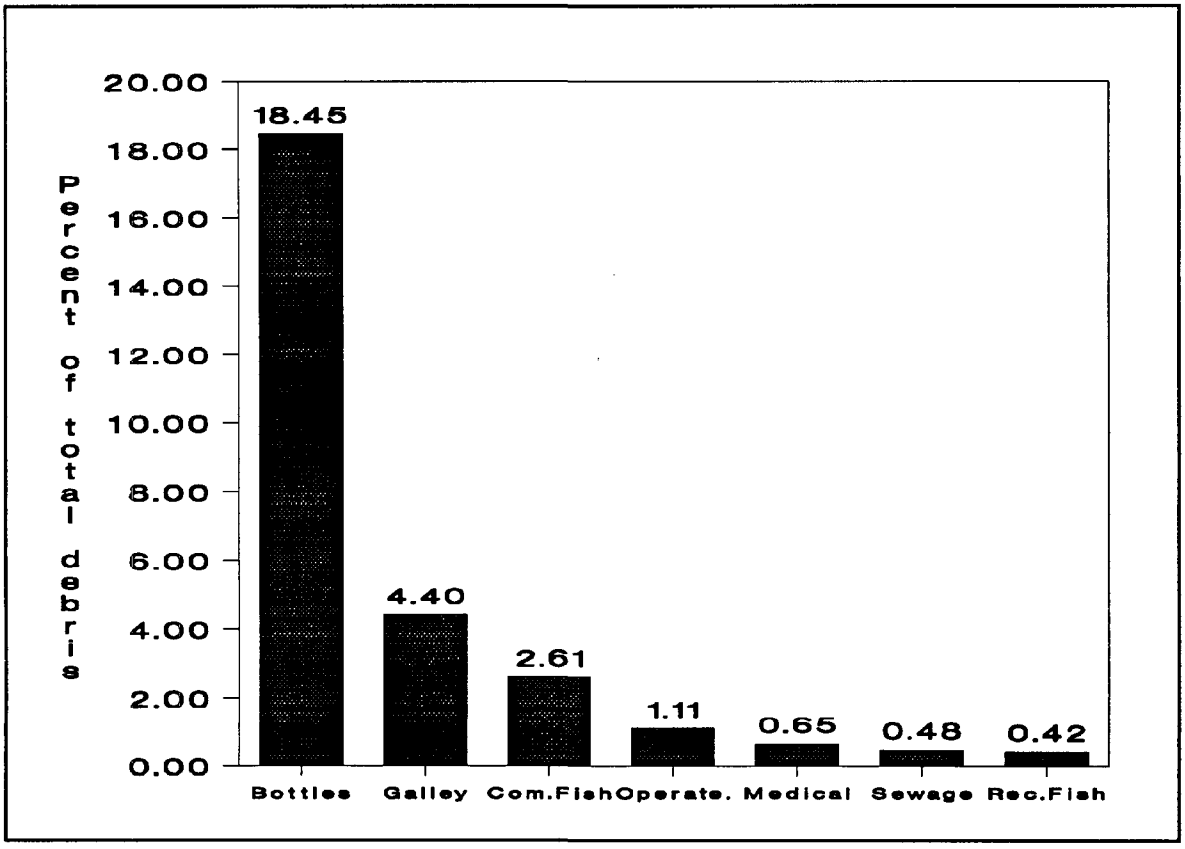
PERCENT COMPOSITION OF PUERTO RICO'S BEACH DEBRIS:



PUERTO RICO'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic cups/utensils	16,873	10.55
2. Glass beverage bottles	12,893	8.06
3. Plastic straws	11,796	7.37
4. Glass pieces	10,516	6.57
5. Plastic caps/lids	7,440	4.65
6. Plastic pieces	7,354	4.60
7. Cigarette butts	6,817	4.26
8. Metal pull tabs	4,556	2.85
9. Paper pieces	4,237	2.65
10. Plastic oil/lube bottles	4,189	2.62
11. Metal bottle caps	3,996	2.50
12. Plastic beverage bottles	3,423	2.14
Total	**94,090**	**58.82**

MAJOR TYPES AND SOURCES OF PUERTO RICO'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Item Collected
Dorado	62.45	Cigarette butts
Pinones	49.48	Plastic cups/utensils
Ocean Park	74.07	Cigarette butts
Vacia Talega	37.13	Glass beverage bottles
Pinones-San Juan	57.19	Plastic straws
Escambron	52.70	Plastic straws
Rio Grande	66.51	Plastic pieces
Guancha Ponce	47.20	Glass beverage bottles
Bajura Isabela	72.24	Plastic pieces
La Parguera	53.91	Glass beverage bottles
Bahia Sucia	81.31	Plastic pieces
Los Tubos	58.73	Foamed plastic plates
Vega Baja	52.49	Cigarette butts
Boqueron	37.41	Plastic cups/utensils
Guajataca	60.89	Plastic cups/utensils
Levittown	73.08	Plastic straws
Fajardo	57.41	Glass beverage bottles

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Item Collected
Boca de Cangrejos	57.77	Plastic cups/utensils
Cerro Gordo	43.93	Glass beverage bottles
Playa Jobos	45.82	Glass pieces
Bahia Ballenas	70.14	Plastic bleach/cleaner bottles
Guanica	60.46	Plastic cups/utensils

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Ocean Park	plastic wrapper	Carnival Cruise Line
Pinones	plastic items	Carnival Cruise Line
	plastic items	Royal Caribbean Cruise Line
	baggage claim tickets	Royal Cruise Line
	plastic bag	Royal Cruise Line
	plastic items	Norwegian Cruise Line
Rio Grande	2 cups	Royal Caribbean Cruise Line
	Lisboa after shave	Norwegian Cruise Line
	face cream	Cunard Princess Cruise Line
	cups	Costa Lines
Bahia Sucia	plastic cup	USS Josephus Daniels, CG27
	plastic items	Norwegian Cruise Line
Levittown	face cream	Princess Cruises
Fajardo	cartons	Kikuet Product Inc.

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Rio Grande	Belgium	detergent	
Bahia Sucia	France	plastic bottle	Bridel Lait Sterilise
	Japan	dried food in plastic	
Bahia Ballenas	France	milk bottle	
	Germany	spices plastic bottle	
	Holland	plastic bottle	
	Spain	plastic deodorant bottle	

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead bird, entangled in net	10 dead fish
Dead fish, in plastic bag	6 dead chickens/hens
Crab, inside plastic cup	4 dead pigeons
Crab, entangled in plastic	4 dead birds

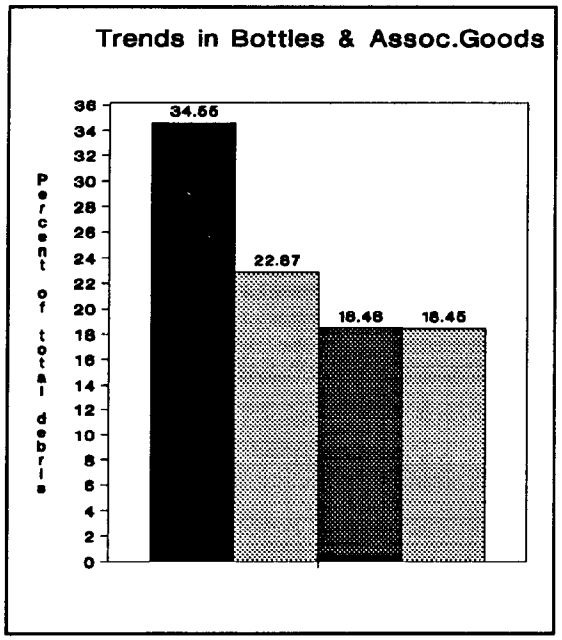
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED: (cont.)

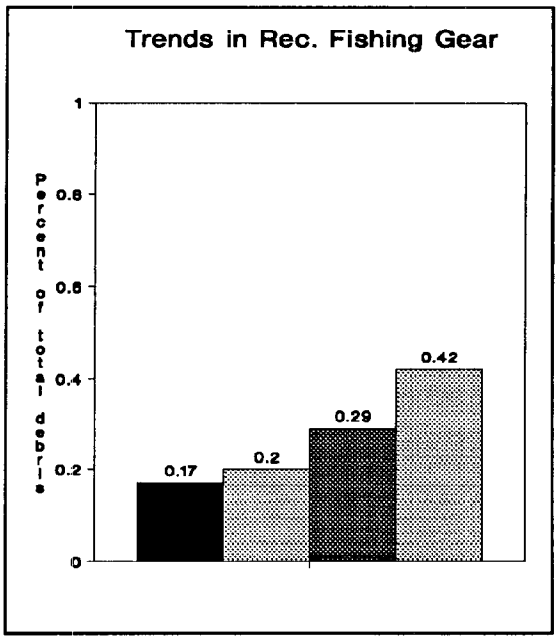
Debris Related	Other Reports
Crab, inside glass bottle	3 dead crabs
sponge, entangled in cloth	3 dead dogs
	1 dead cow
	1 dead lizard

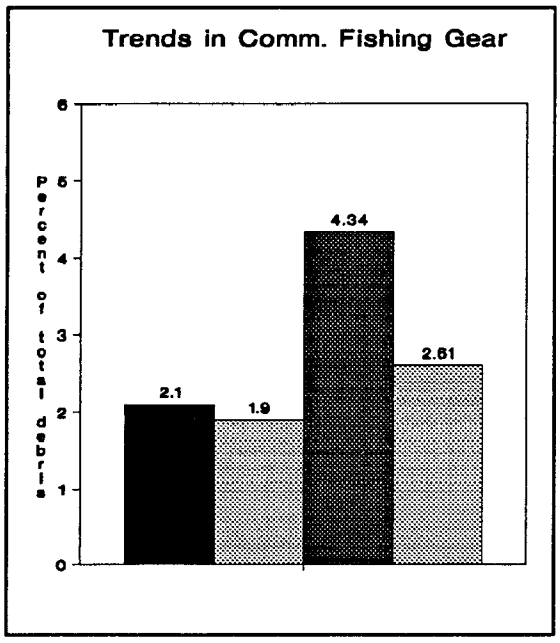
MOST PECULIAR DEBRIS ITEMS REPORTED:

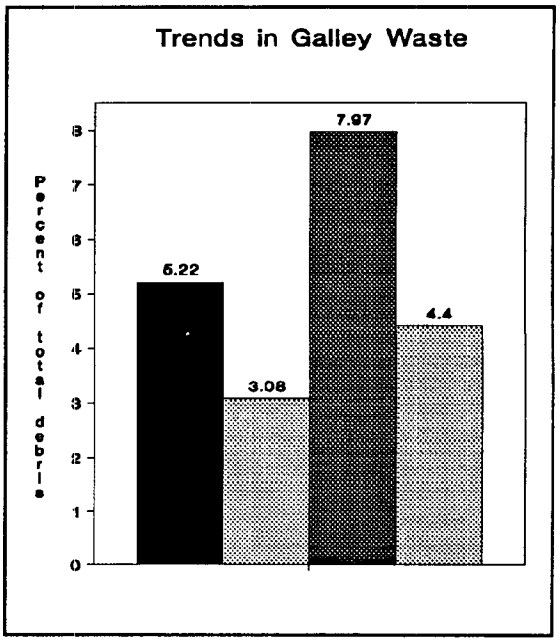
Pinones	9'x5' iron gate, fish tank
Ocean Park	vinyl boat cover, chess horse, headless animals
Pinones-San Juan	message in a bottle, diaphragm
Escambron	shopping cart, soda machine tank
Guancha Ponce	Buddha doll, enema, oil filter, sanitary napkins
Bahia Sucia	bag of rice
Boqueron	square iron stove base
Guajataca	exotic lampshade, thermos, pieces of flooring, dismantled car, sanitary napkin
Levittown	plastic legs, mannequin
Fajardo	metal van frame, shock absorbers
Boca de Cangrejos	X-ray picture
Cerro Gordo	square wood window, car filter

TRENDS IN MAJOR TYPES AND SOURCES OF PUERTO RICO'S BEACH DEBRIS:



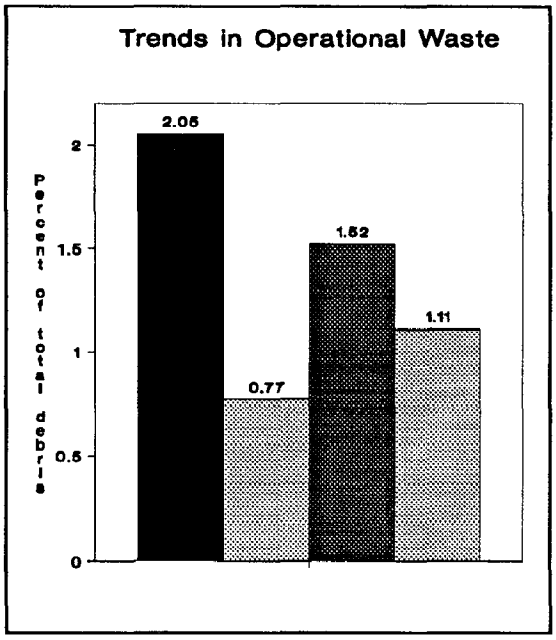


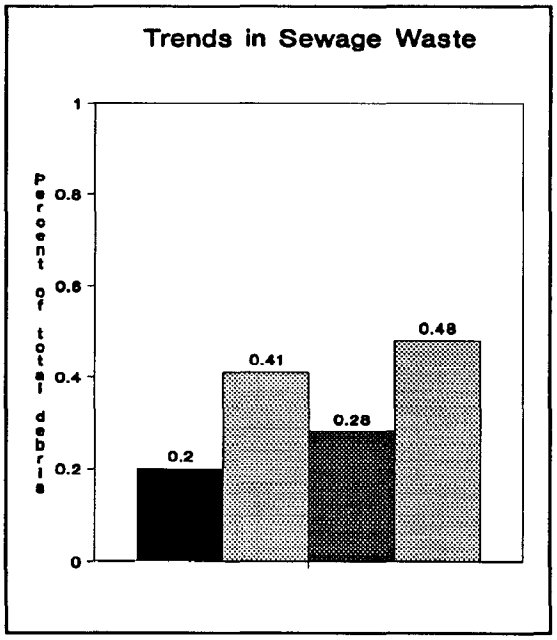


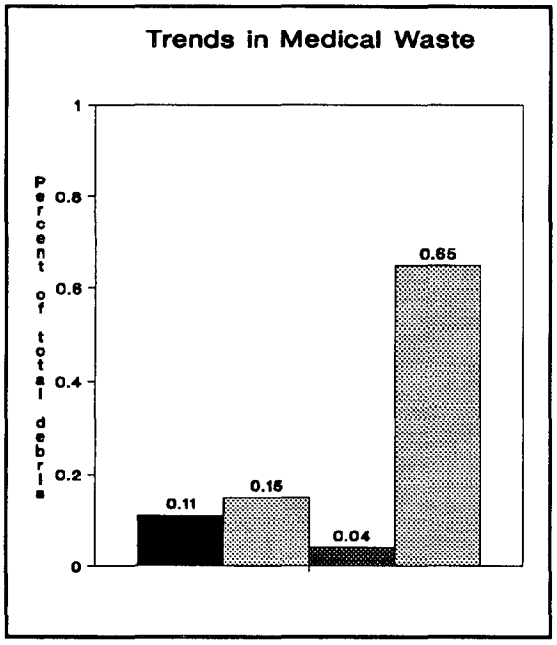


1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF PUERTO RICO'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON PUERTO RICO'S 1992 COASTAL CLEANUP CONTACT:

Javier Valec
University of Puerto Rico
Sea Grant College Program
RUM-UPR, P. O. Box 5000
Mayaguez, PR 00709-5000
(809) 832-8045

CLEANUP DATE: COASTWEEKS

1988 1989 1990 1991

Volunteers from several generations get ready to hit the beach at Sand Hill Cove, Rhode Island.

RHODE ISLAND

September 21, 1991
1,250 Volunteers
44 Miles Cleaned
26,000 Pounds Collected
309 Data Cards

Coordinated by: Eugenia Marks
Audubon Society of Rhode Island
12 Sanderson Road
Smithfield, RI 02971
(401) 231-6444

Co-sponsored by the Rhode Island Department of Environmental Management, Hospital Trust National Bank, and the Audubon Society of Rhode Island, "Get the Drift and Bag It" attracted more than 1,250 volunteers. Volunteers collected 12-14 tons of material on 44 miles of Rhode Island's 420 miles of coastline. In 1990, 1,000 volunteers cleaned 42 miles and collected 8-10 tons of debris.

Counts of more than 400 cigarette butts on a beach occurred in Tiverton, East Providence, Goddard Park, Oakland Beach (Warwick), Moonstone Beach, South Kingstown (Green Hill to Deep Hole), Charlestown, and Westerly. Since similar amounts of cigarette debris were not found on island beaches, it is assumed that the tally indicates beach users -- bathers, picnickers, and fishermen -- stub out cigarettes on the beach rather than the filters washing ashore.

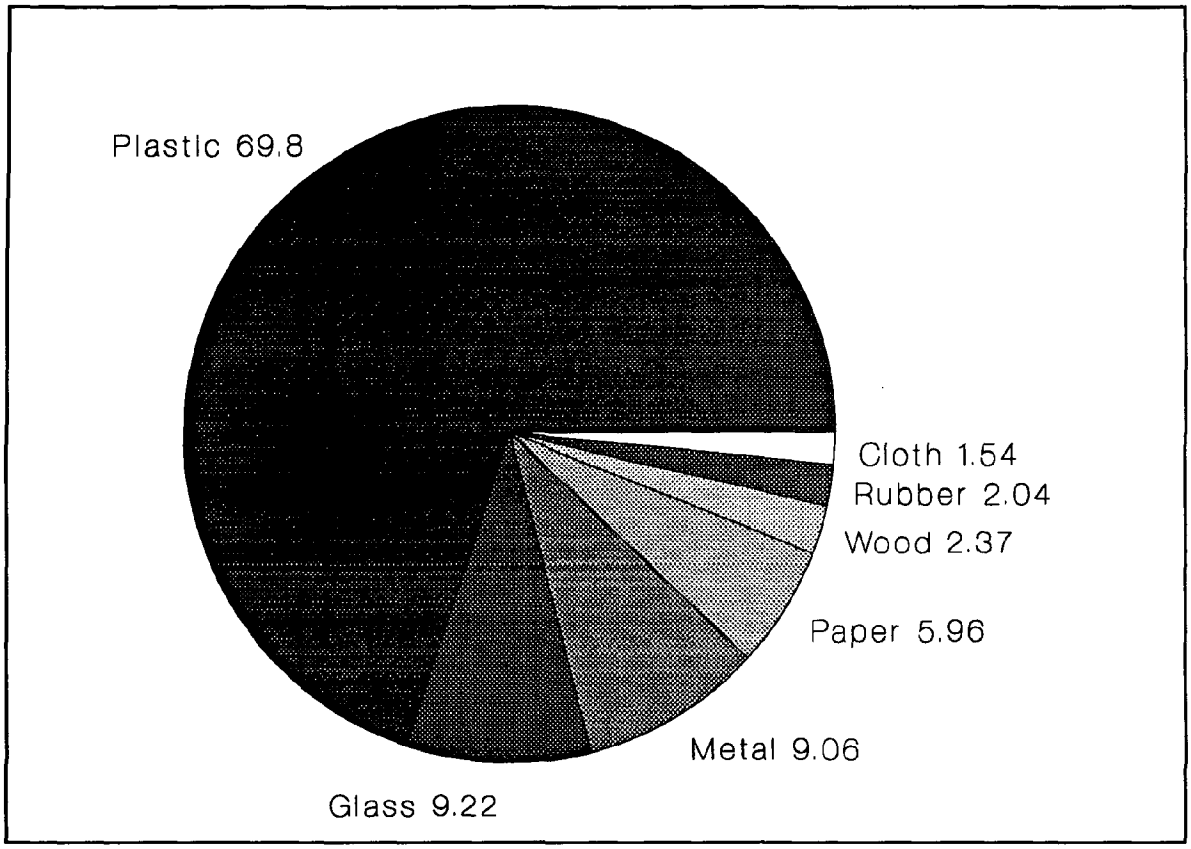
The tallies of tampon applicators show the impact of combined sewer overflows in cities where street sewers flood sanitary sewers during rains and the resultant overflow is dumped untreated into Narragansett Bay. More than 200 pieces of sewage-related debris were found downstream of outflows in Central Falls, Pawtucket, East Providence, and Providence. One hundred fifty applicators were found in Newport Harbor area, and over 100 were found on the west side of Aquidneck Island, on Prudence Island, and along Westerly Beach.

Plastic bags and balloons floating in marine waters endanger sea turtles who mistake them for jellyfish. Necropsies of turtles washed up on Rhode Island beaches have shown plastics blocking their digestive tracts. Loons, turtles, and marine mammals may become entangled in derelict fishing net and drown. Finfish consume styrofoam and plastic resin pellets. Birds and turtles are snarled in improperly discarded monofilament fishing line, kite string, and balloon ties.

Information gleaned from participants' tallying each piece of litter, as it is picked up, onto a standardized, 81-item form will provide background for planners and policy-makers to reduce or eliminate the derelict trash at its source. Data from previous years have already been used for legislative hearings in Rhode Island and at the federal level. At least one piece of legislation, requiring six-pack holders to be biodegradable, has resulted from our six years of mounting "Get the Drift and Bag It." In Newport Harbor, Kathy Maxwell, Recycling Coordinator for the city, and Christine Beal, a graduate student in the School of Oceanography URI, planned and implemented a successful harbor recycling and litter control program to help boaters properly dispose of trash. Audubon Society, with advisory help from DEM and other organizations, successfully applied for a grant from the Rhode Island Foundation to create an activities curriculum to educate school children that pollution beyond litter is harming our bay waters.

Eugenia Marks

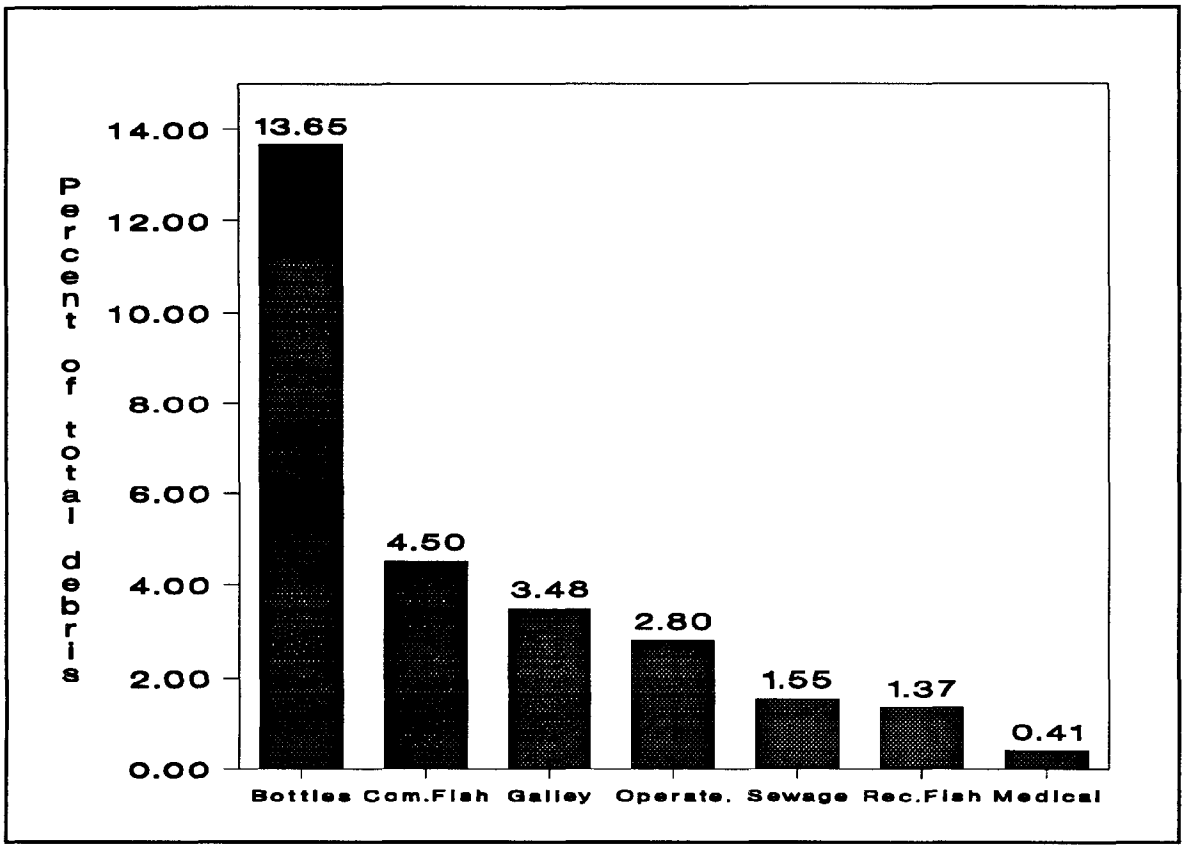
PERCENT COMPOSITION OF RHODE ISLAND'S BEACH DEBRIS:



RHODE ISLAND'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Foamed plastic pieces	6,870	7.24
2. Plastic pieces	6,375	6.72
3. Cigarette butts	5,809	6.12
4. Plastic food bags/wrappers	5,704	6.01
5. Plastic caps/lids	4,508	4.75
6. Glass pieces	4,110	4.33
7. Plastic straws	3,621	3.81
8. Metal beverage cans	3,586	3.78
9. Plastic beverage bottles	3,424	3.61
10. Glass beverage bottles	3,388	3.57
11. Foamed plastic cups	2,800	2.95
12. Plastic cups/utensils	2,410	2.54
Totals	**52,605**	**55.43**

MAJOR TYPES AND SOURCES OF RHODE ISLAND'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Bristol Bay	57.64	Foamed plastic pieces
Tiverton	64.10	Cigarette butts
Portsmouth	86.40	Plastic pieces
Middletown	55.66	Glass beverage bottles
Newport	72.38	Plastic food bags/wrappers
East Providence	76.54	Plastic straws
Prudence Island	82.85	Plastic pieces
Warwick	63.70	Foamed plastic pieces
Goddard Park	61.79	Foamed plastic pieces
North Kingstown	38.23	Glass pieces
Jamestown	59.94	Glass pieces
South Kingstown (Bay)	84.33	Cigarette butts
South Kingstown (Ocean)	80.23	Foamed plastic pieces
Narragansett (Bay)	75.98	Foamed plastic pieces
Narragansett (Ocean)	67.32	Plastic straws
Charleston	74.24	Cigarette butts
Quonochontaug Breachway	61.25	Paper pieces
Westerly	74.86	Plastic food bags/wrappers

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Middletown	plastic crate	Atlantic Coast Fish
East Providence	fish/salmon tag (2)	New Brunswick Aquaculture
Prudence Island	shipping tags (2)	Rosco Steel Co., Warwick, RI
	boat	RI 49701/ Reg. 92 26493
Goddard Park	plastic bottle	Colyte
South Kingstown (Ocean)	balloons with ribbons	Real New York Bargain, NY, NJ, and CT
Charleston	packing box	Frown Fish
Westerly	salmon tag	New Brunswick Aquaculture

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Prudence Island	Canada	plastic salmon band	Quebec Importation #8248228
		plastic salmon band	New Brunswick Aquaculture
		salmon band #3131835	Canada
Quonochontaug Breachway	Thailand	50 lb. rice bag	Sun Lee Inc.
Westerly	Canada	salmon tag	New Brunswick Aquaculture

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Dead sea gull entangled in plastic strapping	8 dead sea gulls
Sea gull, fish hook caught on side of mouth	3 dead birds
Bird entangled in six-pack yoke	2 dead deer
Sea gull, entangled	1 dead herring gull
Fish head entangled in seaweed, rope, fishing line	1 dead turtle
Volunteer's dog entangled in fish net during clean up	1 dead water rat

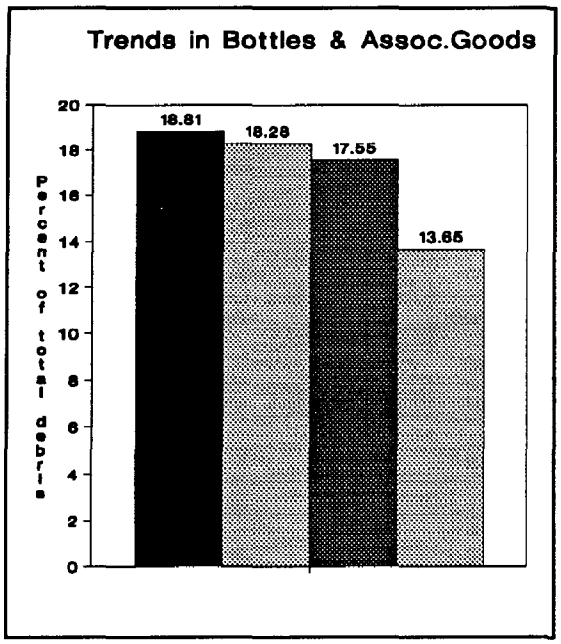
MOST PECULIAR DEBRIS ITEMS REPORTED:

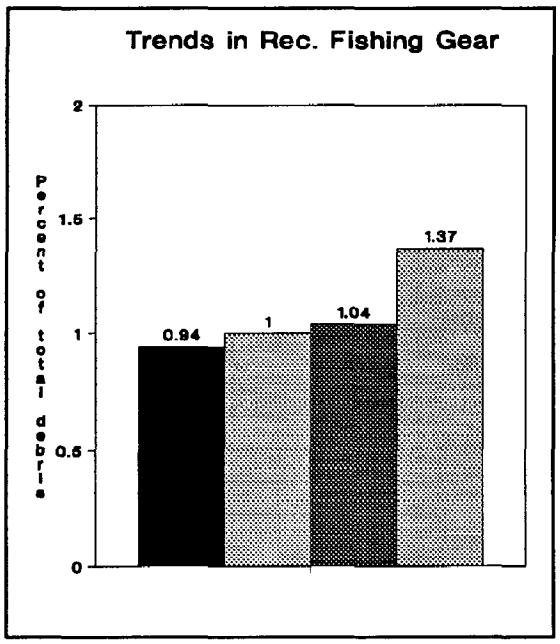
Bristol Bay	roof shingles, magnetic sign, rotary lawn mower, Primatene Mist dispenser, radiator grill, note paper w/memo that read: "Bread and water", railroad track connector, boat trailer without wheels, one set of Christmas lights, bedroom slipper, red underwear, cocaine bag (not quite empty), hub cap, boat seat, 70 lb. outboard motor, 2 boat cushions, propane tank, mushroom anchor, cardboard coaster w/picture of lady in bikini, cocaine pipe, distributor cap, paint brush
Tiverton	metal steering wheel, couch, auto seat, boat seat, sleeping bag, pair of BVDs
Portsmouth	shotgun shells
Middletown	mace container, desk drawer, stove grate, plastic gun shell casing, 3 pair of shoes, rubber boot, camera
East Providence	crack bottle, muffler, salmon tags, mop handle, plastic mop holder, heavy china tea cup, metal bed frame, running shoe

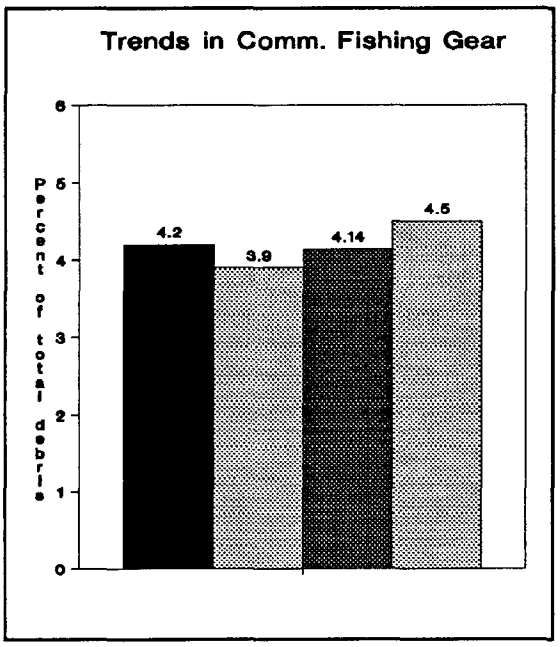
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

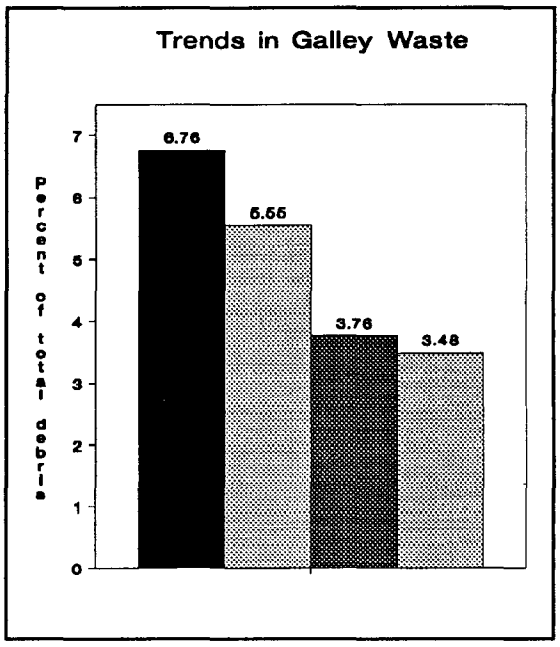
Prudence Island	partial plastic urinal, SCUBA diver flipper, bicycle frame, scooter engine shield, dental retainer
Warwick	toothbrush, empty gun shell, jockey shorts, garden hose, doll leg, turntable, pants, used toilet paper, gate, cassette tape
Goddard Park	damaged rowboat with dark liquid and plastic debris inside
North Kingstown	rain gutter, door
Jamestown	hockey puck, full Thermos, radiators, gas tank, sink, back of a TV set, motor, top lid to a chemical toilet, hatch door, golf ball, piece of life jacket, baby doll, floats from raft
S. Kingstown (Bay)	tinseled Christmas tree
S. Kingstown (Ocean)	headlights, padded couch cushion, shower cap, heating duct
Narragansett (Bay)	tire rims, gas tank, baby carriage, shoes, toothbrush, survival food bags, shot gun shells, toy truck, construction plastic tape, golf balls, stuffed bunny, fake plastic pine needles from fake Christmas tree, plastic grating, car tail lights, blanket, bed frame
Narragansett (Ocean)	paint roller, rubber netting
Charleston	shoe sole, firecracker, leather square, circuit breaker, Teenage Mutant Ninja Turtle toy, broken boogie board, bikini bottom, muffler, shoe heel, 3 ft. rubber hose, sponge, shotgun shells
Quonochontaug Breachway	outboard engine part, Peritioneah dialysis solution w/4.25% dextrose 2000 ml lot #zp039230, boat trailer, used sneakers, Playboy magazine, underwear
Westerly	boat fiberglass parts, panties, car horn, bedspring, payphone, paint brushes, paint can, dinosaur, Chinese dinner complete on a plate

TRENDS IN MAJOR TYPES AND SOURCES OF RHODE ISLAND'S BEACH DEBRIS:



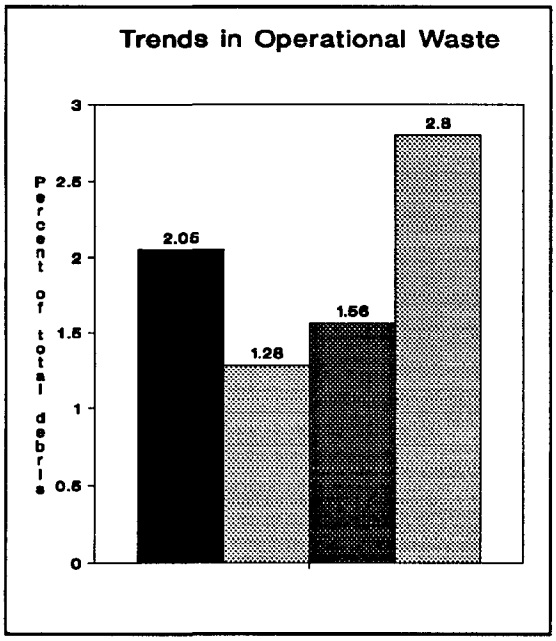


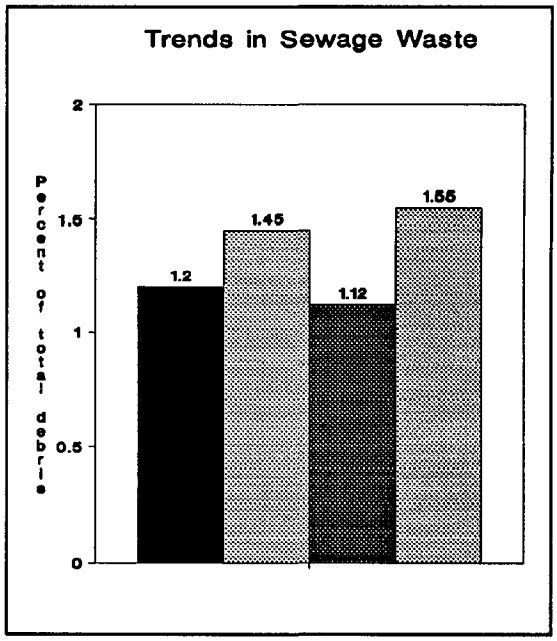


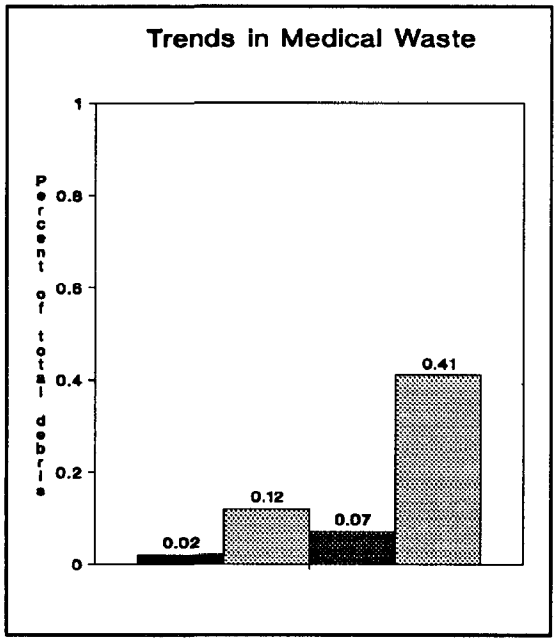


1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF RHODE ISLAND'S BEACH DEBRIS: (cont.)







1988 1989 1990 1991

FOR INFORMATION ON RHODE ISLAND'S 1992 COASTAL CLEANUP CONTACT:

Eugenia Marks
Audubon Society of Rhode Island
12 Sanderson Road
Smithfield, RI 02970
(401) 231-6444

CLEANUP DATE: September 19, 1992

Volunteers record the marine debris they collected at Folly Beach, South Carolina.

SOUTH CAROLINA

September 21, 1991
7,151 Volunteers
198 Miles Cleaned
124,000 Pounds of Debris Collected
513 Data Cards

Coordinated by: Leigh Handal
South Carolina Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
(803) 727-2078

Results: The 1991 annual Beach Sweep/River Sweep drew a record number of volunteers who headed out to beaches, estuaries, rivers, and lakes to clean up more than 60 tons of debris from the state's waterways. This year's results nearly doubled last year's record of 3,626 volunteers and 35 tons.

History: The South Carolina Sea Grant Consortium organized the first South Carolina Beach Sweep in 1988 with 3,000 volunteers picking up 15 tons of debris. Unfortunately, the event was cancelled in 1989 when Hurricane Hugo blew through the state the day before the scheduled sweep, giving the term "marine debris" a whole new meaning to South Carolinians! But volunteers were back in the swing again in 1990, when the SC Water Resources Commission and SC Clean & Beautiful teamed up with SC Sea Grant to organize the first comprehensive coastal and inland Beach Sweep/River Sweep.

Purpose: Beach Sweep/River Sweep is organized with three primary goals in mind:

1) To temporarily clean South Carolina's waterways of unsightly debris;

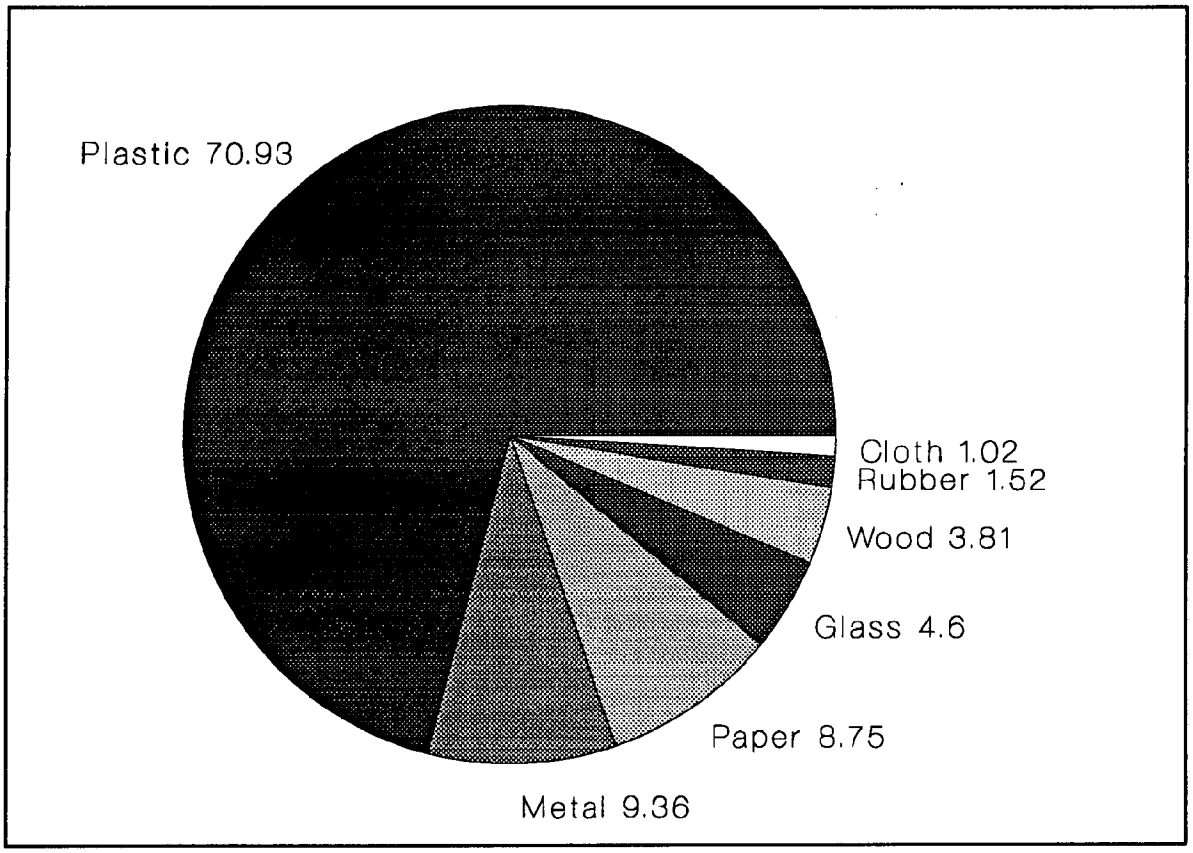
2) To serve as an educational tool to make South Carolinians more aware of the heavy toll debris takes on our economy and our environment, and to adjust their lifestyles and disposal habits accordingly. Debris poses an economic threat to industries such as tourism and recreation (South Carolina's second largest industry), is a safety and health threat to swimmers, boaters, and fishers, and is an environmental threat to fish, wildlife, and our natural resources. Because a large number of volunteers are school-aged children, Beach Sweep/River Sweep helps teach young people the value of our waterways and how important it is to develop good habits that conserve this valuable resource;

3) Beach Sweep participants log their findings on data cards that are then submitted to the Center for Marine Conservation for inclusion in an international marine debris database.

Findings: Comments made by volunteers indicated that again this year cigarette butts were the most common item found, with some volunteers reporting picking up as many as 800 in a single location. Areas located near beachfront hotels were littered with large quantities of plastic straws and swizzle sticks with the hotel logos on them. Other commonly found items included tires, appliances, clothes, construction site wastes such as concrete and lumber, and paper and plastic picnic and recreational items. Medical wastes were found along Grand Strand in Horry County and on Sullivan's Island. Two years after the storm, volunteers continued to find significant amounts of debris such as housing materials and docks apparently attributable to Hurricane Hugo. Of course, the amount of hurricane debris has decreased from last year's findings.

Leigh Handal

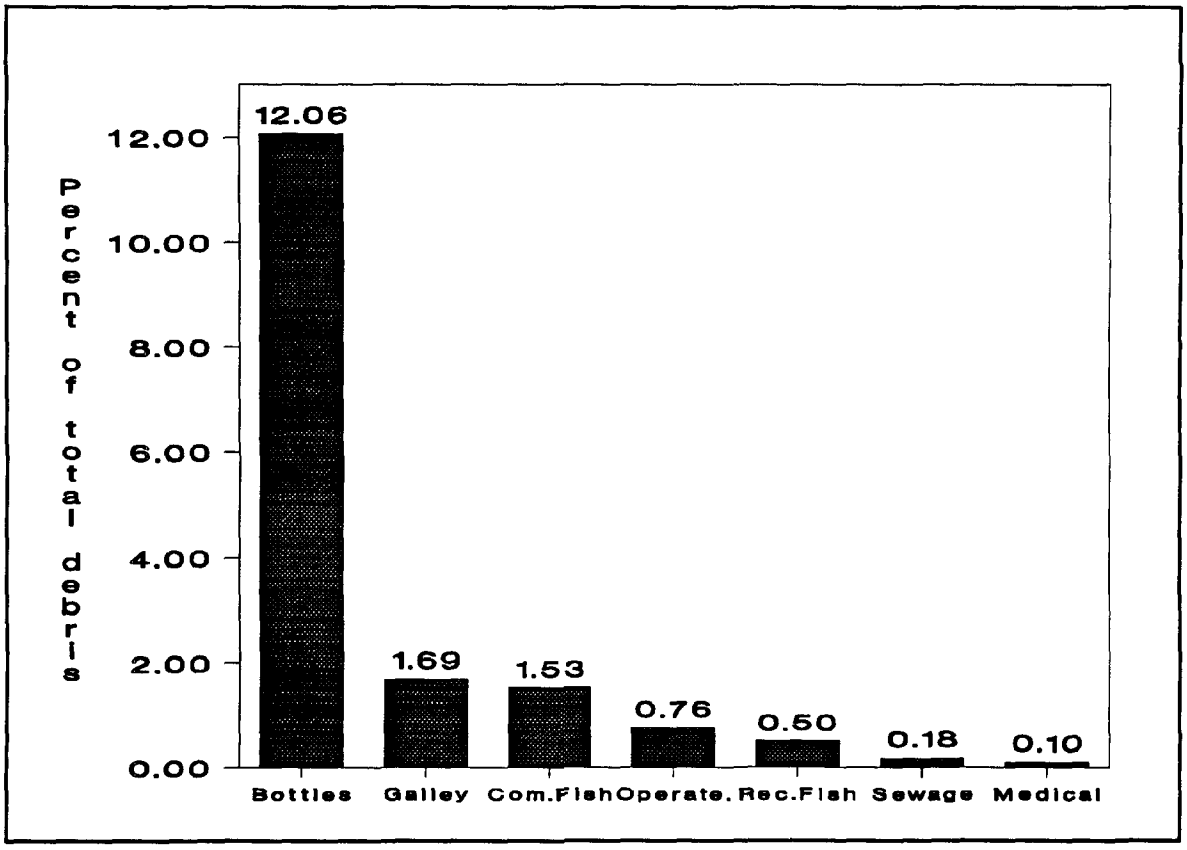
PERCENT COMPOSITION OF SOUTH CAROLINA'S BEACH DEBRIS:



SOUTH CAROLINA'S DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	37,676	29.90
2. Plastic pieces	7,339	5.82
3. Metal beverage cans	6,589	5.23
4. Foamed plastic pieces	6,169	4.89
5. Paper pieces	5,660	4.49
6. Plastic straws	4,632	3.67
7. Plastic food bags/wrappers	4,590	3.64
8. Plastic cups/utensils	3,660	2.90
9. Plastic caps/lids	3,576	2.84
10. Lumber pieces	3,356	2.66
11. Glass beverage bottles	3,080	2.44
12. Plastic beverage bottles	2,796	2.22
Total	**89,123**	**70.70**

MAJOR TYPES AND SOURCES OF SOUTH CAROLINA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Horry County	79.59	Cigarette butts
Georgetown	64.84	Cigarette butts
Isle of Palms	65.59	Cigarette butts
Mount Pleasant	77.99	Cigarette butts
Folly Beach	59.96	Cigarette butts
Edisto Beach	58.73	Cigarette butts
Hilton Head	77.39	Cigarette butts
Sullivan's Island	71.94	Foamed plastic pieces
Beaufort	60.81	Foamed plastic pieces

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Isle of Palms	plastic tag	New South Osmose American Wood Camden, SC
Folly Beach	plastic cup	Spirit of Charleston

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Isle of Palms	Mexico	eye drop bottle	Registro Sanistrio

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Sea gull entangled in six-pack yoke	18 dead horseshoe crabs
Dead crab in crab trap	13 dead fish
	4 dead birds
	3 dead chickens
	2 dead sea gulls
	2 dead sea turtles
	1 dead cat
	1 dead snake

MOST PECULIAR DEBRIS ITEMS REPORTED:

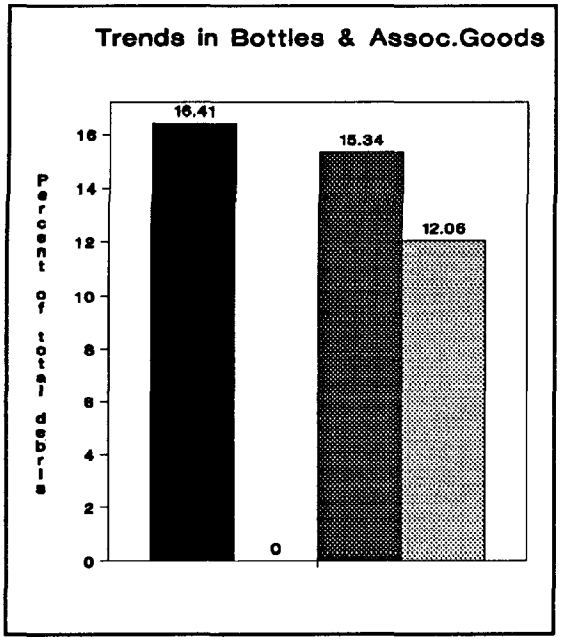
Horry County	prescription glasses, sanitary napkin, wooden table top, underwear, hanger, specimen in bottle, underclothes, condom pouch, "No Trespassing" sign, VO5 hot oil treatment container, filled vial, ping pong handle, quarter, explosives warning tag, piece of model train track, fire cracker pieces, white water pipe, lock, beach chair, 8 or 9 bed springs
Georgetown	sealed bottle with message inside, underwear, empty sand bag, cooler, toy knife, plastic shoe with barnacles, gunny sack, air conditioner, headphone, flashlight, metal bumper, telephone wire, trash can from Myrtle Beach, needle sheath, plastic tubing with hooks, refrigerator, dehydrated tomato soup cans, part of irrigation system, plastic screen, beat up couch, can of snuff
Isle of Palms	hot tub, pair of shorts, firecrackers, shotgun shells, surf board wax, panty liner, metal object that looked like 1/2 of a claymore, dog collar with leash, 3x10 piece of aluminum siding
Mt. Pleasant	dishwashing detergent, pantyhose, underwear, shotgun shells, jelly, rug

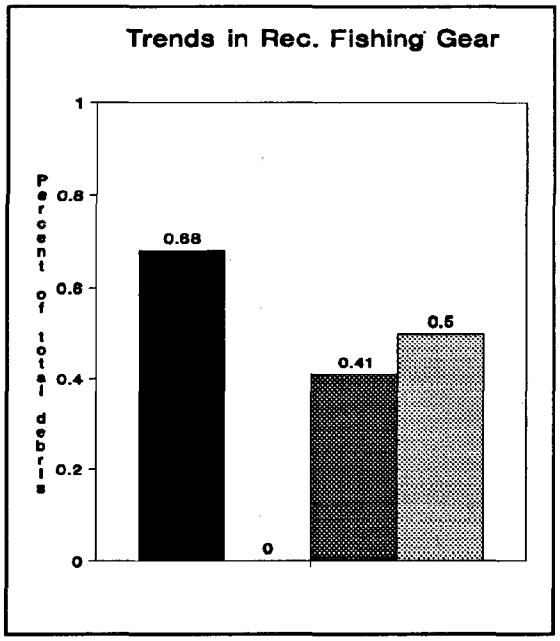
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

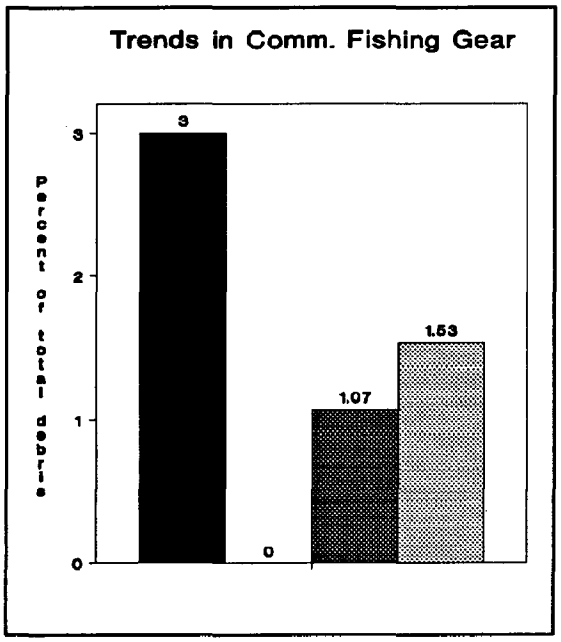
Folly Beach	bow tie, tinted window, Walkman, car engine head, underwear, refrigerator door handle, mini washing machine basket, buck shot, parking ticket, hospital ID, paint brush, placemat from the old Atlantic House restaurant washed away in Hurricane Hugo, queen-size bedspread, aluminum motor, toothbrush, surf wax, shaving items, old bottom of an iron, sweatpants with one short leg and one long leg, ripped underwear, wood duck decoy, pillow, inflatable float, pieces of telephone pole, traffic cone, rug, Hula-Hoop, bottle full of whiskey in bag, lawn chair, electronic device with many batteries, water colors, tackle box, life jacket, lounge chair, tarp or net like object, flip flop, crushed pylon
Edisto Beach	bra, concrete gear anchor, car antenna, ladies' underwear, urine in bottle, lawn chair, magic marker, nice tennis shoe, face mask, undershorts, 5 ft. metal strip, shotgun shells, beer can with BB gun holes, turtle egg, piece of wooden stair, rubber waders, cup with picture, leather boot, wicker pocket book filled w/trash, building permit dated 1/90, electric plug, plastic dog toy, head of Ken doll, 55 gal. plastic drum, full beer bottle with cap, thermometer with Japanese or Chinese characters on back
Hilton Head	pacifier, vial for crack or cocaine, woman's underwear, ice maker box, battery and rope used as anchor, comb, contact lens case, baby raft, men's briefs, necklace made of stone, full can of charcoal fluid on two condom wrappers, panty hose, tennis ball, 5 ft. bamboo pole, 3 full bottles of Evian, folding chair, paint roller, plastic American flag, 55 gal. drum filled with trash, metal spoon
Sullivan's Island	rubber hose, golf ball, doll leg, mattress pad, bed sheet, backpack, lawn chair, road block sign, shot gun casings, 11 ft. long plastic plumber's pipe, paintbrush, electric tester, wood door, Ralph Lauren suit
Beaufort County	diesel engine radiator coolant bottle, flip flop, plastic pipe, little girls' rubber sandals, trash can holder, underwear, $5, toner cartridge for a laser printer, lawn chair, gallon shortening drums (3), doll leg

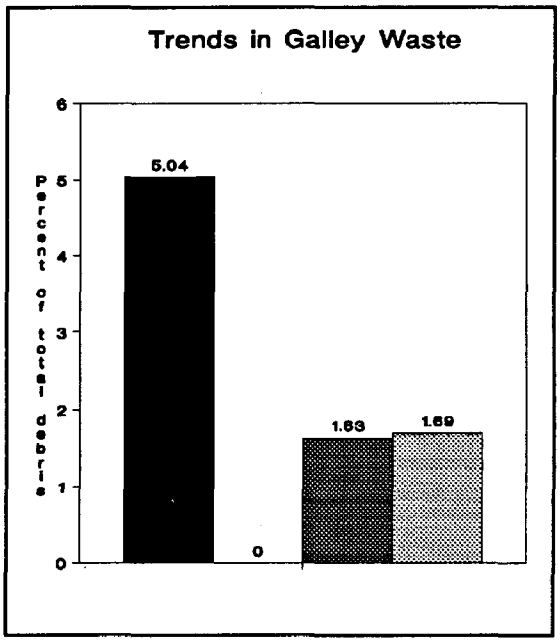
TRENDS IN MAJOR TYPES AND SOURCES OF SOUTH CAROLINA'S BEACH DEBRIS:

Editor's Note: South Carolina's 1989 cleanup was cancelled due to Hurricane Hugo. Therefore, no data for 1989 is included in South Carolina's trend analysis.

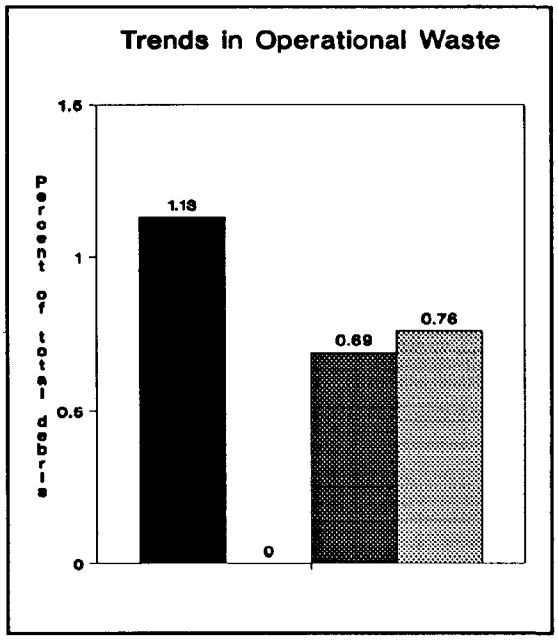


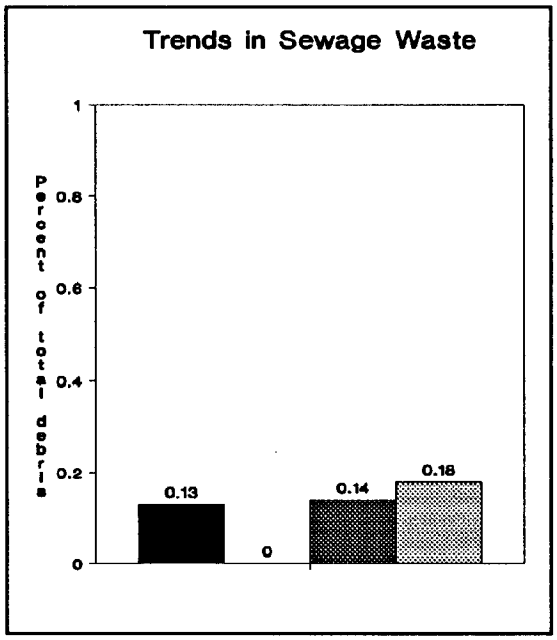


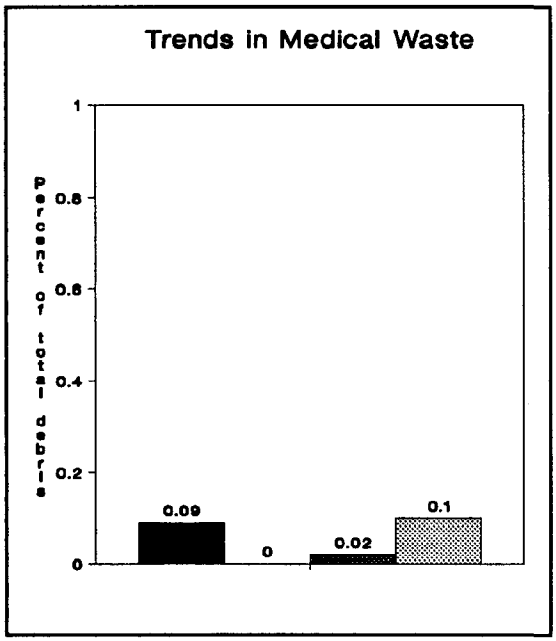




TRENDS IN MAJOR TYPES AND SOURCES OF SOUTH CAROLINA'S BEACH DEBRIS: (cont.)





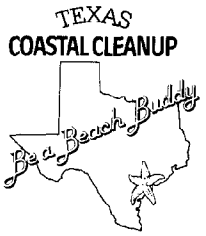


FOR INFORMATION ON SOUTH CAROLINA'S 1992 COASTAL CLEANUP CONTACT:

Leigh Handal
South Carolina Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
(803) 727-2078

CLEANUP DATE: September 19, 1992

Heroes of the Texas cleanup: area zone captains, together with a representative from Mobil.



TEXAS

September 21, 1991
12,716 Volunteers
169.45 Miles Cleaned
399,140 Pounds of Debris Collected
1827 Data Cards

Coordinated by: Linda Maraniss
Center for Marine Conservation
1201 West 24th Street
Austin, TX 78705
(512) 477-6424

Adriana Guitierrez
Texas General Land Office
1700 N. Congress Avenue
Austin, TX 78701-1495
1-800-85BEACH or (512) 475-1468

Thousands of volunteers from all parts of Texas headed to the coast for the 6th Annual Texas Coastal Cleanup held on September 21, 1991. All five U.S. Gulf of Mexico states had cleanups on the same day, creating a truly Gulf-wide effort to rid beaches of marine debris. Beach Buddy discounts at 18 coastal hotels encouraged volunteers from all over the state to come to the cleanup.

Beach Buddies worked at 21 sites along the coast, including several remote barrier islands. Volunteers included students, teachers, church groups, corporations, clubs, and personnel from the Navy. They collected everything from rubber gloves and buckets to trash from foreign countries.

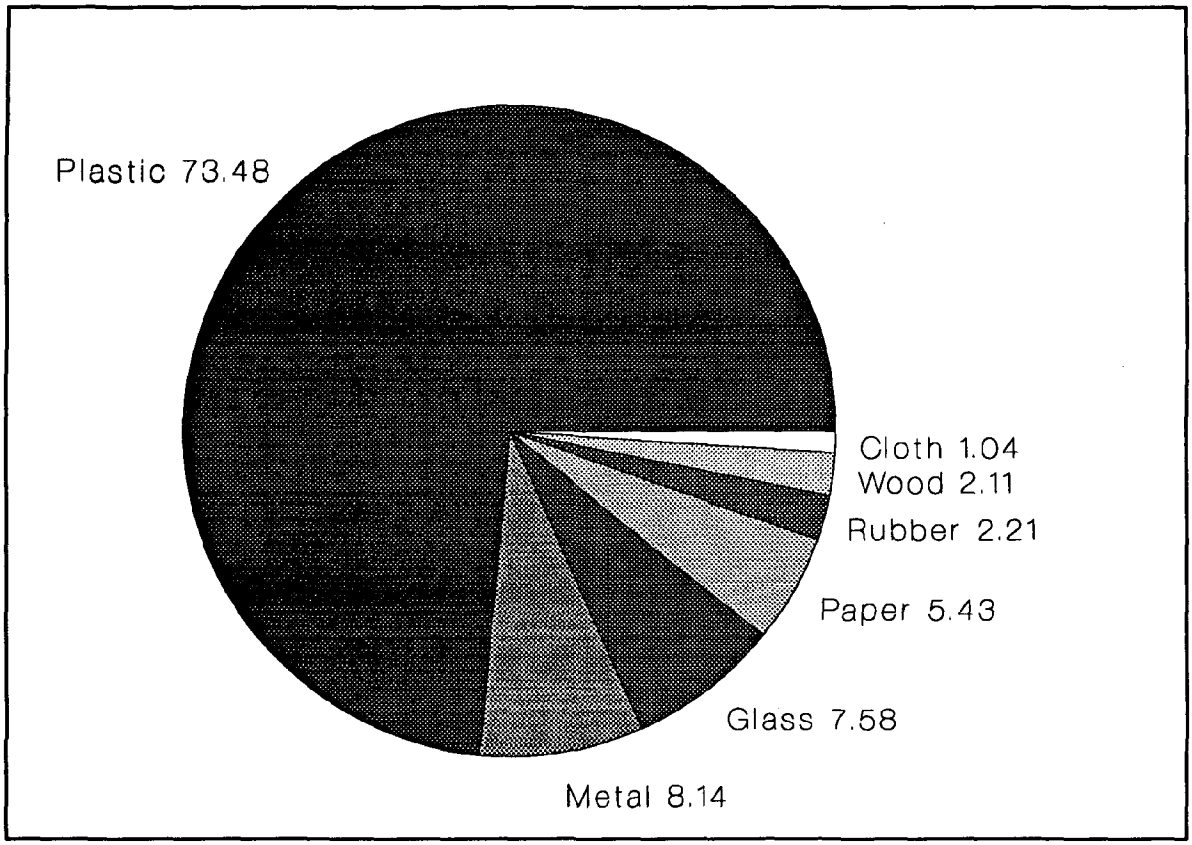
Popeye came to Port Aransas for a 9 am kick-off press conference with Land Commissioner Garry Mauro. Bill Oliver sang the "Beach Litter Blues" to the delight of hundreds of students working along Mustang Island. The third annual trash sculpture contest was held during the cleanup. Sculptures in this contest are composed of refuse collected from Texas beaches. Trash sculpture prizes were awarded and all volunteers were thanked at a noon press conference in Galveston. Each community had appreciation events to thank their participants.

Upon returning completed data cards to sign-in areas, volunteers received a certificate of thanks from the Texas General Land Office's Adopt-A-Beach program and the Center for Marine Conservation. "Don't mess with Texas lakes and beaches" bumper stickers and pins were also given out.

Our county coordinators worked hard all summer to attract volunteers and to ensure a safe and well-organized cleanup. We are grateful for their help and thank them for a job well done. We also thank the many corporations and foundations for donating money or supplies to the cleanup program. The success of this program depends on their continual support.

Linda Maraniss, Adriana Gutierrez, and Susan Ghertner

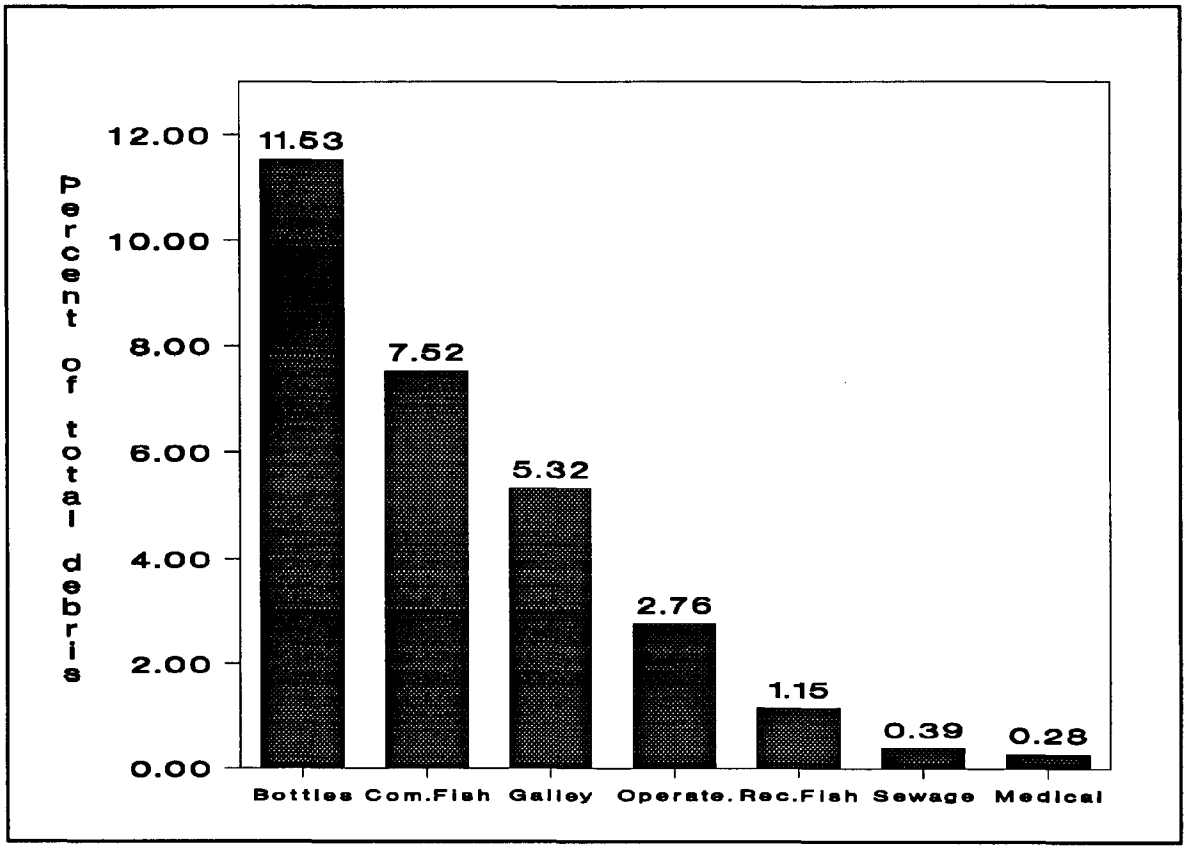
PERCENT COMPOSITION OF TEXAS' BEACH DEBRIS:



TEXAS' 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic pieces	41,100	10.41
2. Plastic caps/lids	34,428	8.72
3. Cigarette butts	23,418	5.93
4. Foamed plastic pieces	21,043	5.33
5. Plastic rope	18,659	4.73
6. Plastic food bags/wrappers	16,035	4.06
7. Metal beverage cans	12,549	3.18
8. Glass pieces	11,971	3.03
9. Glass beverage bottles	10,135	2.57
10. Plastic straws	9,362	2.37
11. Foamed plastic cups	9,054	2.99
12. Plastic beverage bottles	8,616	2.18
Total	**216,370**	**55.50**

MAJOR TYPES AND SOURCES OF TEXAS' BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Items Reported
Sea Rim State Park	71.30	Plastic pieces
McFaddin Beach	69.62	Plastic pieces
Bolivar Peninsula	71.62	Plastic pieces
Galveston	72.12	Plastic pieces
Sargent Beach	69.98	Plastic caps/lids
Port Lavaca	54.45	Plastic caps/lids
Matagorda Island	76.48	Plastic pieces
St. Joes	55.72	Glass beverage bottles
Rockport	64.74	Cigarette butts
Port Aransas	83.57	Plastic pieces
Corpus Christie	75.80	Plastic pieces
North Padre Island	83.18	Plastic pieces
Padre Island Ntl. Seashore	83.40	Plastic caps/lids
South Padre Island	68.76	Plastic caps/lids
Boca Chica	67.45	Plastic food bags/wrappers

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
McFadden Beach	plastic covers	Tameem Shipchandlers, Tel. (06) 598828, Fax, (06) 549683
	bag	Sparkle Ice Co., 3535 Tavis, Dallas, TX 75204
	hard hat	Arco Oil and Rig Co.
	shampoo bottle	Princess Cruise Line
	fishline spool	Ultralon
	corrosive waste/rusty drum	CXY Energy Inc.
	RTV sealant, 732 multi-purpose	Dow-Corning
	shampoo	Holiday Inn, Chateau le Moyne
	plastic food package	Ve Wong Corp., Taipei, Taiwan ROC
	return envelope	Clayton Thomas Funeral Home
Bolivar Peninsula	balloons	Shell Oil
	lg. plastic container	Fulton Seafoods, Inc., LA
	cap	City Pump Works
	plastic label	Milt's Seafood
	acid descaling compound	Drew Ameroll Marine Div.
Galveston	barrel containing oil	Exxon USA, SAE 40 Formula 01731 Batch 1706, LOC PAL, PC211731
	ammonium chloride	The Dollar Group of America, Inc.
	5 gallon bucket	Conoco Tracon Motor Oil
	gallon bucket	Rotellat, Shell, SAE 15W40
	plastic bag	Gulf Shores Rock Salt
	plastic packaging	Ear Division Corp.
	gauze	Sherwood Medical
	brochure	Jehovah's Witness
	milk crate	Borden
	coupons from contest	Exxon
	chemical bottle	Barcelona, 661 2550
Sargent Beach	50 lb. bag of salt	Sea and Land
	5 gallon plastic bucket	Texaco
Port Lavaca	paper	Mobil oil
	milk crate	Land O Pinca
Matagorda Island	plastic irrigation control valve cover	Brooks Products
	bag	Atlantic Ice Co.
	piece of plastic	Retur & Babrand
	military grease, 1/2 full	Oil Center Research P. O. Box 51871 Lafayette, LA 70505
	box	Jefferson Smurfit Corp.
	plastic bags	Morton Salt
	cold galvanizing compound	Crown
	chemical gun	Whistle Bond lifeboat
	pallet wood	Ortho
	plastic w/detonator	Patelt-Detanator, FHASA 55212V
	label	Coray Payton
Port Aransas	shipping bag	U.S. Army Corps of Engineer

TRACEABLE DEBRIS REPORTED: (cont.)

Location	Type of Debris	Source Indicated
Corpus Christi	piece of cloth	Montgomery Wards
	paper	Heinelsco
	pallet	Red Coach
	pallet	Jergens 11-90
	receipts	Walmart
	plastic cap, 3" diameter	Pemex
	bucket of X-ray processing chemical	Baltimore, MD
	assorted family waste & pill bottle	Velma Leith
	paint thinner carton	Devoe & Reynolds Paint
	plastic cup	Days Inn
	industrial machinery aerosol	Lab Inc.
	plastic label	Mobil
	piece of styrofoam	Tex Lic. No. 1050-1176 P.O. Box 9570, TX 78945
	plastic cup	Holiday Inn
N. Padre Island	plastic hat	Book Div., Grace Offshore
	injection bottle	Lakeside
	bag	Mission Party Ice
	bag	Country Heath, Village Pack Ice
	egg carton	HEB Grocery
S. Padre Island	plastic lid and cup	Pemex
	7 plastic bags	HEB Grocery
	plastic top, 6" diameter	Data Chem Inc.
	plastic	HEB Grocery
	cup	Raspa, "Self Serve Saves"
	water jug	HEB-Park Manor

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
McFadden Beach	France	bottle	
		styrofoam package	
		bottle	De-Sodorisant D'Atmosphere Francais
	Japan	lid	
	Mexico	plastic	
		plastic drink container	
	Singapore	drink container	Bean drink
	Taiwan	plastic food package	Ve Wong Corp., Taipei, Taiwan ROC
	Vietnam	food package	
	"Oriental"	drink box	Longan soy bean drink

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
Bolivar Peninsula	Australia	plastic vinegar bottle	Anchor-Australia
	Brazil	bug spray	Brazil Baygon
	Germany	glass bottle	
	Mexico	plastic bottle	
		talc bottle	
		Cloralex bottle	
		plastic medical bottle	
		jugs	Clarasol cleaning solution
	Norway	bleach bottle	
	Thailand	beverage container	Penny Royal Soda
	USSR	plastic bottle	
	Venezuela	pump spray bottle	
	"Far East"	glass bottle	
	"Oriental"	plastic package	
		beverage container	Soybean drink
	Unknown	plastic piece	Vacunado Contra Rabia
		bleach jugs	Spanish writing
Galveston	France	plastic cleaner bottle	
		metal olive oil bottle	
	Greece	plastic bottle	Nice
	Holland	canned milk	Ceteco Zoo Gramos
	Mexico	shampoo bottle	
		2 plastic drink bottles	
		3 plastic bottles	Veedol, Mexsana
		glass bottle	
		plastic oil can	Imemsa Yamaha Mexico
		beer bottle	Carta Blanca
		cigarette filter	
		2 motor oil bottles	Veedol A Debokda Super
		3 bleach jugs	Clarasol El Blanquedor Quege Blanquich
	South America	plastic bottle	
	Singapore	plastic bag	Yeo's soybean drink
		container	Harpic Toilet Cleaner, 250g NET
		drink carton	Yeo's soy drink
	Soviet Union	insect repellant can	
	Switzerland	aerosol can	
	Unknown	spray bottle	Touch of Scent Orient
		bottle	Mam RVOC Thvong Hang
		drink container	Kin Wong Rong
	Venezuela	oil container	Quaker
		butter container	
	Unknown	bag of noodles	Nouilles Instantanees Au Gout
		plastic lighter	Trialta
		2 plastic bottles	Suavitel, one written in spanish
		8 bottles	Cloradon
		plastic bag	Chikara, oriental style

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
Sargent Beach	Brazil	2 plastic bottles	
	Britain	soap bottle	
	China	metal container	
		shoe	
	France	plastic bottle	
	Germany	disinfectant	
		cigarette lighter	
	Greece	plastic bottle	
	Holland	shampoo bottle	
	Japan	bottle	
	Mexico	2 plastic bottles	2 Clorolex
		1 plastic bottle	Clarasol
		1 plastic bottle	Vidol
		1 plastic bottle	Kaomycin
		1 plastic bottle	Alcohol
		1 plastic bottle	Mr. Clean
		handcream bottle	
		4 plastic bottles	1 with syringe
		drink box	
		2 shampoo bottles	
		2 bleach jugs	
	Singapore	paper carton	
	USSR	cleaner bottle	
	"Oriental"	glass bottle	
	"SE Asia"	glass bottle	Fish sauce
	Unknown	1 plastic bottle	Talco Para Ninos Mennen
		1 plastic bottle	Nivea
		1 plastic bottle	Ospho
		1 plastic bottle	Suave
		margarine dish	
		salad oil	
		plastic circle	DelGolfo
Port Lavaca	Mexico	plastic cap	
	Singapore	drink box	
Matagorda Island	Cuba	bleach jug	No Cadel
	England	plastic bracket	
	Germany	nasal spray	Merok products
	Japan	Clorox bottle	
	Mexico	deodorant	Matchebelli
		3 plastic bottles	3 Clarasol
		3 plastic bottles	Veedol
		1 plastic bottle	Avon shampoo
		1 plastic bottle	Afrin brand drug
		1 plastic bottle	Valencia Blanquerdor
		plastic container	Mr. Leche

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
Matagorda Island (cont.)	Mexico	plastic bag	
		plastic talc container	
		plastic cup	Clarasol bleach
		plastic bleach jug	
		not recorded	Puebla S.H. De Mexico, Muratic acid
		oil bottle	Transmission oil
		plastic lid	Plastipol
		cleaner	Vero Vetril
		tuna	
	Nicaragua	kasbiotic suspension	Kalamazoo A.P. John Co.
	Singapore	instant noodles	Mi Hai Cua
	Taiwan	plastic wrapper	Kmu-tu noodles
	Venezuela	carton	Frica, Cocel De Jugos
	West Germany	shampoo bottle	
	"S. America"	glass bottle	Empacadora Bufalo
	Unknown	plastic bottle	Survitol
		plastic cleaning bottle	13 El Rendidor
		plastic oil bottle	Vertias petrdem
		plastic, drain cleaner	Destop
		plastic bottle	Cruz Verde
St. Joe's	Mexico	plastic bleach jug	
Port Aransas	Columbia	glass bottle	Laboratory bottle
	England	foam fire extinguisher	
	Malaysia	plastic	
	Mexico	2 plastic bleach jugs	
		2 plastic bottles	
		shampoo bottle	Caprice
		straw hat	
		plastic bottle	Que Si Blanqui, Clarasol
		liquor bottle	
		medicine bottle	
		plastic bottle cap	
		plastic food wrapper	Montezuma, Mexico
		plastic shampoo pouch	Vanart Shampoo del Centro
		2 plastic bottles	Clarasol, Cloralex
		2 plastic bottles	Veedol Intl.
		plastic bottle	Armstrong Las, Herklin
		mayonnaise lid	Hellmans
		bottle	Bristol
		cup	Motor oil
		moisture cream	
		plastic bag	
		2 plastic bottles	Clarion
		butane cylinder	
	Spanish	Vicks vapor	
		plastic bottle	
		shampoo bottle	
	USSR	jar	Aribecar
	Venezuela	medicine	

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
Port Aransas (cont.)	Unknown (cont.)	2 bleach jugs	Spanish
		lid	Fundador Pedro Domeco
		bottle	Vera Cruz, diostic
		plastic bottle	Marca Registraoa
		plastic bottle	Frescolin
		plastic bottle	Yamaha Actite
		murine eye drops	Spanish label
		glass bottle	Valenlina
		plastic bottle	Pebalemento
		plastic cap	Chamboucy
		cigarette butts	Maruror Cig. Co.
		plastic bottle	Fresco Limonaca
Corpus Christi	France	cap	Chembourcy
	Greece	plastic bottle	
	Mexico	tube of hand cream	
		4 bleach jugs	Cloralex and Alen Products Quimcos Alen
		medicine bottle	
		oil bottle	
		cleanser	
		alcohol	
		plastic pieces	
		bag, bottle	Produce of Mexico, Medico
		plastic lid	Agua Parifacado
		bleach jug	El Nevado, Blanquedor
		5 plastic bottles	
		2 bleach jugs	
		pen	Fonde
		plastic cap	Pedro Domeco Mexican
		rope	Pedro Dominico, Mexico
		plastic bottles	Detergent
		syringe	
		2 plastic beverage bottles	
		plastic wrapper	
		2 bottle caps	Allen
		3 bleach bottles	Clarasol
		shampoo bottle	Lindy
		cap	Hellmans
		food bags	
		plastic water bottles	
		dissenfectant bottle	Sol
		ice cream stick	Montes
		bottle cap	Mexico Yogurt, yogurt coat, sulfuric acid
		plastic bottle	Yamaha oil
		plastic container	
		plastic bottle	Alen Sevicio de su Hogar
		pouch	Creme Enjuague
	Singapore	plastic container	Toilet cleaner, Reckitt & Coleman Ltd.
	"Asian"	plastic shampoo bottle	Elida-London
	"Orient"	food pack	

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
Corpus Christi (cont.)	USSR	glass medical jar	Oxycyclosolum, Happy Hoe
	Yugoslavia	hairspray	
	Unknown	plastic bottle	El Rendido, Para Su Protoeel
		plastic bottle/lid	Danone, Degulfo
		rice bag	Empecacoraa la Mared
	Unknown	plastic piece	Adena
		plastic lid	Aurelita
		plastic bag	Thinhsaigon
		plastic bottle cap	Pedro Cardora Company
		plastic bag	Mustao
		plastic bag	Cameron Fresco Concelad
		tear gas	Samre
N. Padre Island	Ecuador	bottle	Quesiblanguea
	Mexico	plastic beverage bottle	Pino Mex
		24 bottles	Cloralex
		motor oil bottle	
		plastic cleaning bottle	Amonnid Mex
		6 plastic bottles	Clarasol
		4 cleaning bottles	Veedol
		plastic cleaning bottle	Pino
		bottle	
		acid bottle	
		plastic bag	Protexa Mexico 576-7300
		plastic bag	Bimo Read
		egg carton	Koug Huevo Mexico
		shampoo sample	Vanart shampoo
		shampoo	Nuevo Shampoo Caprice
		plastic bottle	Juice
		plastic bottle	Drain cleaner
		shampoo	Vanart
		bottle	Solucion de hyprochloric
		Vicks Medicine	
		water bottles	
		bic pen	
		plastic bottle	Texaco chassis grease
		bottle	Beiersdorfde Mexico Saz
	Spain	plastic bottle	Acetate
	Thailand	food container	
	Unknown	metal tube, zinc oxide	Pennwalt, Spanish
		plastic bottle	Pritt
		glass	Fuera de borda, Nestle dolca
		shampoo in plastic	Nuevo Aroma
		plastic bottle	Electolito
		bottle	Aceitas Lubricantoe
		bottle	Arasas Camkadi Sa 3
		plastic bottle cap	Delgoled, Poza Rica, Veracruz
		plastic bottle	Fruts Bebida Defuta, Tiempo
		plastic bottle, caps	Vanart Intermezzo
		plastic bottle	Pegamento

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
N.Padre Island (cont.)	Unknown (cont.)	antiperspirant	Erlandi
		milk carton	Nutrileche
		plastic lid	Svenska Toaksao
		plastic cup	Pinol
		Hellmans	Conjugo de Limon
Padre Island National Seashore	Greece	chemical bottle	x^Opion
	Japan	condom	
	Mexico	vegetable bag	
	Mexico	Vick Vapo Rub	
		plastic bottle	Pegamento
		2 plastic oil bottles	Cloralex
		bottle	Veedol
		shampoo sample	Clarasol
		vitamin container	
		3 bottles	
		shampoo samples	
		milk carton	
		jar, platter	Boldocynnara
	Singapore	plastic cleaner bottle	
	Thailand	glass jar	
S. Padre Island	Great Britain	plastic	Liquid detergent
	Mexico	plastic bottles	Medical waste, Methiolate
		plastic food bag	
		7 plastic bottles	Veedol
		cigarette package	
		baby powder	Mexana
		acid chemical	Alamo
		insect repellant	
		glass bottle	
		bleach jug	
		butter container	Primavera
		face creme container	Laila
		plastic container	Lactel
		plastic bottle	El Rendidor
		shampoo sample	
		chocolate wrapper	
		cracker wrapper	
		2 plastic bottles	
		plastic bottle	Disinfectant
		plastic beverage bottle	
		plastic	
		plastic container	Magnopynol
		plastic container	Cadena
		plastic bottle	Clarasol
		yogurt container	
		bottle top	Alen Servico
		plastic beverage bottles	
		plastic chemical container	
		plastic dairy products	

FOREIGN DEBRIS ITEMS REPORTED: (cont.)

Location	Source	Type of Debris	Other Remarks
S. Padre Island (cont.)	Mexico (cont.)	bottle	Cloralex
		plastic oil container	
	"S. America"	plastic container	Blanquedor Valenciana, S.A. (c12)
	"Spanish"	2 plastic bottles	Acido Muriatic Jr.
		plastic vaseline jar	
		plastic bottle	Descodorante Producto Higenilo
		plastic bleach bottle	Valenciana
		plastic cookie sack	Galletas puig presquistias, spanish
	Unknown	plastic oil container	Exxon
		plastic bottle	Electrolilo para
Boca Chica	Mexico	yogurt container	Chamourgey

STRANDED AND/OR ENTANGLE WILDLIFE REPORTED:

Debris Related	Other Reports
2 dead birds, entangled in fishing line	49 dead fish
Dead bird, entangled in strapping/netting	24 dead birds
Dead fish, entangled in plastic	18 dead catfish
Dead fish, entangled in fishing line	9 dead sea gulls
Dead fish, entangled in plastic	1 dead land turtle
Dead mullet, entangled in plastic bag	1 dead racoon
Dead mullet, entangled in plastic holder	1 dead baby duck
Dead crab, entangled in plastic bag	1 injured bird - released
Dead crab, entangled in rope & fishing line	1 injured sea gull - rescued
	1 dead tern
	1 dead dog

MOST PECULIAR DEBRIS ITEMS REPORTED:

Sea Rim State Park	trampoline
McFadden Beach	tire iron, paint can, toy horse, propane tank, muffler, bikini strap, men's underwear, paint, ping pong ball, brick, bell, toilet paper roller, toothbrush, medicine vials, Tupperware lid, 2-gallon freon bottle, lawn chair, return envelope to Clayton Thompson Funeral Home, whole onion, mangoes, butane bottle, brush handle, pina colada liquid, deodorant, human feces in plastic ice bag, fishing reel, Mobil bumper sticker "Protect and Enjoy Your Environment," clothes hanger, gaff hook, gas canister, purple glass marble, corrosive waste drum with the logo "Our goal is a safe and clean environment," bottle with contents labeled "skin tissue sample," woven plastic tubes

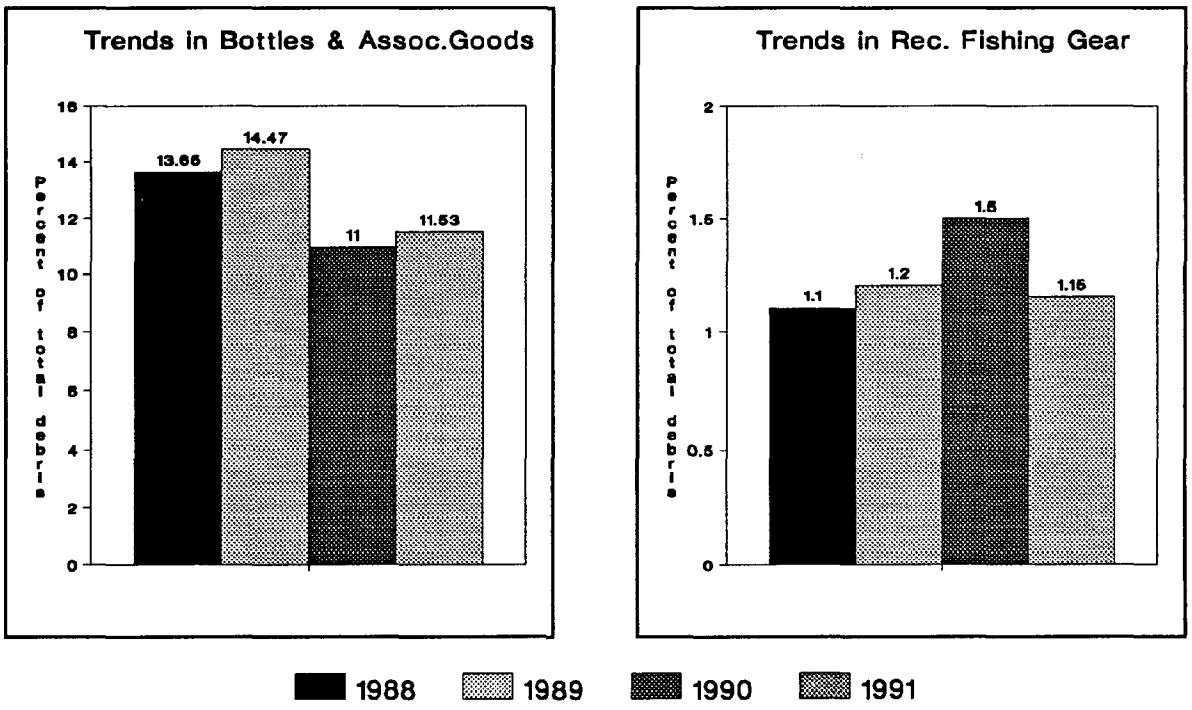
MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

Bolivar Peninsula	folding chairs, suitcase, refrigerator, bed springs, large carpet, milk crate, typewriter, television, mattress, air conditioners (window units), fishing pole, telephone, full rootbeer cans, raincoat, snorkel mask, shock absorber, propane gas bottle, refrigerator door, empty jar of "colon cleaner", underwear, seismic line, silk flowers, baby doll leg and arms, steel tape measure, $1, wire rim wheel, muffler, medical bottle for syringe, jar of fat, carpet row, gamepiece for foreign game, small metal container with Chinese writing and "Castle of Heaven" on it, kid's telephone handset, new doormat, boy's underwear
Galveston	toothbrush, oil injection cartridge, paintbrush handle, volleyball net, razor blade, metal chair, unused matches, umbrella, bullets, fire grate, large whale float, box springs, car door, corked bottle, washing machine, something that resembled a charred steak or chop, Tylenol bottles, Grandma's jelly, a dildo, grill from a car, toilet paper roll w/metal attachment, shoe horn, necklace, half of a Barbie doll, sex wax paper, pacifier, tailpipe, lounge chair, unused candle, unused cigar, serum bottle, hot oil treatment, plastic cowboy, plastic bag w/shrimp in it, room deodorizer, wooden surfboard, rug, full Coke can, tennis ball, Christmas tree light, antenna, Thermos lid, baby bottle lid, audio tape, pearl earring, extra-large swim trunks, student desk top, headphones, birth control package, quilt, plastic green spaceman, drain pipe for house, valid Chevron credit card, hair brush, IV tubing, plastic fish, decorative hair comb, chemical or medical glass vial, eggs, oil test tube, plastic appliance plug w/four plugs, $5, large plastic bag with tar like substance inside (too heavy to move), plastic flower, barrett, heads-up penny, plastic toilet seat, hatchet, car fender
Port Lavaca	penny, weight disk, 20 feet of wire insulation, auto or boat seat, Christmas ornament, car console, torch, 50 lbs. of salt, paint can, life preserver, butane tank, heating pad, silicone caulking tube, rat poison
Matagorda Island	Christmas stocking with names on it, marble countertop, tennis shoes, dryer vent, commode, pillow, pacifier, large bone, shingles, bed springs with frame, bra, bathing suits-male and female, boat radio, carburetor for mower, 2 pair of men's underwear, basketball hoop, hot pink shoe, pipes, hinges, asbestos, tile (from burn site)
St. Joe's	medicine bottle
Rockport	bottomless galvanized metal trash can, nails, Bethsom rug, shotgun shells
Port Aransas	anchor, electrical gadget, vampire teeth, fringed balloon, E.P.T. pregnancy test, doll arm, plastic onion, 4 squash, canteen, tent spike, goggle band, push broom, contraceptive diaphragm, bicycle handle bar, onion, headband, toy monkey, peach, baby bottle, refrigerator door, 5 foot CO2 tank, 5 gallon pump sprayer, partial denture w/teeth attached, muffler, toy letter magnets, rat poison, brake fluid, back scrubber, roller brush, falsie from a bathing suit, Alice in Wonderland figure, 30 mg plastic container w/Trofurazona drug, round corroded metal piece w/open cylinder shape endings of screws, dime, lipstick, cocaine vial, medicine bottle for needles, oven tray/rack, baby bottle nipple
Corpus Christi	underwear, blue jeans, head phones, button, shoe sole, metal toy wheel, paintbrush, toothbrush, bullet shell, lawn chair, panties, sex wax, pregnancy test, panty hose, diaphragm, heel of ladies' shoe, plastic cushion cover, jar of unknown liquid, hip waders, 50 lb. piece of lead melted in a campfire, drug vials, earplugs, paint roller, Bacardi bottle, door knob, car jack, plastic dracula teeth, tear gas, comb, Barbie doll leg, pacifier, refrigerator magnet, refrigerator door, $2.25, insulin bottle, golf ball, Rubbermaid trash can, shampoo, plastic chicken, yellow plastic Elmer Fudd toy, horseshoe, hatch cover from fishing vessel, metal grill, melted glass bottles

MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

N. Padre Island	toy soldiers, toothbrushes, soap dish, plastic bottle of potassium, bleach container full of oil, dental container with tooth in it, can of make-up, yo yo, oil filter, lawn chair, hair roller covered w/tar, douche applicator
Padre Isl. Ntl. Seashore	plastic Dracula teeth, plastic Batman, plastic Captain America, tent
S. Padre Island	comb, pillow, corn on the cob, rug, wire hangers, roof shingles, drugs, 5 ml. graduated cylinder, toilet lid, oversized condom, penny, yellow condom, sanitary napkin, rusted bowl, toilet seat lid, half of a Barbie doll, goal post, 25" TV, doll leg, air conditioner frame, underclothes, muffler, tennis shoe, sweater, sandal, tarp, Moltov cocktail, 33 cents, car floor mat, styrofoam sandals, tent, baby bottle nipple, handkerchief, umbrella, truck bumper, jockey shorts, broom, eggs in egg carton, Corpus Christi pencil, wallet
Boca Chica	auto exhaust manifold, suction cup, gas cap, religious tracts in a bottle, training bra, big carpet, hammock, hair curler, oxygen tank, car bumper.

TRENDS IN MAJOR TYPES AND SOURCES OF TEXAS' BEACH DEBRIS:



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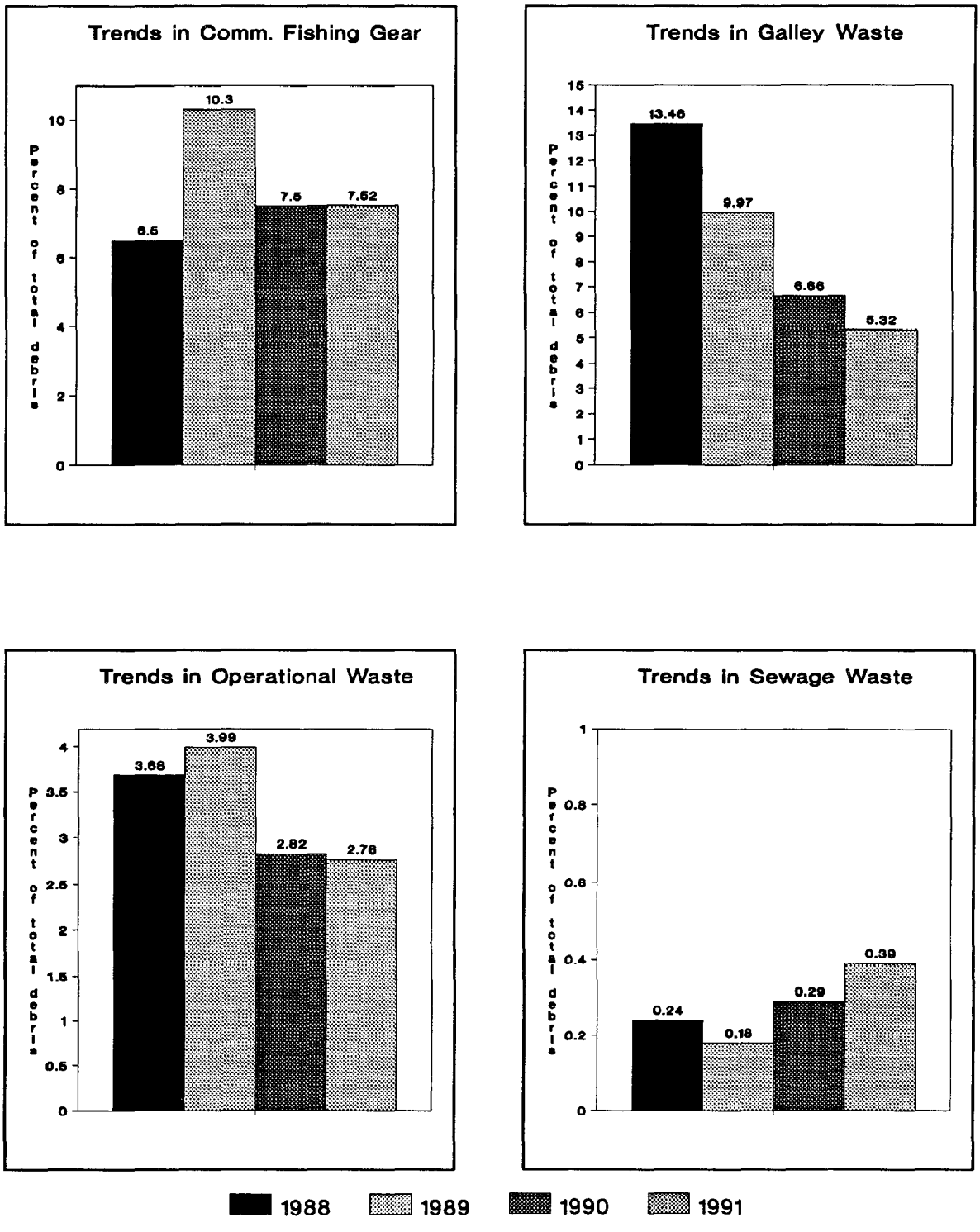

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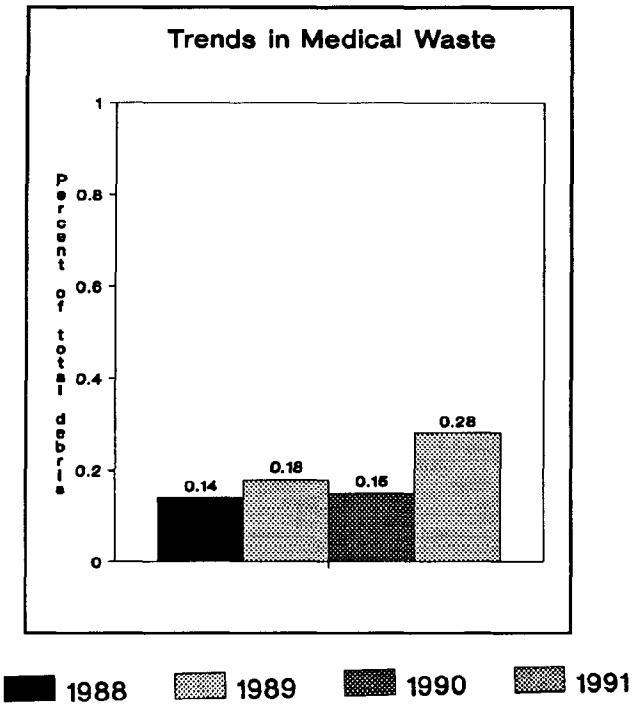


FOR INFORMATION ON TEXAS' 1992 COASTAL CLEANUP CONTACT:

Linda Maraniss
Center for Marine Conservation
1201 West 24th Street
Austin, TX 78705
(512) 477-6424

OR

Adriana Guiterrez
Texas General Land Office
1700 N. Congress Land Office
Austin, TX 78701-1495
1-800 85BEACH or (512) 475-1468

CLEANUP DATE: September 19, 1992

And they're off...Volunteers get ready to clean the beach in Texas.

Navy personnel helping to record debris collected from Fisherman Island, Virginia.

VIRGINIA

September 14 and 21, 1991
1,211 Volunteers
56 Miles Cleaned
18,027 Pounds of Debris Collected
476 Data Cards

Ocean Beaches:
Coordinated by: Dr. Joseph Silvio
Audubon Naturalist Society
8940 Jones Mill Road
Chevy Chase, MD 20815
(301) 652-5964

Chesapeake Bay:
Coordinated by: Robert Dean
Clean the Bay Day Inc.
1204 Shawn Dr.
Virginia Beach, VA 23456
(804) 427-6606

We had another "turn around" day for the Third Annual Assateague Island Beach Cleanup, with torrential rains just prior to signup time and brilliant sunshine when we hit the beach. This year, 180 volunteers cleaned 14 miles of wild beach on Assateague and four miles on Wallops Island, removing approximately 10 tons of trash. There were noticeably fewer plastic items, a greatly reduced number of tires, but a far greater amount of lumber and wood. In general, the beaches looked much less littered than in the past two years.

I think everyone had a terrific time and the beach looked marvelous at the day's end. We look forward to the 1992 Beach Cleanup.

Joseph Silvio

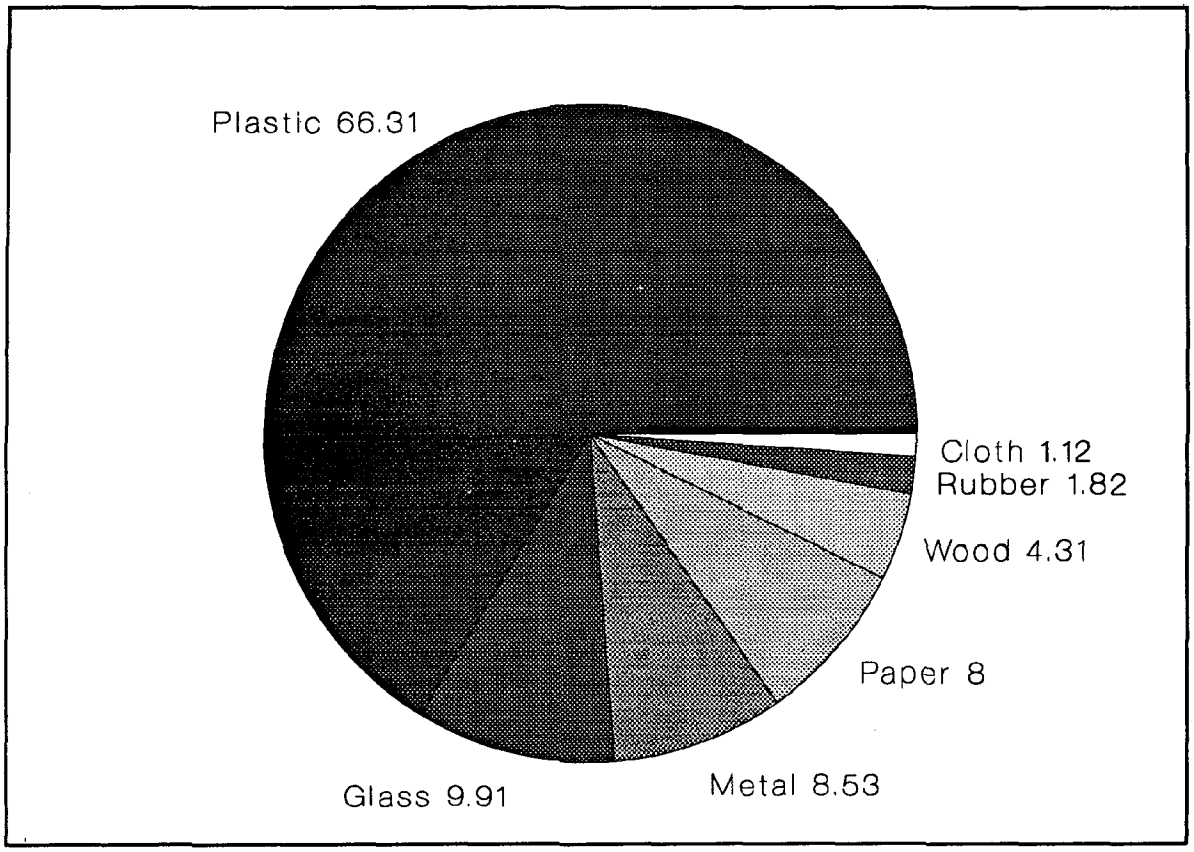
The 1991 Hampton Roads participation in the International Coastal Cleanup produced both an increase in volunteers, miles cleaned, and amount of debris collected. Because of Desert Storm and the vast amount of military infrastructure located in Hampton Roads, the military involvement was greatly reduced. Significant reduction also occurred during the "Clean The Bay Day" June cleanup. But 1992 should see everyone home safe and sound and we hope for a great turnout for both cleanups.

While Virginia has one of the largest resort beach areas in the world, we also have many miles of inland waterways, which can carry debris from inland sights to the coast. To combat this source of marine debris, many cleanups in the Hampton Roads areas focus on inland waterway. Even those places accessible only by canoe are tackled by dedicated volunteers determined to get every last piece of trash they see.

We did experience a large increase in participation from scouting groups. Because of this, we have developed a scout patch that can be earned during the 1992 cleanup.

Robert Dean

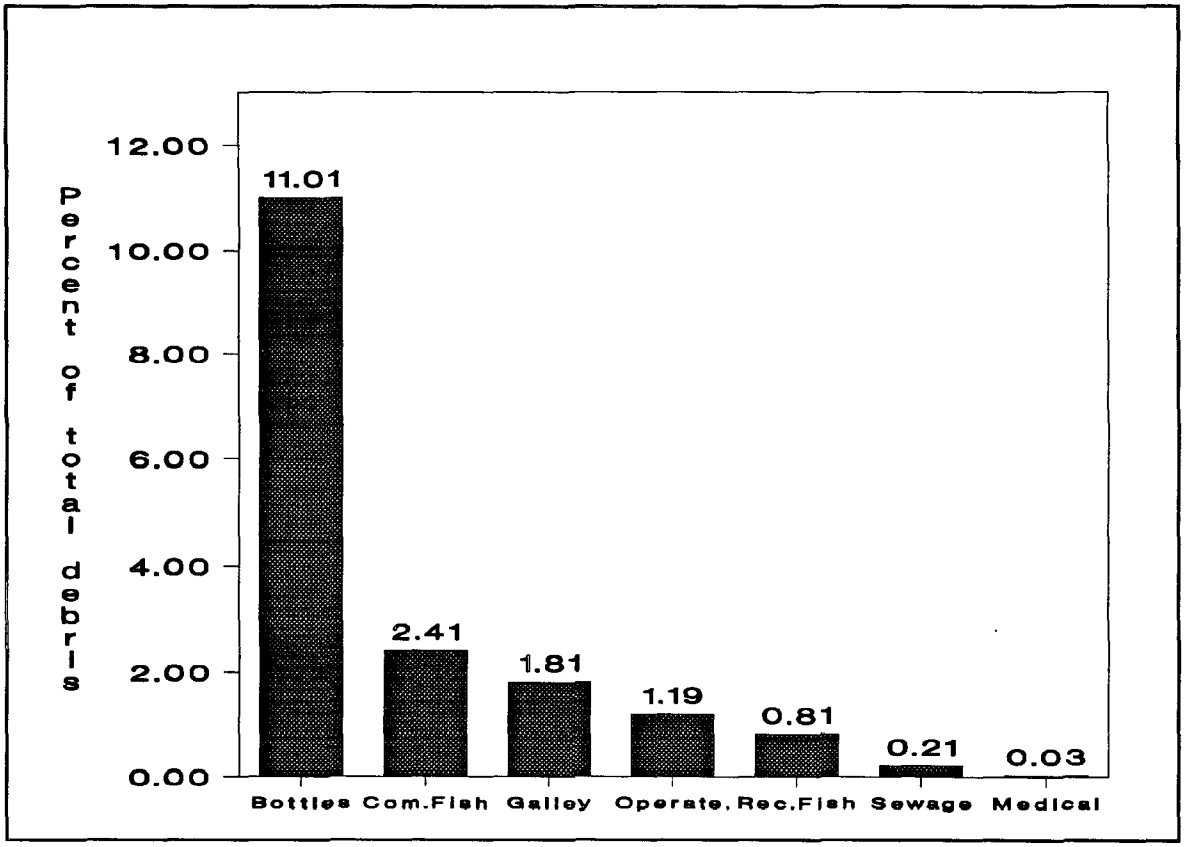
PERCENT COMPOSITION OF VIRGINIA'S BEACH DEBRIS



VIRGINIA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	22,160	21.40
2. Plastic pieces	7,066	6.82
3. Foamed plastic pieces	6,493	6.27
4. Glass pieces	5,409	5.22
5. Plastic food bags/wrappers	5,006	4.83
6. Metal beverage cans	4,277	4.13
7. Plastic caps/lids	4,173	4.03
8. Paper pieces	3,647	3.52
9. Plastic straws	3,573	3.45
10. Glass beverage bottles	3,559	3.44
11. Lumber pieces	3,288	3.17
12. Foamed plastic cups	3,136	3.03
Total	**71,787**	**69.31**

MAJOR TYPES AND SOURCES OF VIRGINIA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Wallops Island	59.07	Lumber pieces
Assateague Island	63.95	Lumber pieces
Baytree Beach	36.68	Cardboard pieces
York River	66.23	Cigarette butts
James River	52.12	Glass beverage bottles
Stuart Gardens	56.43	Cigarette butts/foamed plastic cups
Mill Point	71.44	Cigarette butts
Grandview	49.40	Glass pieces
Buckroe Beach	64.25	Cigarette butts
Langley AFB	69.86	Plastic food bags/wrappers
Fisherman's Island	59.80	Metal beverage cans
Portsmouth	74.23	Cigarette butts
Oceanview	62.60	Cigarette butts
Lynnhaven	69.65	Cigarette butts
Virginia Beach Resort Area	80.36	Cigarette butts
Sandbridge	64.70	Cigarette butts
False Cape State Park	74.11	Plastic pieces

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Wallops Island	balloon	Star States Co. (WSFS)
Assateague Island	plastic bucket	Texaco Hydraulic Oil, Drew Oil Co., Cranston, RI 02920
	balloon	Chartered Health Plan
	balloon w/ribbons	Tri M Corp.
	plastic hat	Combustion Engineering
James River	plastic container	Sea, Lake and Shore Bait Co.
Buckroe	shopping cart	Food Lion
Portsmouth	plastic shipping wrapper	Tastee Freez, Int.
Oceanview	blanks carton	Navy
	dye marker	Dye Chem
	bait bag, 8 oz.	Jack's Bait, P.O. Box 152, Currituck, NC 27929
	bait bag, 16 oz.	Harrison's Boathouse, Norfolk, VA 23503
	plastic grate	Cumberland Chattanooga, Tenn.
	military ID	Thomas W. Trumbauer
Lynnhaven	hat	Sanford Bros.
False Cape State Park	key	Boys Club

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris
Assateague Island	Germany	milk carton
	Japan	plastic bottle
	"Arabic"	milk carton
	"Greek"	plastic bottle

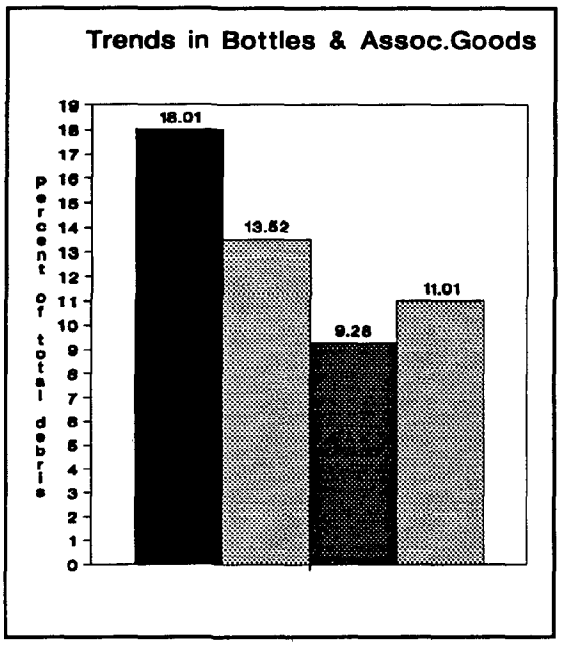
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

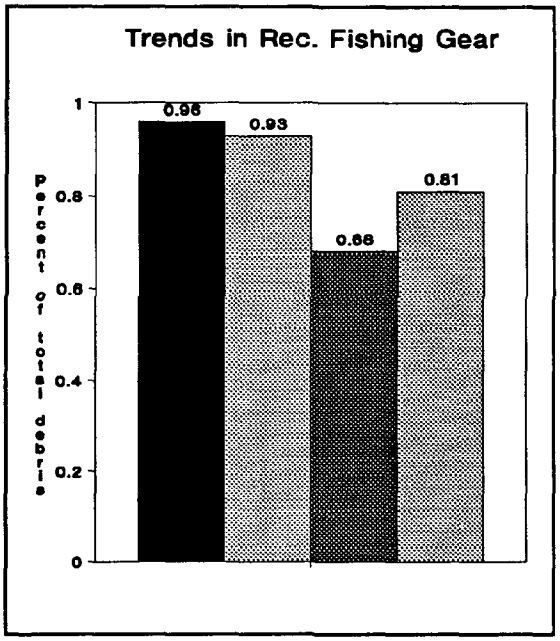
Debris Related	Other Reports
Sea gull, entangled in monofilament line	37 dead monarch butterflies
Sea gull, entangled in fishing line	20 dead horseshoe crabs
2 stone crabs, entangled in monofilament net	3 dead sea gulls
2 horseshoe crabs, entangled in fish net	2 dead turtles
	1 injured duck
	1 dead bird
	1 dead duck

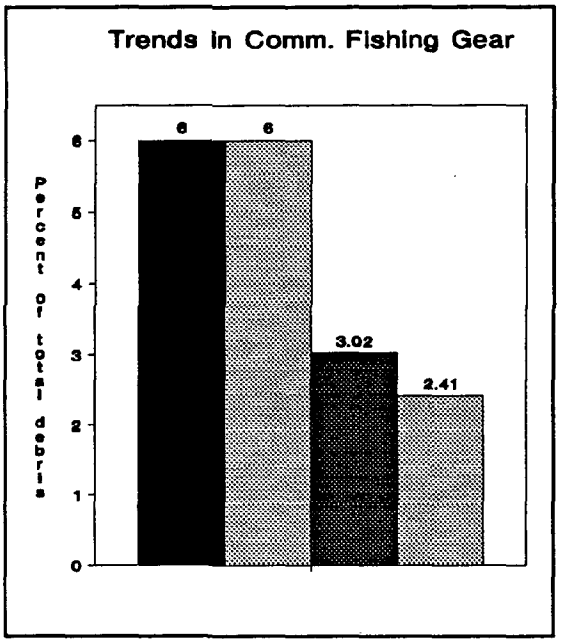
MOST PECULIAR ITEMS REPORTED:

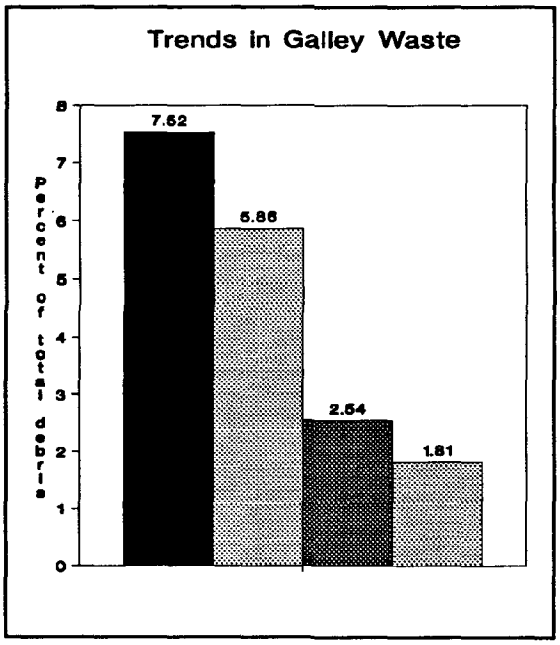
Wallops Island	Nike sneaker, shotgun shells, goggles.
Assateague Island	transmitter, aqua sock, mylar balloons for twins (1 boy, 1 girl), part of boat with rudder, leg bone?, brick, 3 foot yellow plastic box, acetylene tank, child's tea cup, florescent zone markers, kite tail, plastic cigar holder, funny sunglasses, pills
James River	peach basket, flip flops, golf ball, car trim off a 72 Nova, human waste, lawn chair, springboard, earplug, high top sneaker, ceramic resistor, paint can, floating chair, cinderblock
Stuart Gardens	men's drawers, telephone pole, life preserver, mask
Mill Point	sewer lid, disk brakes, swimming trunks
Grandview	1/2 bushel basket, 12 foot metal cable, plastic decoy bird, screen, counter top, kitchen shelf, beach chair, bra and underwear, shotgun shell casing, eye glasses, aluminum decking
Buckroe Beach	plastic carton lid 2 foot x 3 foot, underwear, flip flop, panty hose, condom ring, baby cup, shotgun shell, chicken bones, corn cob, firecracker
Langley AFB	shotgun shells
Portsmouth	shoes, blue ball, insulation
Oceanview	fired cartridge, blank bullet casings, 4 foot x 10 foot plastic anti-erosion netting, magnesium battery, rubber tube, life boat tag, fecal matter, part of a windshield, $1.00, pink shorts, button, 4 full beer cans, military ID, sunglasses, 1/2 transistor radio w/batteries, roofing tiles, lottery tickets, 12 gauge shotgun shell, quarter, vehicle door
Lynnhaven	photo album, piece of paper with the words "assignment kill die tonight perish", plastic fishing chair, gallon garbage can (it came in handy!), 2 refrigerator magnets, full bottle of dandruff shampoo, underwear, tennis balls, plastic army men, racquetballs, firecrackers, glasses, hairbrush
Sandbridge	underwear, 18 foot x 20 foot blue tarp, marijuana cigarette, knife handle, ladies panties-stained, surfboard piece, tennis shoes, diver's flipper
False Cape State Park	McDonald's bag with live mouse inside eating a piece of hamburger, brown paper bag used as a porta-potty!, underwear, tail pipe piece, unopened mail

TRENDS IN MAJOR TYPES AND SOURCES OF VIRGINIA'S BEACH DEBRIS:

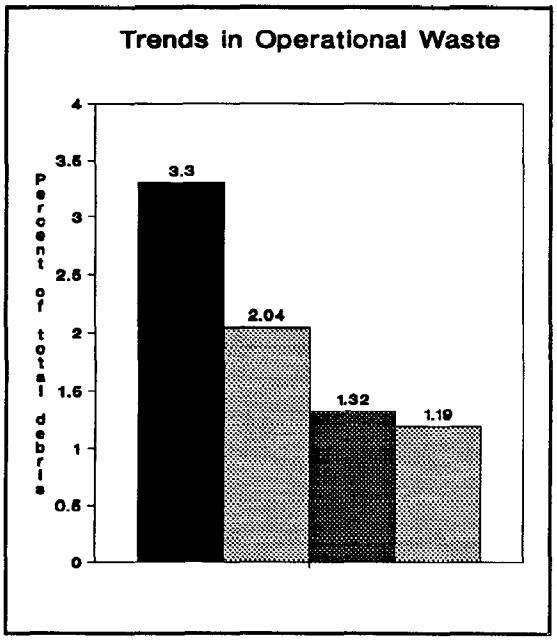


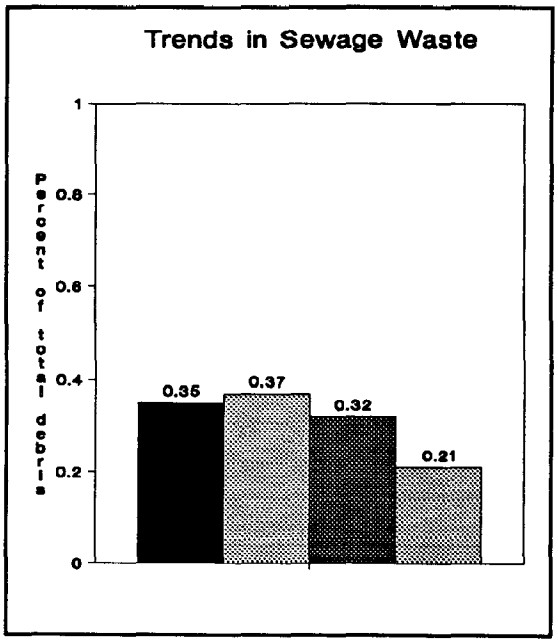


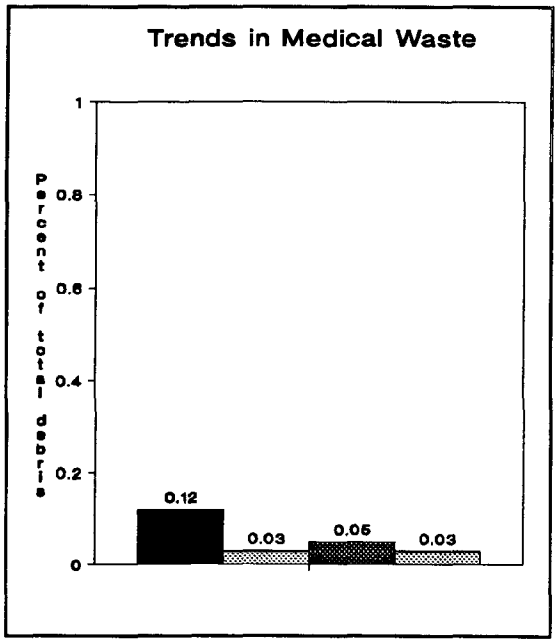




TRENDS IN MAJOR TYPES AND SOURCES OF VIRGINIA'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON VIRGINIA'S 1992 COASTAL CLEANUP CONTACT:

Dr. Joseph Silvio
Audubon Naturalist Society
8940 Jones Mill Road
Chevy Chase, MD 20815
(301) 652-5964

OR

Robert Dean
Clean The Bay Day, Inc.
1204 Shawn Drive
Virginia Beach, VA 23456
(804) 427-6606

CLEANUP DATE: September 19, 1992

1988 1989 1990 1991

VIRGIN ISLANDS

COASTWEEKS
70 Volunteers
4 Miles Cleaned
4,000 Pounds of Debris Collected

Coordinated by: Robin Freeman
St. Croix Environmental Association
P. O. Box 3839
St. Croix, VI 00822
(809) 774-1989

St. Croix Environmental Association coordinated cleanups on three consecutive Saturday mornings--one in the west end, one in the east end, and on mid-island. Each was a cooperative effort of private citizens, government agencies, civic and educational organizations, and local businesses.

The Department of Housing, Parks and Recreation provided trucks for each of the cleanups', as well as bags, gloves, rakes, refreshments (donated by the V.I. Coca-Cola Bottling Co. and about a dozen personnel, including a lifeguard). Some of the employees were on their day off and came as volunteers, according to Susan Larsen, the public information officer for HPR, who coordinated her agency's part in COASTWEEKS. She added that Charles McAlpin brought his family to all three cleanups and provided refreshments for everyone.

The Department of Planning and Natural Resources also participated, donating trash bags and providing a boat and men to clean up debris from mangroves in Salt River Bay. William Thomas, a.k.a. "Cheech," was beach captain of the west end cleanup, where about 20 people collected about 110 bags of trash between Sprat Hall and the West End Beach Club. Both of those establishments and the Sundowner provided drinks, bags, and restroom facilities for the volunteers.

A long-term maintenance project is a spin-off of that cleanup. Mount Eagle Corporation has donated six 55-gallon drums to be used as trash barrels along that stretch of beach, and "Cheech" and Pat Branno have volunteered to empty the barrels when needed. Students from the Montessori school will paint the drums.

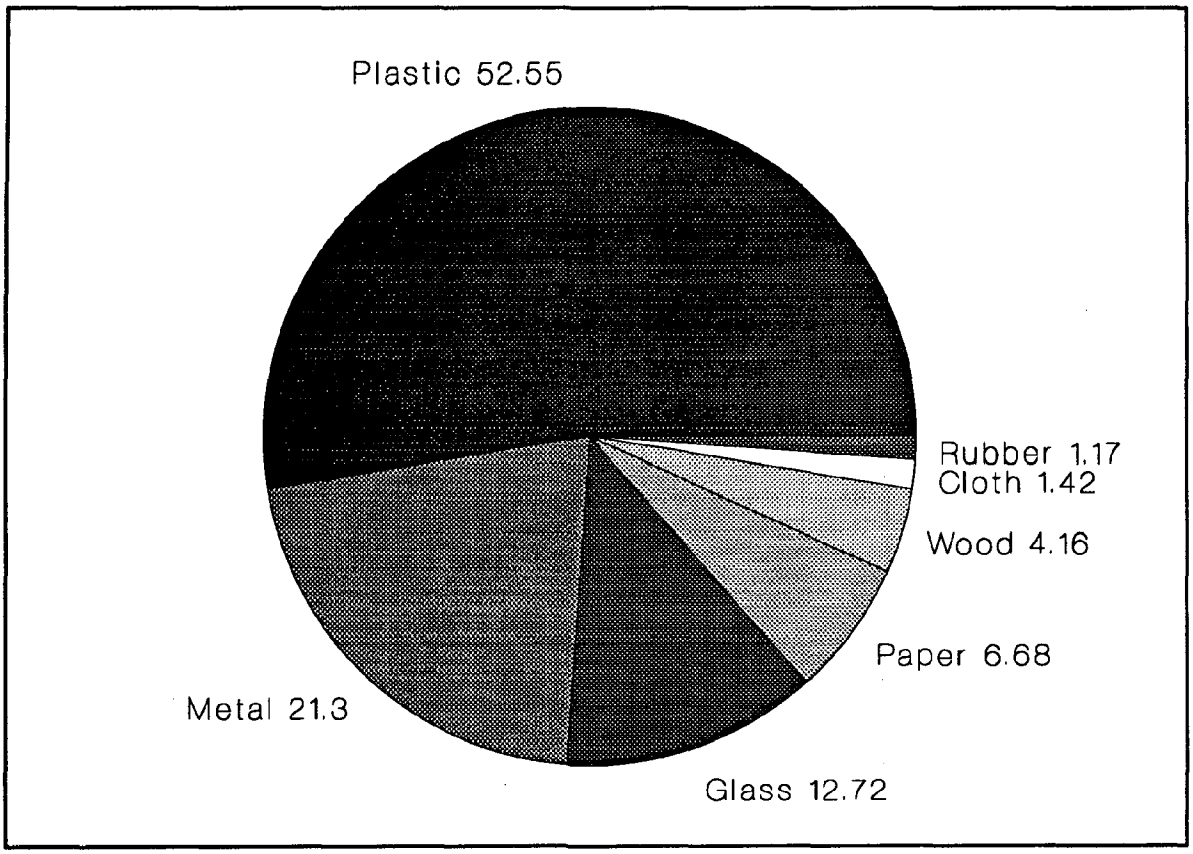
A similar maintenance program is needed in the east end, according to Jane Keller, who was co-captain with Rita Gates of the cleanup between Green Cay Marina and Chenay Bay. They had about 20 volunteers who collected about 60 bags of trash, including a toilet seat and a car muffler, and then participated in a raffle. Prizes were donated by Baker Street Sound, Deep End Bar, Solitude Store, Luncheria Mexican Restaurant, Sailboat Supply, Out of the Blue, Grog & Spirits, and Cafe Madeleine.

Chenay Bay Resort contributed bags and refreshments. Kiran O'Brian was captain of the mid-island cleanup at Salt River. Because the beach at Columbus Landing was relatively litter-free, she took half of the volunteers to a boat launching area on the Salt River Road, where "we picked up tons of trash that would have ended up in the water at the next big rain."

Aluminum cans were separated from other debris at all the cleanups and were taken away by My Brother's Table, the Frederiksted soup kitchen, for recycling.

Robin Freeman

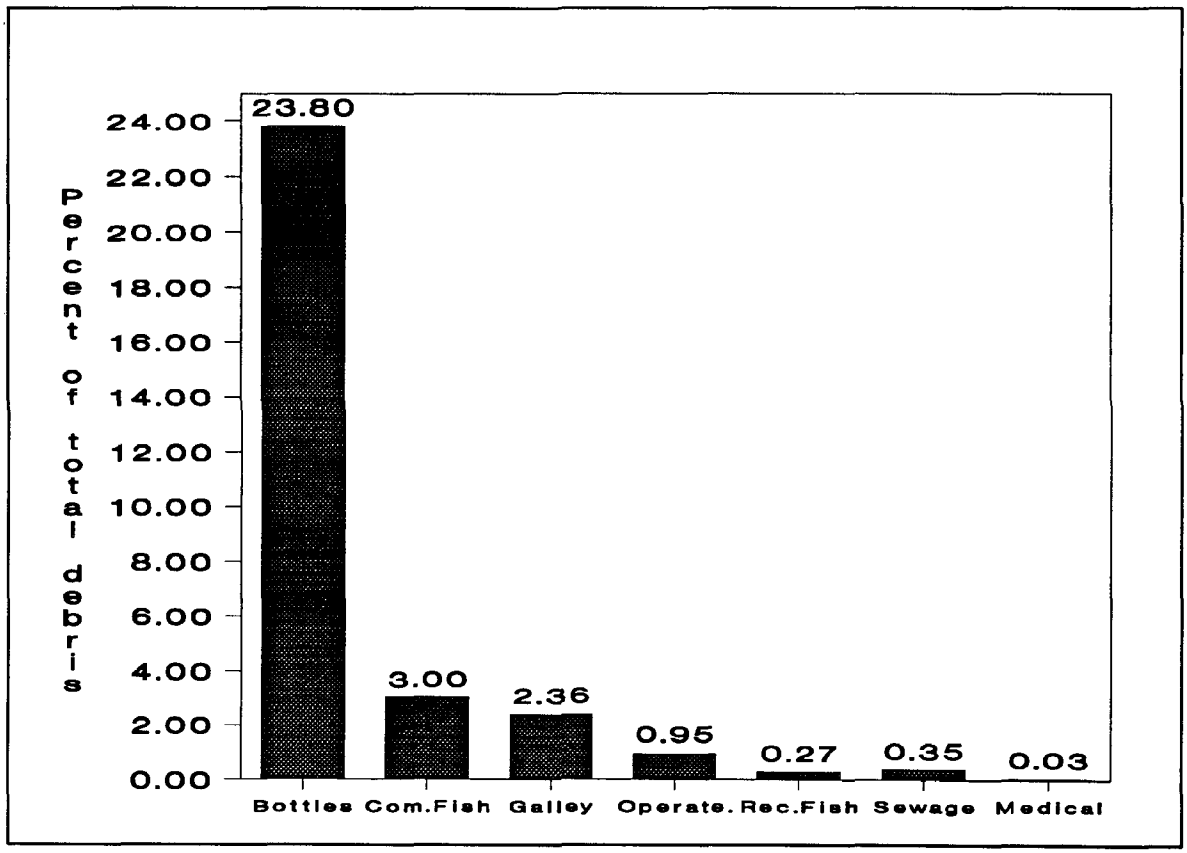
PERCENT COMPOSITION OF VIRGIN ISLANDS' BEACH DEBRIS:



VIRGIN ISLANDS' 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Metal beverage cans	1,695	13.26
2. Foamed plastic pieces	846	6.62
3. Glass pieces	779	6.10
4. Plastic cups/utensils	751	5.88
5. Plastic pieces	740	5.80
6. Glass beverage bottles	663	5.19
7. Plastic straws	587	4.59
8. Plastic food bags/wrappers	421	3.29
9. Lumber pieces	369	2.89
10. Paper pieces	351	2.75
11. Plastic caps/lids	318	2.49
12. Cigarette butts	317	2.48
Total	**7,837**	**61.34**

MAJOR TYPES AND SOURCES OF VIRGIN ISLANDS' BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Items Reported
St. Croix	47.16	Metal beverage cans
Hassel Island	36.54	Metal beverage cans
St. Thomas	57.52	Foamed plastic pieces
Red Hook	53.57	Metal beverage cans
Mary's Creek	71.28	Plastic pieces
Brewer's Bay	40.38	Glass beverage bottles

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Hassel Island	paper cups	Carnival Cruise Line
	candy wrappers	Carnival Cruise Line
	plastic	Gourmet Gallery
	plastic slip sheet	Amuri Extusion
	menu	The Bridge Restaurant
	plastic cups	Caneel Bay Hotel
	stamp	Nurieux Ref #222
	paper box	St. Thomas Dairies Market
St. Thomas	milk carton	St. Thomas Dairies Market
	Jungle Juice box	St. Thomas Dairies Market
	plastic ice bag	St. Thomas Dairies Market
Red Hook	plastic cup	Virgin Grand Hotel
Mary's Creek	plastic cup	Caneel Bay Hotel
	beer holder	Peter Island
	plastic cup	Pusser's Landing, Tortola

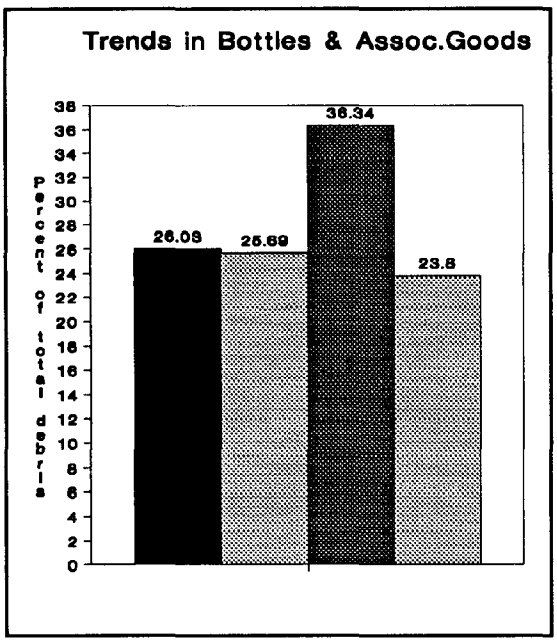
FOREIGN DEBRIS ITEMS REPORTED:

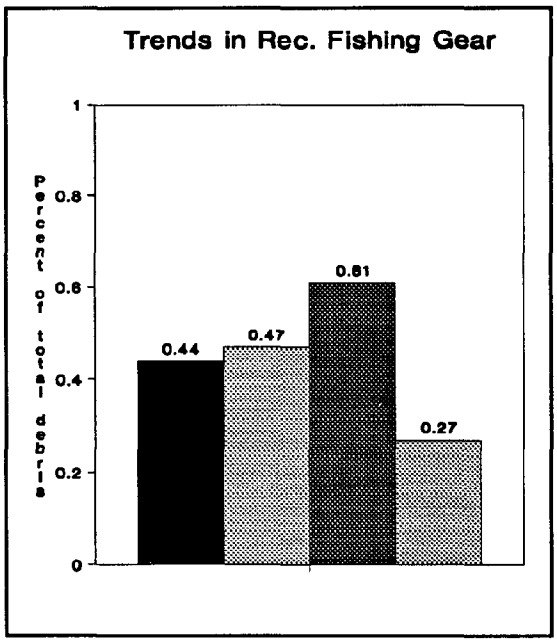
Location	Source	Type of Debris	Other Remarks
Hassel Island	France	plastic bucket	
St. Thomas	China	industrial gloves	
	France	plastic milk jug	Bridel
Mary's Creek	Aruba	plastic bottle	
	France	plastic wine bottle	
	France	plastic milk jug	
	Puerto Rico	plastic bottle	
	Switzerland	plastic container	

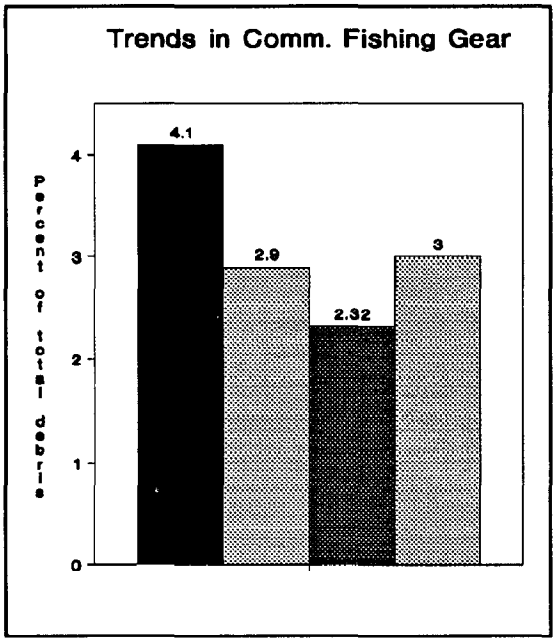
MOST PECULIAR DEBRIS ITEMS REPORTED:

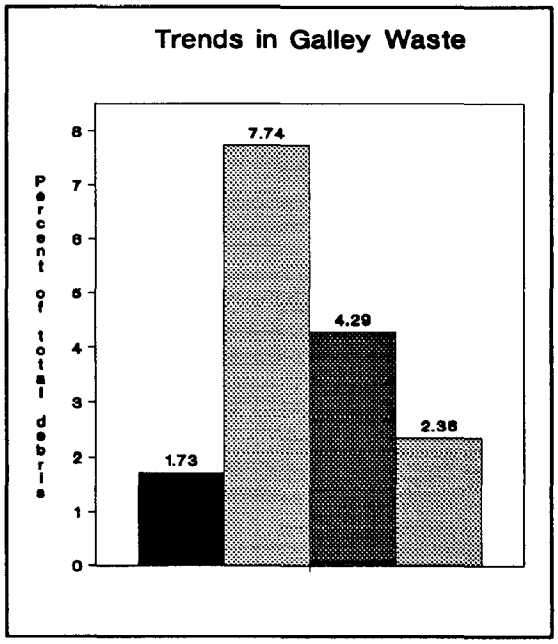
St. Croix	refrigerator pieces, muffler
Hassel Island	chair
St Thomas	underwear wasteband, cardboard w/sponge on bottom, can of yellow paint, short pant, towel, screwdriver, floor tiles, tube of cream, potato peeler
Mary's Creek	toothbrush, 3 lb. Ricotta cheese container, pen that still worked after being in the sea, cloth hat, lubricant jelly, old pottery, champagne bottle, money, entire set of clothing (pants, socks, shirt, shoes), plastic Frisbee, underwear, shorts
Brewer's Bay	underwear, deodorant, bras, shoes

TRENDS IN MAJOR TYPES AND SOURCES OF VIRGIN ISLANDS' BEACH DEBRIS:



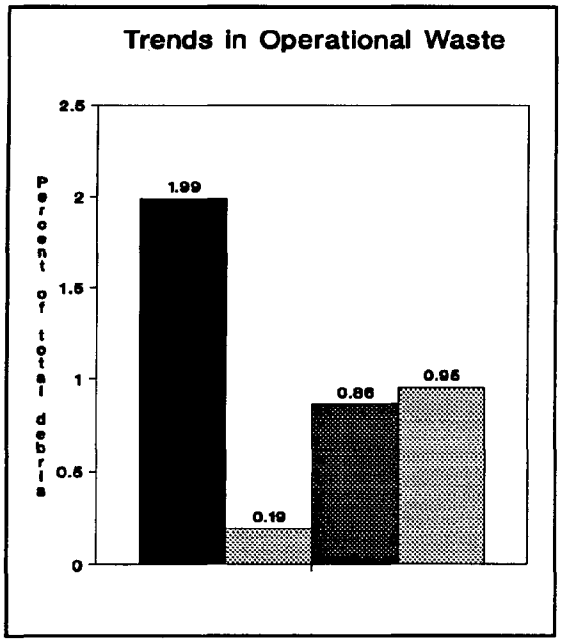


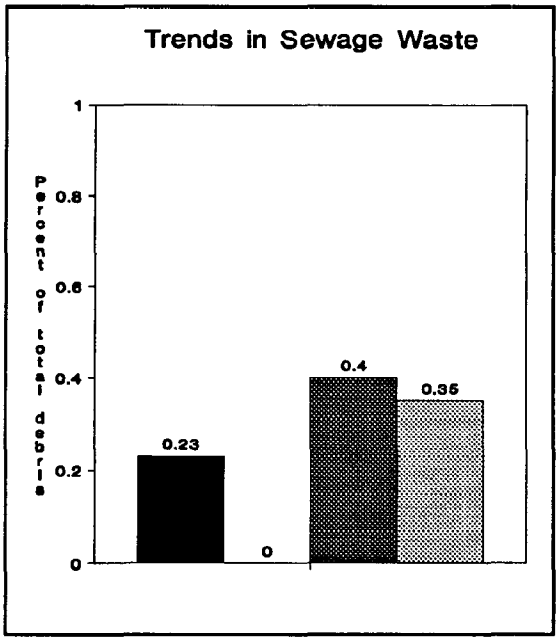


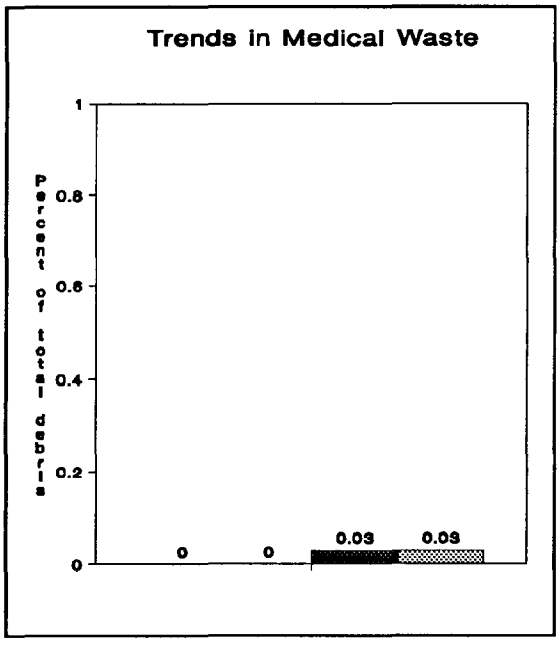


1988 1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF VIRGIN ISLANDS' BEACH DEBRIS: (cont.)







1988 1989 1990 1991

FOR INFORMATION ON THE VIRGIN ISLANDS' 1992 COASTAL CLEANUP CONTACT:

ST. CROIX

Rita Gates
P.O. Box 24263
Gallows Bay, VI 00824-4263
(809) 778-7201

CLEANUP DATE: COASTWEEKS

Washington's cleanup is a family affair at Seattle's Alki Beach as three-year old Christie Marie helps Dad clean the beach.

Puget Sound Bank
Home of the Puget Sound Fund

WASHINGTON

September 7, 21 and 22, 1991
3,968 Volunteers
60 Miles Cleaned
34,900 Pounds Collected
235 Data Cards

Coordinated by: Joan Hauser-Crowe
Washington State Parks
7150 Clearwater Lane
Olympia, WA 98504
(206) 753-5759

David Parent
Puget Sound Bank
1119 Pacific Ave.
Tacoma, WA 98402
(206) 593-3770

Arlene Brooks
21520 SE 346
Auburn, WA 98002
(206) 833-8747

Janet Cooper
DNR, Aquatic Lands
Mail Stop, QW-21
Olympia, WA 98504
(206) 664-0312

It has now been twenty years since the first initial beach cleanup by the Pacific Northwest Four Wheel Drive Association members. During this time, many volunteer hours have been spent and many cubic yards/tons of litter and marine debris have been picked up in the name of environmental concerns and the protection of our natural resources.

In cooperation with several groups and organizations (Good Sam, Telephone Pioneers, scouts, schools) Mary Quehrn, Dave Harrison and Linda Jessen, Region Chairmen, found 1991 was another successful year as 1184 volunteers, an increase of 334, took to the beach, volunteered 9184 hours to pick up 109 cubic yards of litter and debris along 60 miles of coastline. By the time they had returned home from this weekend activity, they had traveled 127,027 miles.

Co-sponsors of this annual event are Washington State Parks and Recreation Commission and the Department of Ecology. Their time and effort is greatly appreciated, as well as that from the local communities, merchants, and service groups that have participated through support in various ways.

Arlene Brooks

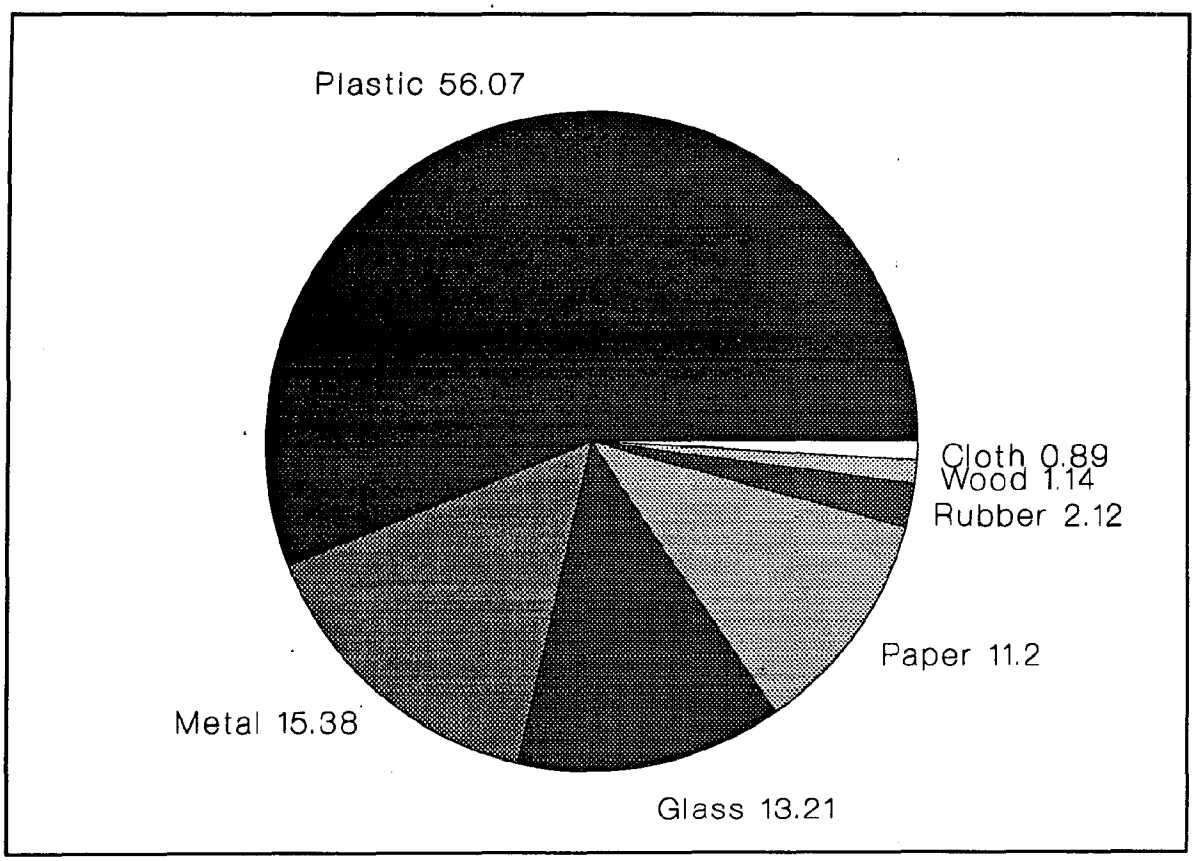
Nearly 17.5 tons of marine debris and litter were removed from 54 Puget Sound beaches on September 7, 1991, by 2,784 volunteers from Puget Sound Bank. The event, the fourth annual "Puget Sound Bank Beach Cleanup Day" was sponsored by the bank's Puget Sound Fund.

Cleanup sites ranged from the San Juan Islands in the north to Olympia in the south. The largest single cleanup occurred at Tacoma's Waterfront Park where 412 volunteers removed 3.95 tons of trash. Among the items found were: a push lawn mower, balloons, one gallon container of oil, dirty diapers, tires, dental tools, surgical gloves, boat battery, and a Shop Vac. Many locations reported numerous syringes, needles and condoms, as well as the usual assortment of broken glass, cigarette filters, and fast food containers. Dead animals included sea gulls and seal pups.

The cleanup was covered by two television stations, three radio stations, four major daily newspapers and nine weeklies.

David Parent

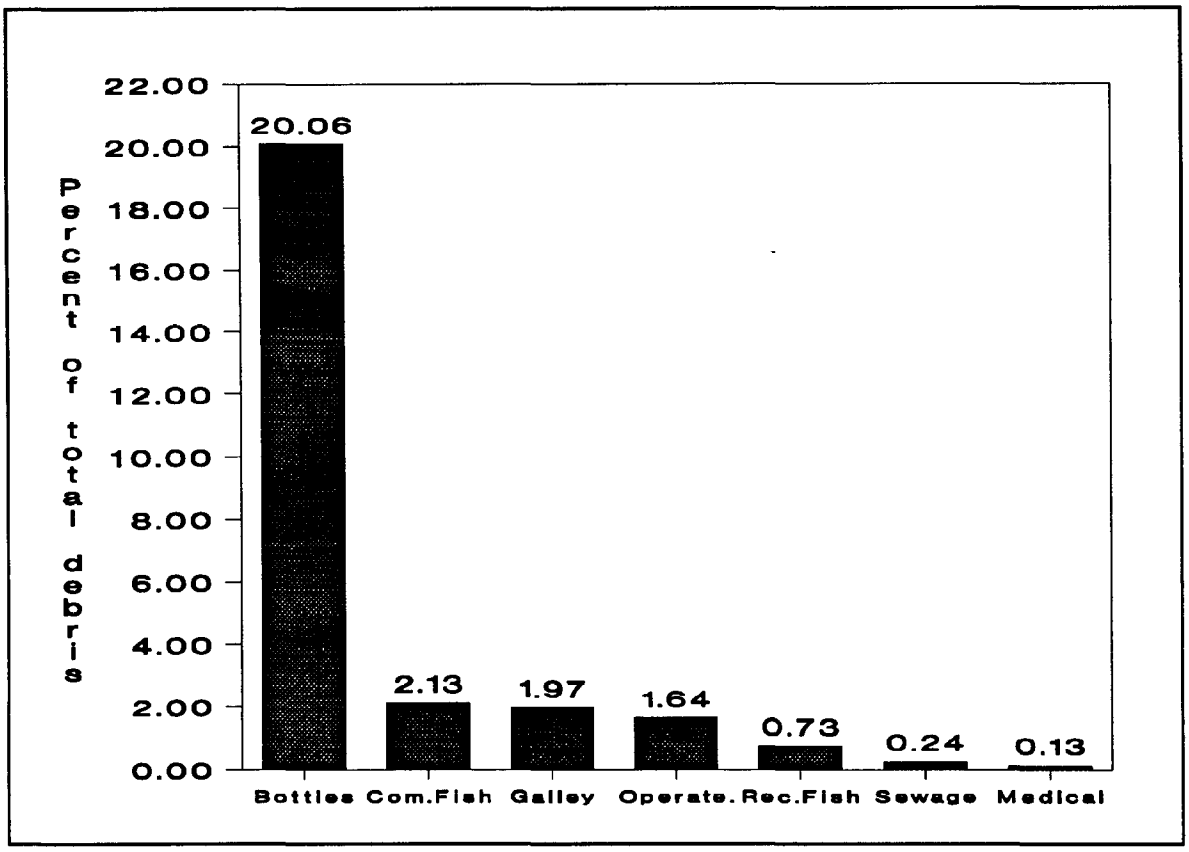
PERCENT COMPOSITION OF WASHINGTON'S BEACH DEBRIS:



WASHINGTON'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	12,270	17.66
2. Paper pieces	3,944	5.68
3. Glass pieces	3,787	5.45
4. Metal beverage cans	3,599	5.18
5. Glass beverage bottles	3,490	5.02
6. Plastic food bags/wrappers	3,367	4.85
7. Plastic pieces	3,106	4.47
8. Metal bottle caps	2,945	4.24
9. Foamed plastic pieces	2,800	4.03
10. Plastic caps/lids	2,332	3.36
11. Metal pull tabs	2,093	3.01
12. Plastic beverage bottles	1,447	2.08
Total	**45,180**	**65.03**

MAJOR TYPES AND SOURCES OF WASHINGTON'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
San Juan	77.59	Foamed plastic pieces
King	68.40	Plastic pieces
Pierce	57.56	Cigarette butts
Kitsap	52.12	Cigarette butts
Gray's Harbor	65.21	Cigarette butts
Pacific	71.47	Plastic food bags/wrappers

TRACEABLE DEBRIS REPORTED:

Location	Types of Debris	Source Indicated
Kitsap	battery	Military Ind., Missouri
	several balloons	Exeter Lines, Ltd.-Luxury Dinner
Pacific	shampoo bottle	Princess Cruise Line
	plastic bags	Princess Cruise Line

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
King	Canada	20 liter container	Exxon, Nuto H46
		bait box	Vancouver Bait Co., British Columbia
	Scandinavia	can of lubricant	
Kitsap	Korea	sales slip	
Gray's Harbor	Japan	food containers	
		laundry detergent bag	
		juice bottle	
		hard plastic	
	West Germany	milk carton	
Pacific	Japan	whiskey bottle	
	Oriental	food container	

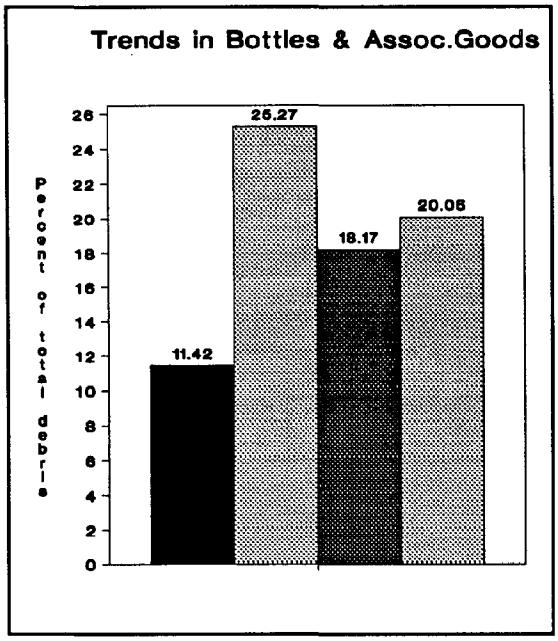
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

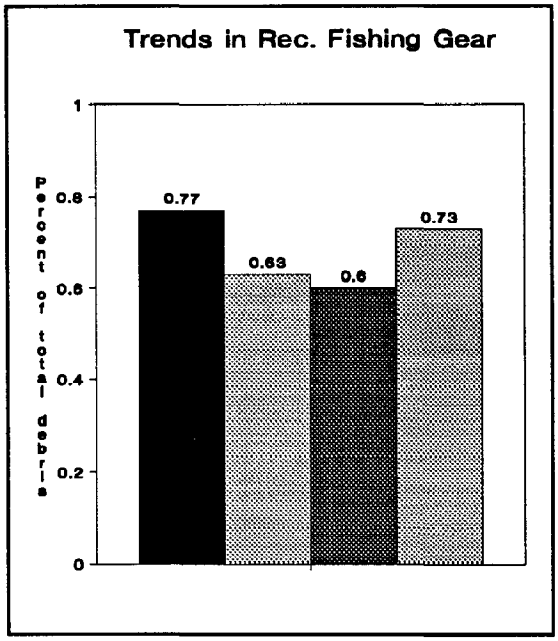
Debris Related	Other Reports
Sea gull with entangled feet, could still fly	32 dead birds
Dead sea gull, entangled in fishing line	10 dead sea gulls
Dead crab, entangled in fishing line	6 dead crabs
	4 dead seals
	2 dead pelicans
	1 dead tern
	1 dead dog
	1 dead cat
	1 dead rat

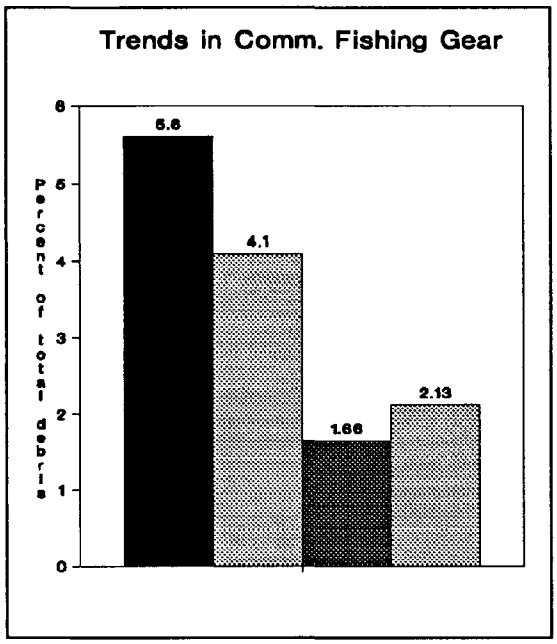
MOST PECULIAR DEBRIS ITEMS REPORTED:

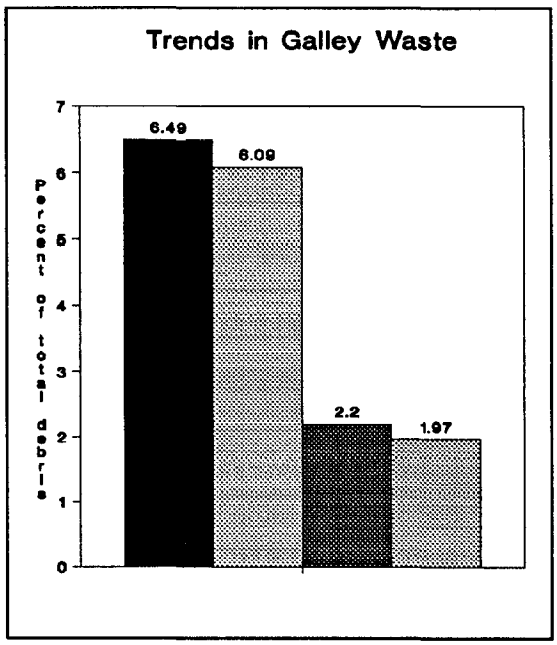
King	portable electric cooler, bike sprocket crank and one pedal, car seat, safety helmet, part of fiberglass boat, full set of woolie underwear, shotgun shells, part of computer printer
Pierce	floppy disk, skeleton key, flea collar, Fred Flintstone figure, part of old stove, fanny pack, red lace panties, large onion on a stick
Kitsap	empty douche bottle, broken wooden chair, thong, popsicle stick, men's underwear
Gray's Harbor	Radio Shack Stereo Mate cassette stereo, baby bottle, kitchen sink, metal vice, bowling ball, golf balls, full case of beer, blankets, windshield wipers, pacifier, motorcycle tank, rug, tile, water bed, baster w/flexible tube, pillow, full bottle of wine, bike reported to police, foam cushion, zebra-striped panties, baby shoe, radio antenna, ceramic dishes, watch, keys, pom pom, tool kit, lipstick, lawn chair, sleeping bag, flashlight, part of a dock, door hinge, auto drive shaft, kazoo, piece of rebar, $55, 10 foot black plastic plank, Coke bottle w/40 live bees, 2 mating slugs on a beer bottle, gold-plated Seiko watch, check for $5,000, beer bottle with dog poop in it, carrots, foam mattress, roach clip, arrow, hair clip, rubber boot, car pipe
Pacific	kite anchor, rubber squid, head for model A Ford, polish, bug spray, large round piece of electronic gear, prescription bottle w/pills

TRENDS IN MAJOR TYPES AND SOURCES OF WASHINGTON'S BEACH DEBRIS:









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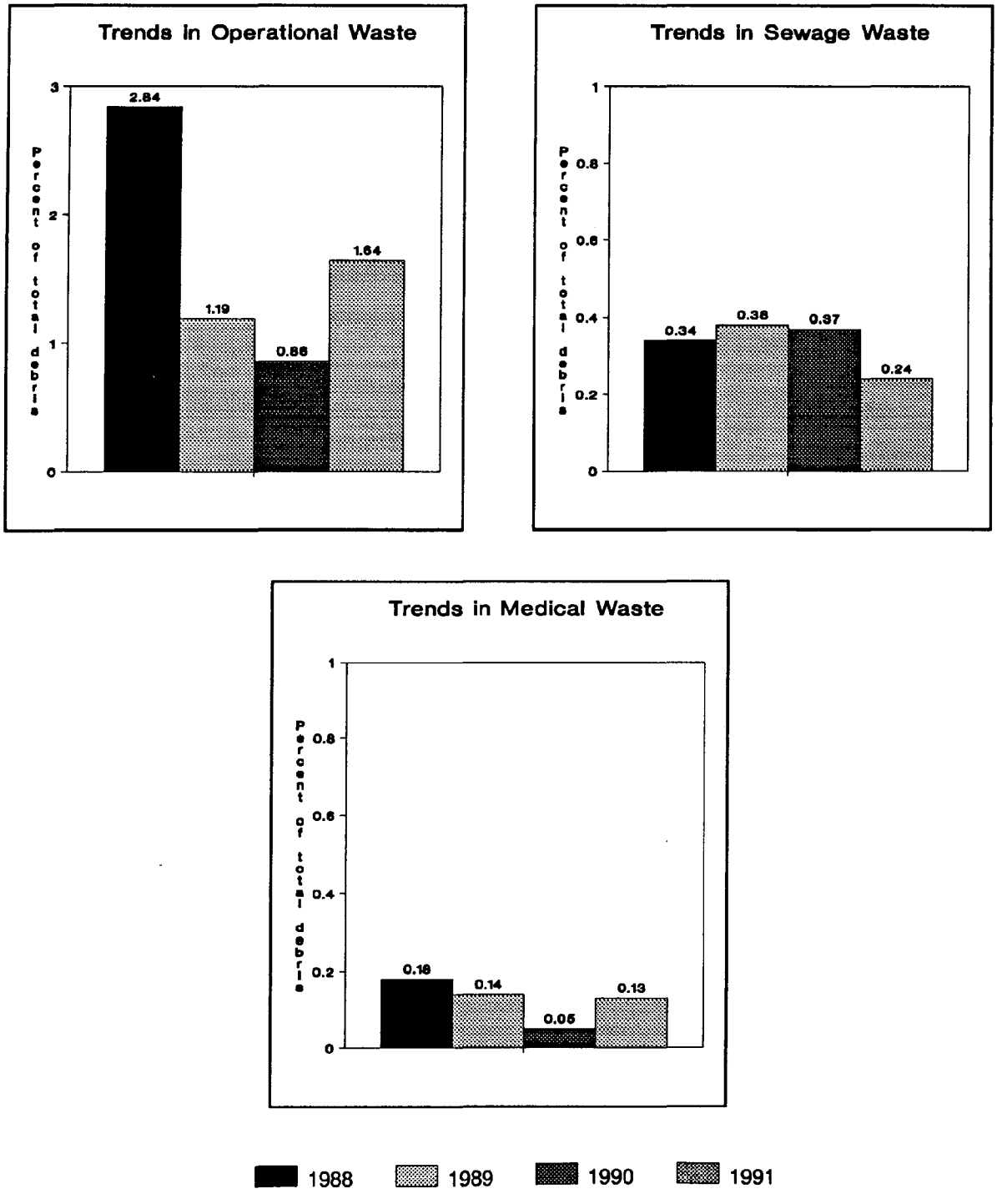


FOR INFORMATION ON WASHINGTON'S 1992 COASTAL CLEANUP CONTACT:

Puget Sound: David Parent
Puget Sound Bank
1119 Pacific Avenue
Tacoma, WA 98402
(206)593-3770

OR

Ocean Beaches: Janet Cooper
Department of Natural Resources
Division of Aquatic Lands
Mail Stop QW-21
Olympia, WA 98504
(206) 664-0312

OR

Arlene Brooks
21250 SE 346
Auburn, WA 98002
(206) 833-8747

OR

Joan Hauser-Crowe
Washington State Parks
7150 Clearwater Lane
Olympia, WA 98504
(206) 753-5759

CLEANUP DATE: September 12, 19-20, 1992

1991 GREAT LAKES BEACH SWEEP

WISCONSIN

September 21, 1991
61 Volunteers
.5 Mile Cleaned
1,240 Pounds of Debris Collected
31 Data Cards

Coordinated by: Kae Donlevy
Lake Michigan Federation Volunteer Coordinator
647 West Virginia Street., Suite 301
Milwaukee, WI 53204
(414) 271-5059

This was the first year Wisconsin participated in CMC's International Coastal Cleanup. Two beaches were swept clean as part of the Great Lakes Beach Sweep sponsored by the Shedd Aquarium in Chicago, Illinois. The Milwaukee office of the Lake Michigan Federation coordinated the two cleanups in Bay View and Kenosha, Wisconsin.

Bay View, a suburb of Milwaukee, had more than 900 pounds of trash swept off a quarter-mile stretch of beach. This broke down into approximately 8,000 items, including more than 2,600 cigarette butts and over 1,200 styrofoam pieces. Some odd finds were a pair of rubber numchucks, linoleum flooring, two pacifiers, three tires, a 200-pound metal ring, and enough clothes to make two complete outfits.

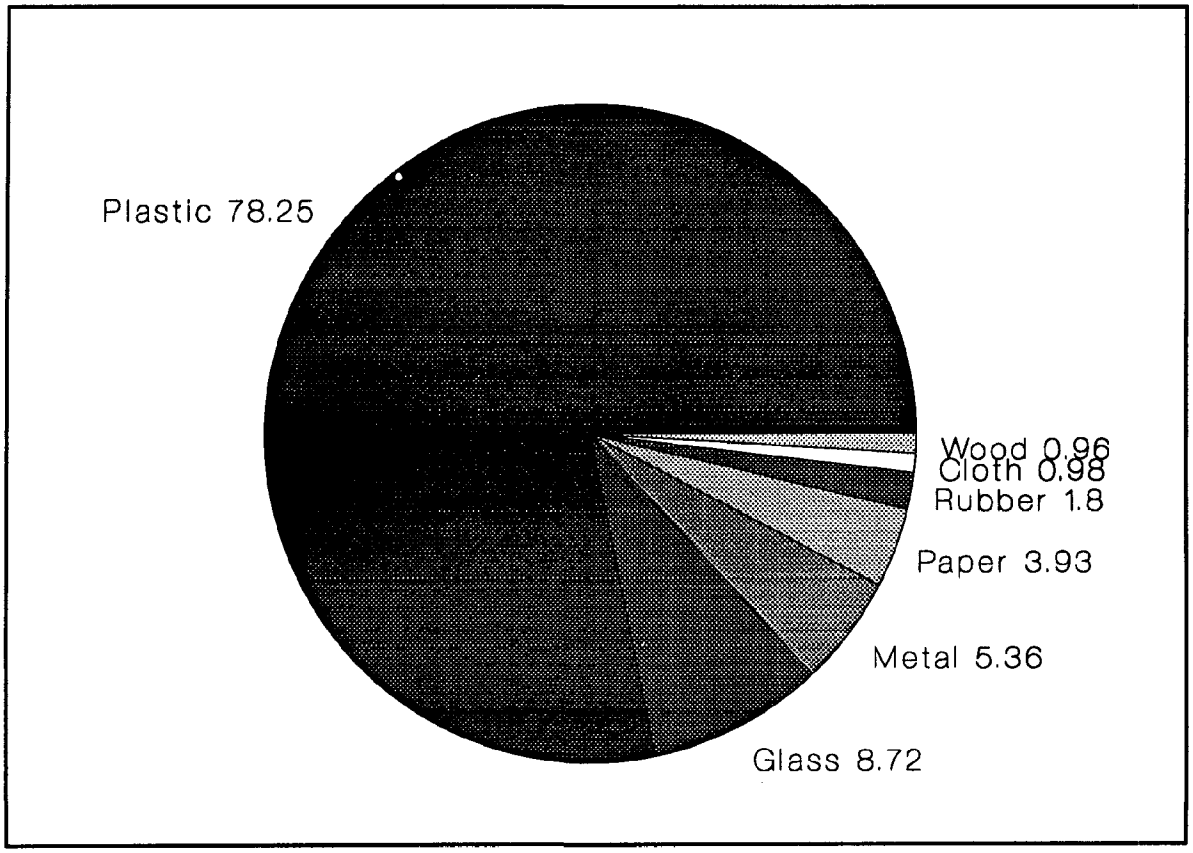
The volunteers in Kenosha, located 40 miles to the south of Milwaukee, removed more than 4,000 items from their beach, including about 1,200 cigarette butts and an equal number of plastic pieces.

Our enthusiastic trash and data collectors included volunteers from the Lake Michigan Federation and Keep Greater Milwaukee Beautiful, employees of Wisconsin Electric Co., First Wisconsin National Bank, CBC Environmental Laboratories, and concerned citizens in Kenosha, Wisconsin. Sponsors were First Brands Corporations, which supplied the trash bags, Pioneer Industrial Products of Willard, Ohio, which provided latex gloves, and Illinois Tool Works, which funded media kits and promotional efforts.

We look forward to involving every coastal county in the state to contribute to the cleanup efforts in '92. Lake Michigan Federation is establishing a "Shorekeeper" program in which community groups adopt and are responsible for a stretch of beach. Milwaukee has its first beach adopted and hopes to have more groups sign up as the year progresses. The Milwaukee office of LMF is planning a yearly spring cleanup for coastal counties in Wisconsin in which we hope to get local schools to participate. We want to establish a computer network of vital statistics of these beaches using the school computer network systems and hope to share the data obtained with other Great Lakes communities with similar programs.

Kae Donlevy

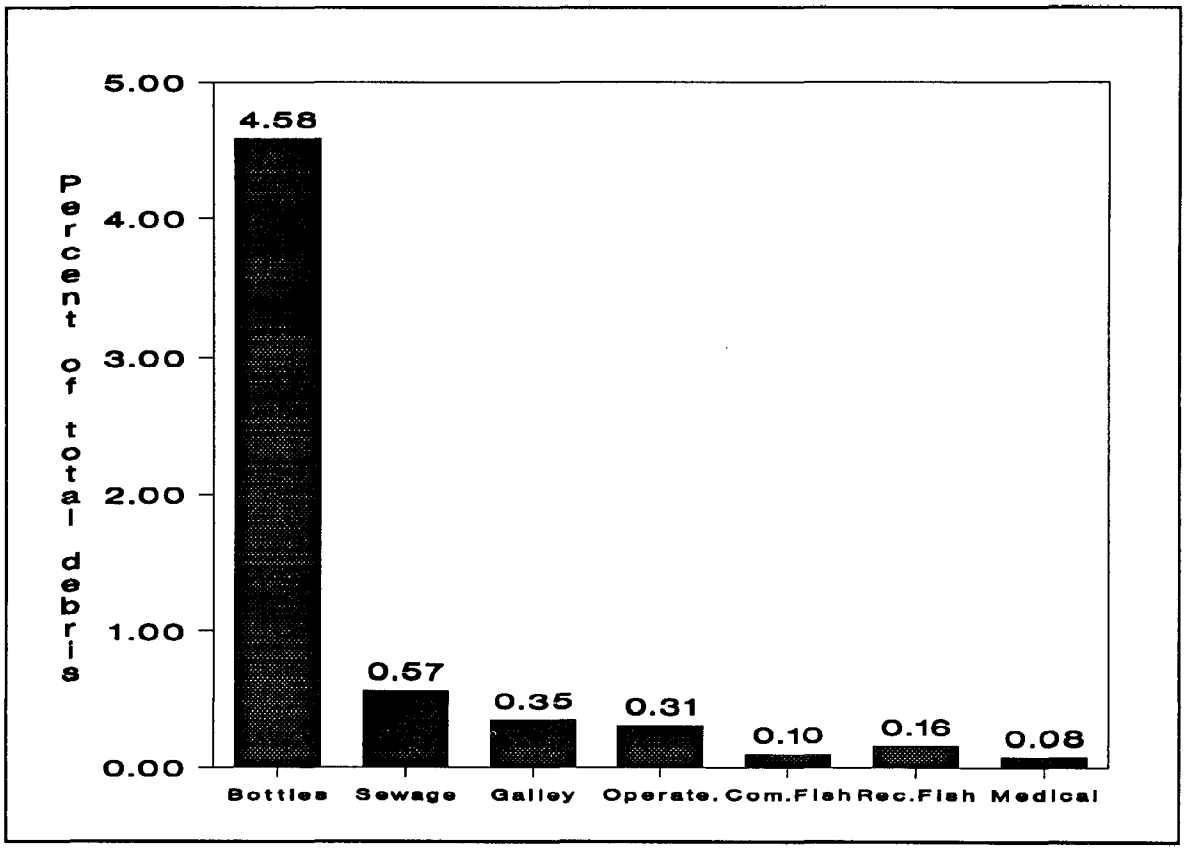
PERCENT COMPOSITION OF WISCONSIN'S BEACH DEBRIS:



WISCONSIN'S DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	3,386	29.35
2. Plastic pieces	1,184	10.26
3. Foamed plastic pieces	1,069	9.27
4. Plastic straws	1,064	9.22
5. Glass pieces	923	8.00
6. Plastic caps/lids	516	4.47
7. Plastic food bags/wrap pers	366	3.17
8. Paper pieces	288	2.50
9. Metal bottle caps	191	1.66
10. Foamed plastic packaging	177	1.53
11. Plastic cups/utensils	162	1.40
12. Metal pieces	145	1.26
Total	**9,471**	**82.09**

MAJOR TYPES AND SOURCES OF WISCONSIN'S BEACH DEBRIS:



MAJOR CHARACTERISTIC OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Bay View Beach	75.06	Cigarette butts
Alford Park Beach	85.43	Cigarette butts
La Belle City Beach	13.40	Glass beverage bottles

TRACEABLE DEBRIS ITEMS REPORTED:

Location	Type of Debris	Source Indicated
Bay View Beach	"Gulf Lite" flare	Rickett & Colman Lakeside Fusee

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

Bay View Beach	pacifier, underwear, shorts, dog tooth, Thermos, shotgun casings, cork, lipstick, num chucks, car battery, "Caution" flag for buried natural gas line
Alford Park Beach	shotgun wadding
La Belle City Beach	photograph and Polaroid camera, sandle, coat hanger, cement anchor, sunglasses, iron sailboat rudder, tennis shoe, boat lamp, broken stem wine glass, stove grease catcher

TRENDS IN MAJOR TYPES AND SOURCES OF WISCONSIN'S BEACH DEBRIS:

Data collection from Wisconsin's cleanup has only been carried out for one year (1991) and therefore trends cannot yet be assessed.

FOR INFORMATION ON WISCONSIN'S 1992 COASTAL CLEANUP CONTACT:

Dan Burke
Lake Michigan Federation
647 West Virginia St., Suite 301
Milwaukee, WI 53204
(414) 271-5059

CLEANUP DATE: September 26, 1992

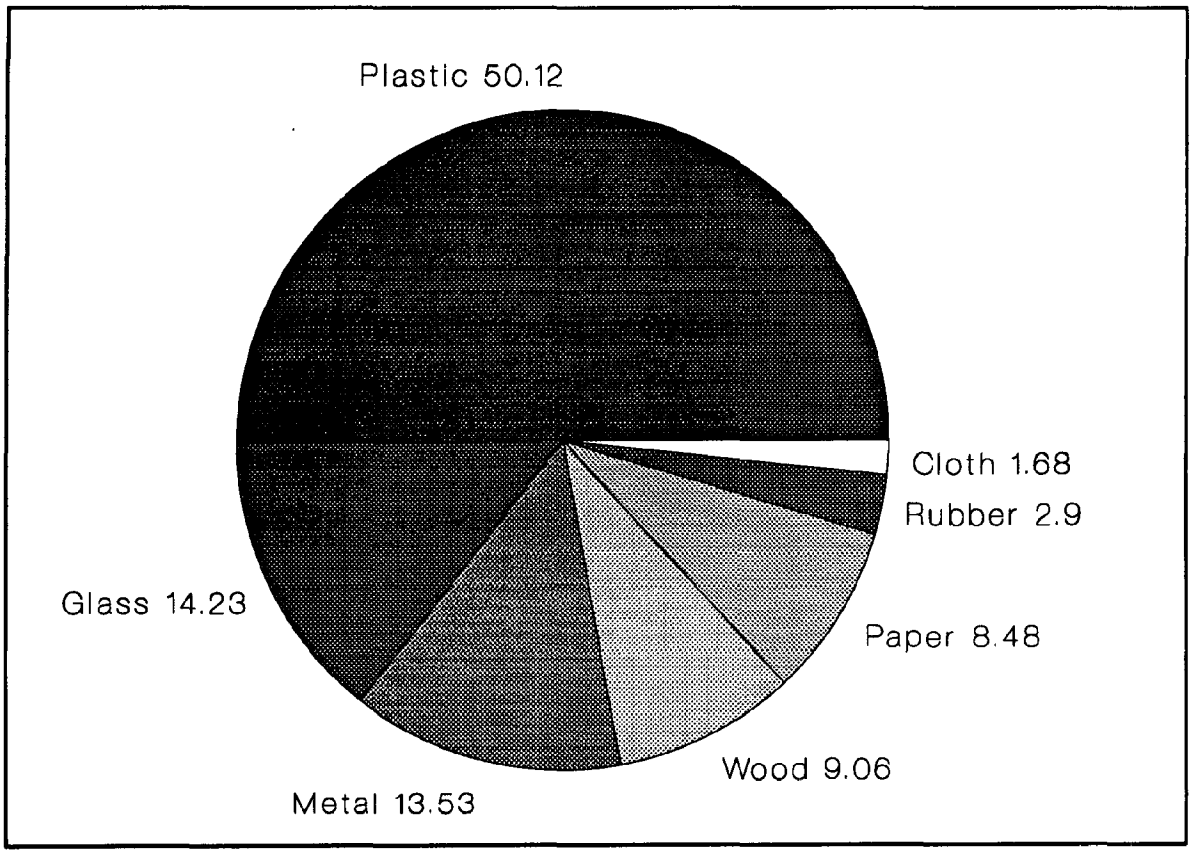
BRITISH VIRGIN ISLANDS

COASTWEEKS	Coordinated by: Dr. Gillian Cambers
32 Volunteers	Chief Conservation and Fisheries Officer
.5 Miles Cleaned	Conservation and Fisheries Dept.
1,000 Pounds of Debris Collected	Government of the British Virgin Islands
10 Data Cards	Tortola, British Virgin Islands

CMC cleanup coordinators were pleasantly surprised when they received data cards from a cleanup in the British Virgin Islands. Prior to the 1991 cleanup, we were not aware that anyone in the British Virgin Island had copies of the data card! This data was collected by a group of school children on the island of Tortola from an area known as Road Reef. This data provides our first look at the marine debris problem in the British Virgin Islands and we hope to learn even more from future cleanups.

Lisa K. Younger
Coordinator,
International Coastal Cleanup

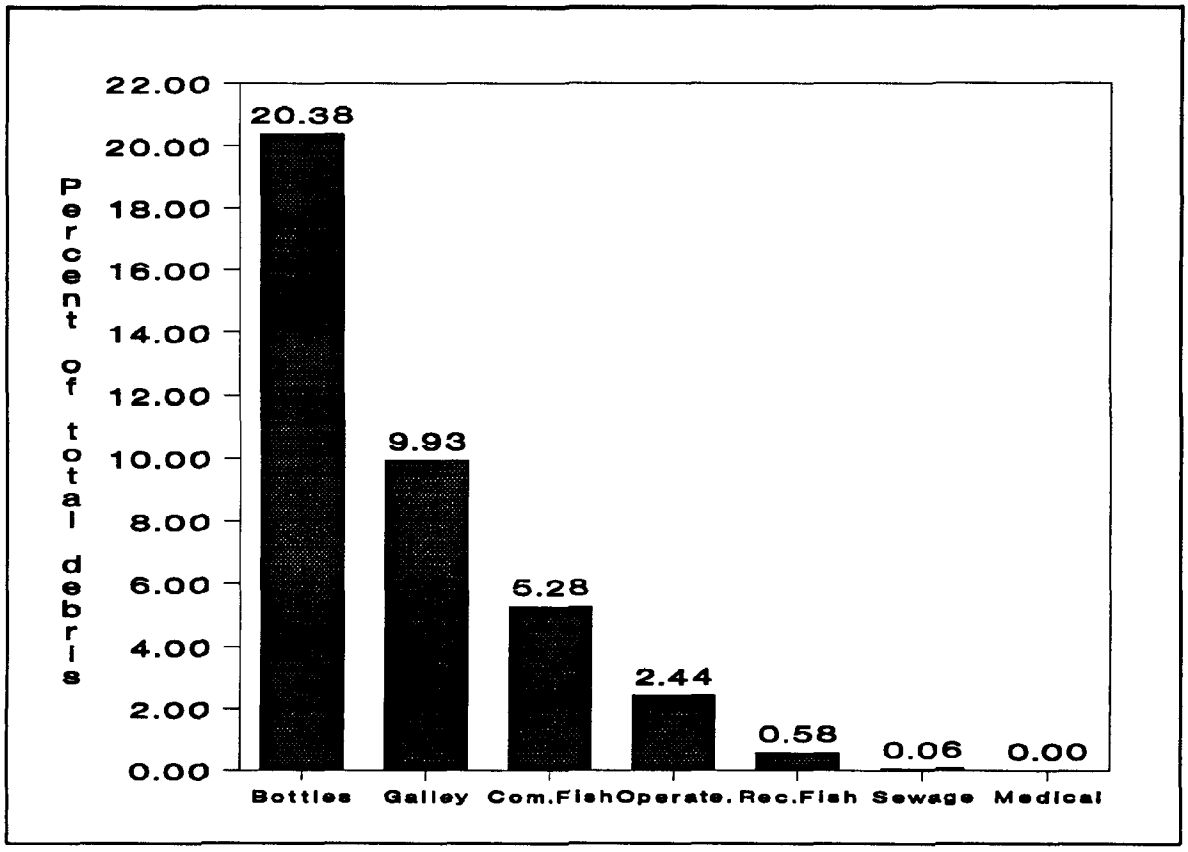
PERCENT COMPOSITION OF BRITISH VIRGIN ISLAND'S BEACH DEBRIS:



BRITISH VIRGIN ISLANDS 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Glass beverage bottles	125	7.26
2. Plastic cups/utensils	118	6.85
3. Metal beverage cans	103	5.98
4. Plastic trash bags	97	5.63
5. Plastic beverage bottles	89	5.17
6. Miscellaneous plastic bags	66	3.83
7. Foamed plastic pieces	63	3.66
8. Paper pieces	56	3.25
9. Lumber pieces	54	3.14
10. Plastic caps/lids	51	2.96
11. Plastic rope	50	2.90
12. Glass pieces	47	2.73
TOTAL	**919**	**53.37**

MAJOR TYPES AND SOURCES OF BRITISH VIRGIN ISLAND'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Data was collected for only one zone, Road Reef.

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
None reported	1 dead turtle

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF BRITISH VIRGIN ISLANDS BEACH DEBRIS:

Data collection from the British Virgin Islands cleanup has only been carried out for one year (1991) and therefore trends cannot be assessed.

A local football team take time out from their regular schedule to clean the beach at St. John, New Brunswick.

CANADA (NEW BRUNSWICK)

September 22 and 28, 1991
725 Volunteers
57 Miles Cleaned
21,920 Pounds of Debris Collected
171 Data Cards

Coordinated by: Rose Bennett
New Brunswick Museum
277 Douglas Avenue
St. John, New Brunswick
Canada E2K 1E5
(506) 658-1842

The New Brunswick Museum has been involved in the coordination of coastal cleanups since 1989, and the 1991 cleanup has been the most successful to date. Volunteer participation has increased as well as coverage of our coastline. It was encouraging to see that cleanup results on beaches that have been cleaned for the third year have shown a decrease in domestic debris. Our efforts over the past few years have been rewarded.

September 1991 provided an exceptional month for cleanups in New Brunswick. Most cleanups enjoyed the assistance of Mother Nature in providing dry, sunny conditions. In Saint John (local zone of the New Brunswick Museum) five beaches were cleaned. It was our good fortune at one beach to have a "football" team ("Lancaster Warriors") come jogging down the road to practice on the mud flats. You can guess what we suggested they do with all that energy! Thanks team! In total 150 volunteers - including several local politicians - scattered themselves along Saint John coastal areas to see what the problem was, and to help the museum in this global effort of debris identification.

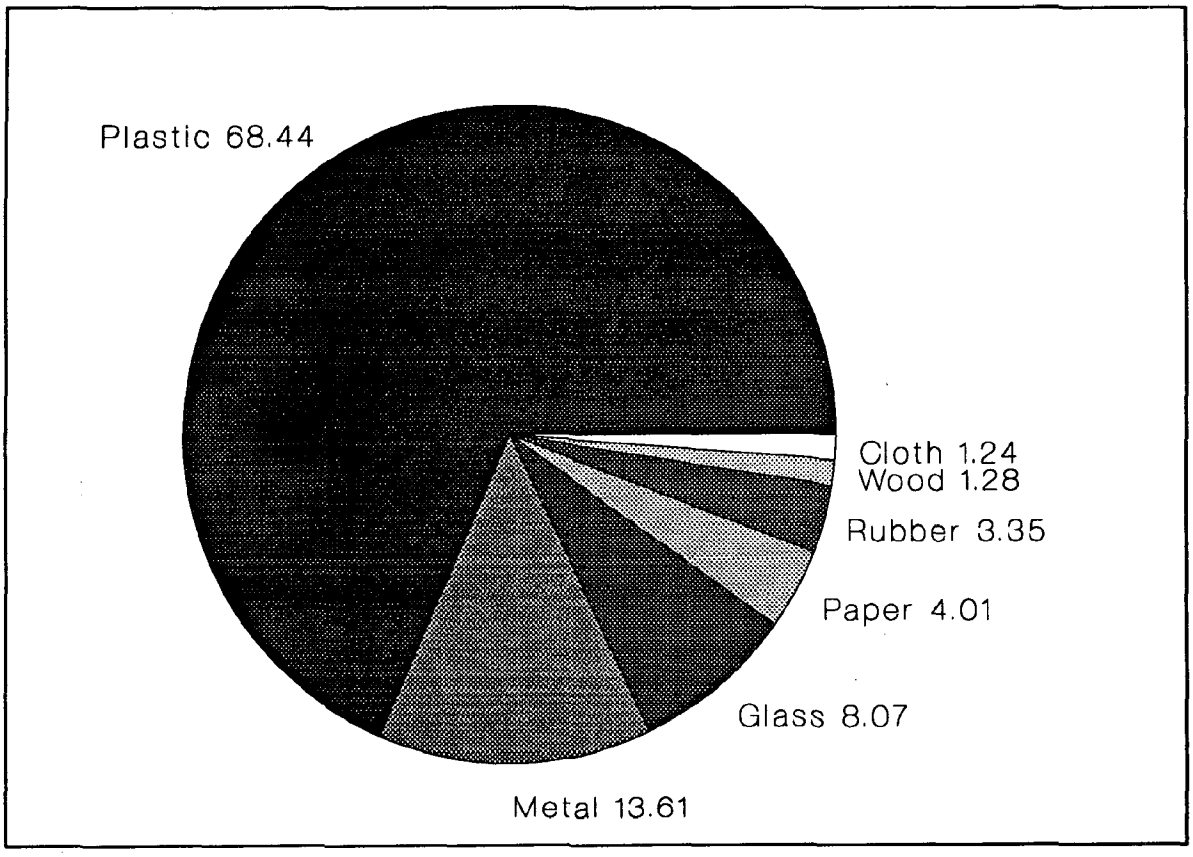
Recycling of beach debris was initiated by individual participants at the cleanups. They took a personal interest in collecting recyclables along their beach and transporting them to the local recycling company. A few items were deposited at the museum by volunteers for identification: one leg bone of a young deer, one rib bone of a cow, and one recently dead sea gull. Some of the strangest items collected include; two Radio Sounds (weather measuring devices); and a "stress note" in a bottle--"teacher gone bankrupt again."

The New Brunswick Museum has established a committee of local volunteers that will be active throughout the year. We hope to provide on going information to interested citizens, and help organize future cleanups more effectively. Problems associated with documenting debris on the data cards cleanup day will be focused on by organizing a sub-committee which will provide representatives at area beaches to accompany beach cleanup volunteers to ensure proper identification of the debris collected. As well, promoting the cleanups and motivating public response will be increased. Some communities may be becoming too confident that "others" are doing the work where environmental issues are concerned.

We were pleased to assist the Center for Marine Conservation this year in their efforts to heighten awareness of and place special attention on the global problem of untreated landbased sewage draining into our oceans. Good luck to the CMC in their efforts over the next year! In conclusion, the New Brunswick Museum and the Museum's beach cleanup organizing committee are very pleased with the support we received this year from volunteers around the province and businesses, and look forward to next year's project with equal success. A special thank you to the Center for Marine Conservation for their support through the 1991 campaign.

Dale C. Nicholson

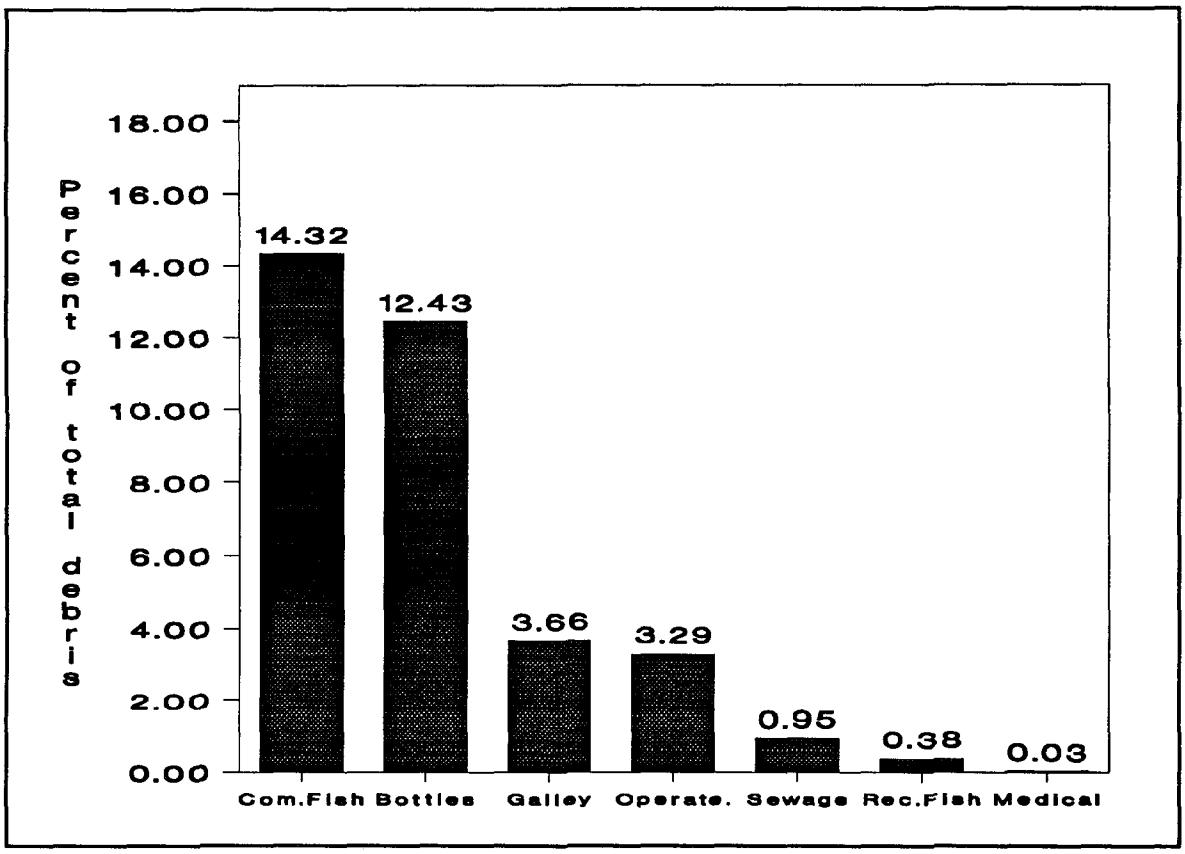
PERCENT COMPOSITION OF NEW BRUNSWICK'S BEACH DEBRIS:



NEW BRUNSWICK'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic rope	12,522	12.07
2. Plastic caps/lids	6,858	6.61
3. Foamed plastic pieces	6,201	5.98
4. Plastic pieces	4,780	4.61
5. Foamed plastic packaging	4,663	4.49
6. Glass pieces	4,003	3.86
7. Glass beverage bottles	3,623	3.49
8. Metal pieces	3,461	3.34
9. Plastic sheeting shorter than 2 feet	3,344	3.22
10. Plastic oil/lubricant bottles	3,230	3.11
11. Plastic beverage bottles	3,159	3.04
12. Metal beverage cans	3,010	2.90
TOTAL	**58,854**	**56.72**

MAJOR TYPES AND SOURCES OF NEW BRUNSWICK'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Items Reported
St. John	51.65	Foamed plastic pieces
Sackville/Dorchester	77.71	Plastic pieces
Deer Island	73.20	Foamed plastic pieces
Tabusintac	81.19	Foamed plastic pieces
Campbell Island	83.86	Foamed plastic pieces
Albert	81.79	Plastic rope
Riverview	34.32	Glass pieces
St. Andrews	60.82	Glass pieces
Grand Manan Island	68.57	Foamed plastic pieces
Chance Harbor	68.89	Plastic rope

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Sackville/Dorchester	plastic lobster trap tags	Newfoundland Department of Fisheries
Campbell Island	two totes	Connors Brothers, Ltd.

FOREIGN DEBRIS ITEMS REPORTED:

None reported

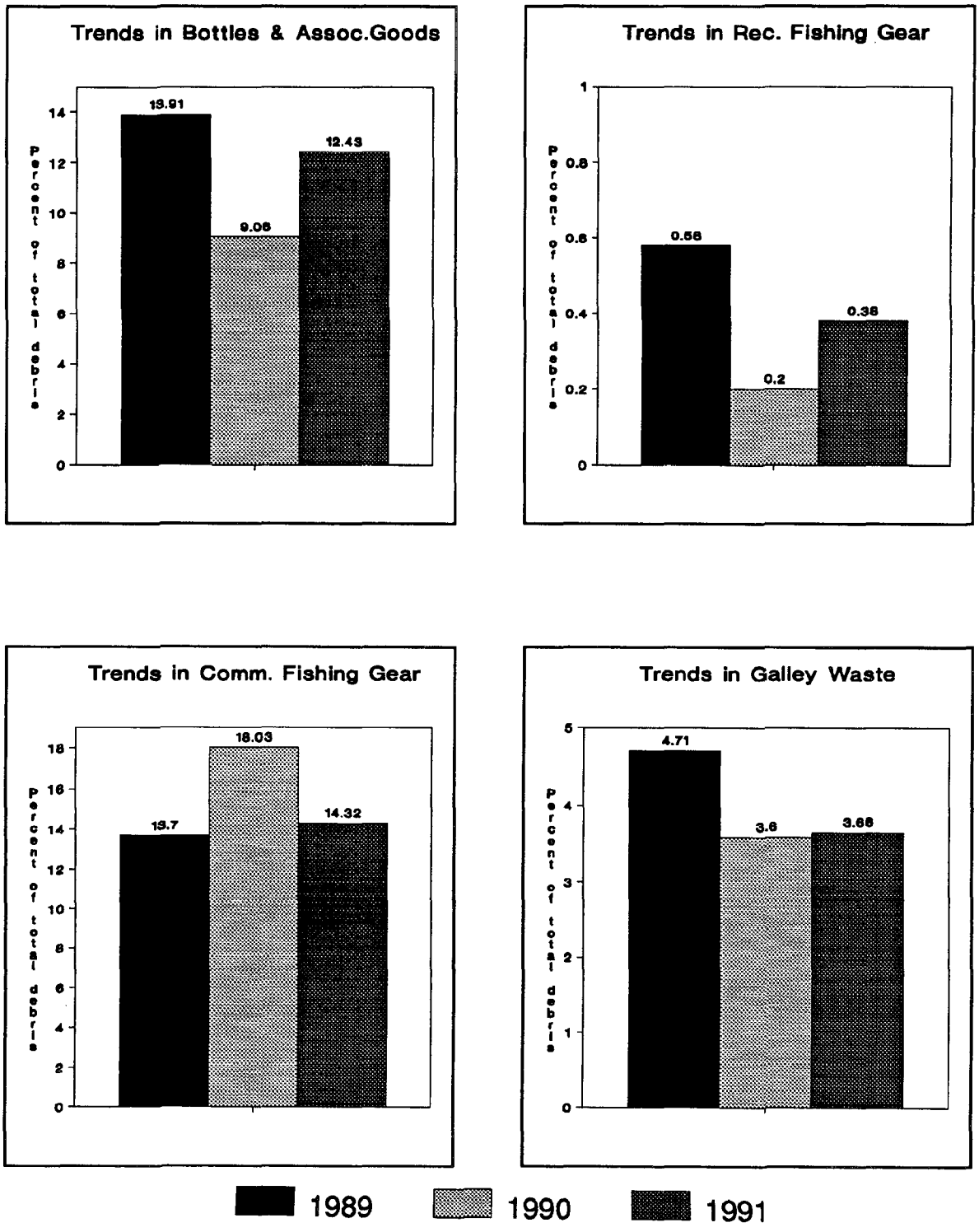
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reported
2 dead sea gulls, shot, and tangled in rockweed	46 dead sea gulls 2 raccoons 1 dead herring gull 1 dead seal 1 dead deer 1 black duck 1 rat

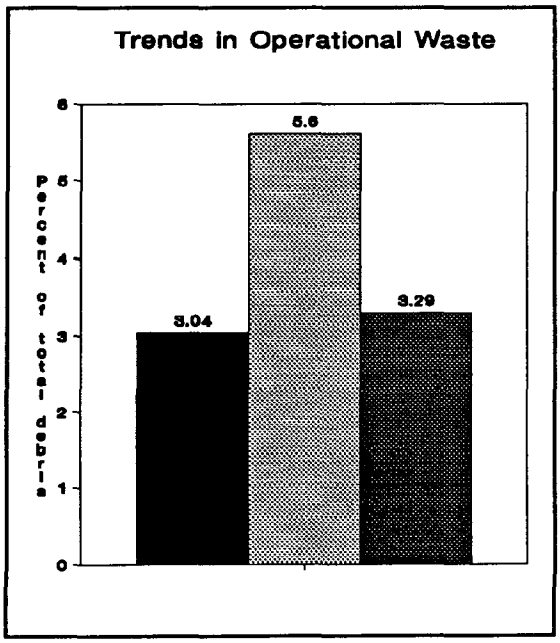
MOST PECULIAR DEBRIS ITEMS REPORTED:

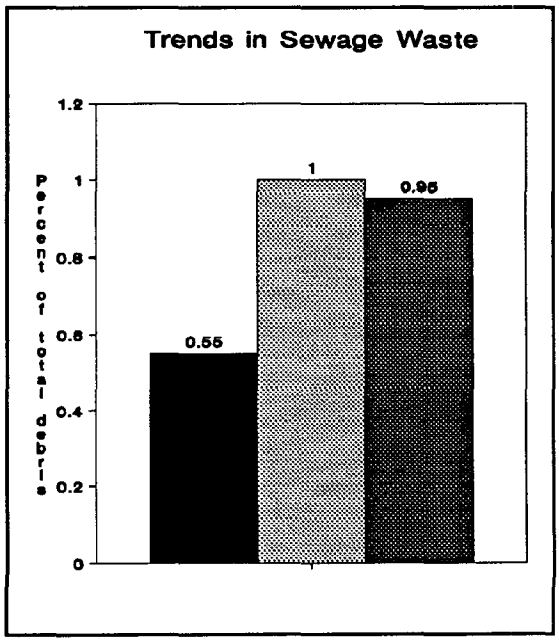
St. John	mattress spring, horseshoe, pantyhose, ship parts, bus seat, car alternator
Sackville/Dorchester	telephone, birth control pack, washing machine
Albert	hockey equipment
Riverview	bedspring, grill, screwdriver, underwear
Andrews	wheelbarrow, $1
Grand Manan Island	deodorant

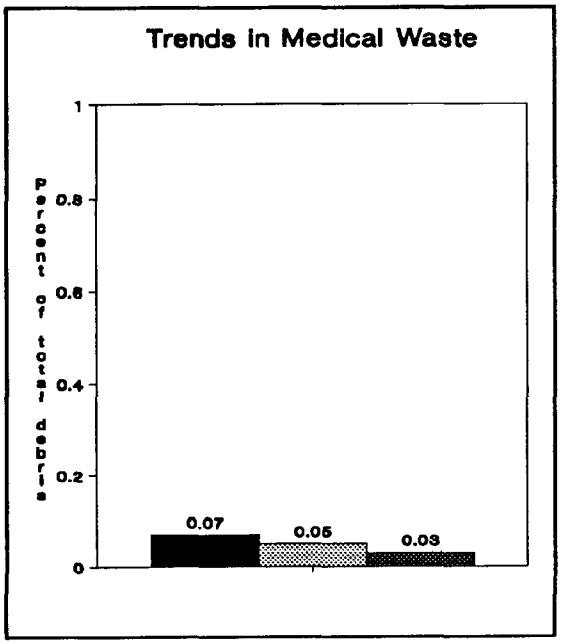
TRENDS IN MAJOR TYPES AND SOURCES OF NEW BRUNSWICK'S BEACH DEBRIS:



TRENDS IN MAJOR TYPES AND SOURCES OF NEW BRUNSWICK'S BEACH DEBRIS: (cont.)







FOR INFORMATION ON NEW BRUNSWICK'S 1992 COASTAL CLEANUP CONTACT:

Jamie Steele
Huntsman Marine lab.
Brandy Cove Road
St. Andrews, New Brunswick
Canada E2K 1E5
(506) 529-8958

CLEANUP DATE: COASTWEEKS

1989 1990 1991

Volunteers haul in a larger find at St. John, New Brunswick.

Moosehead Breweries and The Clean Nova Scotia Foundation's staff and family "Beach Sweep" at Rainbow Haven Beach near Dartmouth, Nova Scotia.

CANADA (NOVA SCOTIA)

September 21 - 29, 1991
2,000 Volunteers
42.85 Miles Cleaned
9,921 Pounds of Debris Collected
240 Data Cards

Coordinated by: Randy Miller
The Clean Nova Scotia Foundation
P.O. Box 2528, Station "M"
Halifax, Nova Scotia
Canada B3J 3N5
(902) 424-5245

The volunteer support for the fall Beach Sweep and Litter Survey held from September 21 to 29, 1991 across the province and organized by the Clean Nova Scotia Foundation and Moosehead Breweries, Limited, was high. Returned data cards indicated that 1,512 "sweepers" visited 62 Nova Scotia shoreline locations. According to the actual numbers of materials requested by volunteer groups, the Foundation believes approximately 2,000 people actually participated.

Beach Sweep volunteers also found dead marine animals. Some of this wildlife included 22 dead sea gulls, two dead seals, and a variety of other animals.

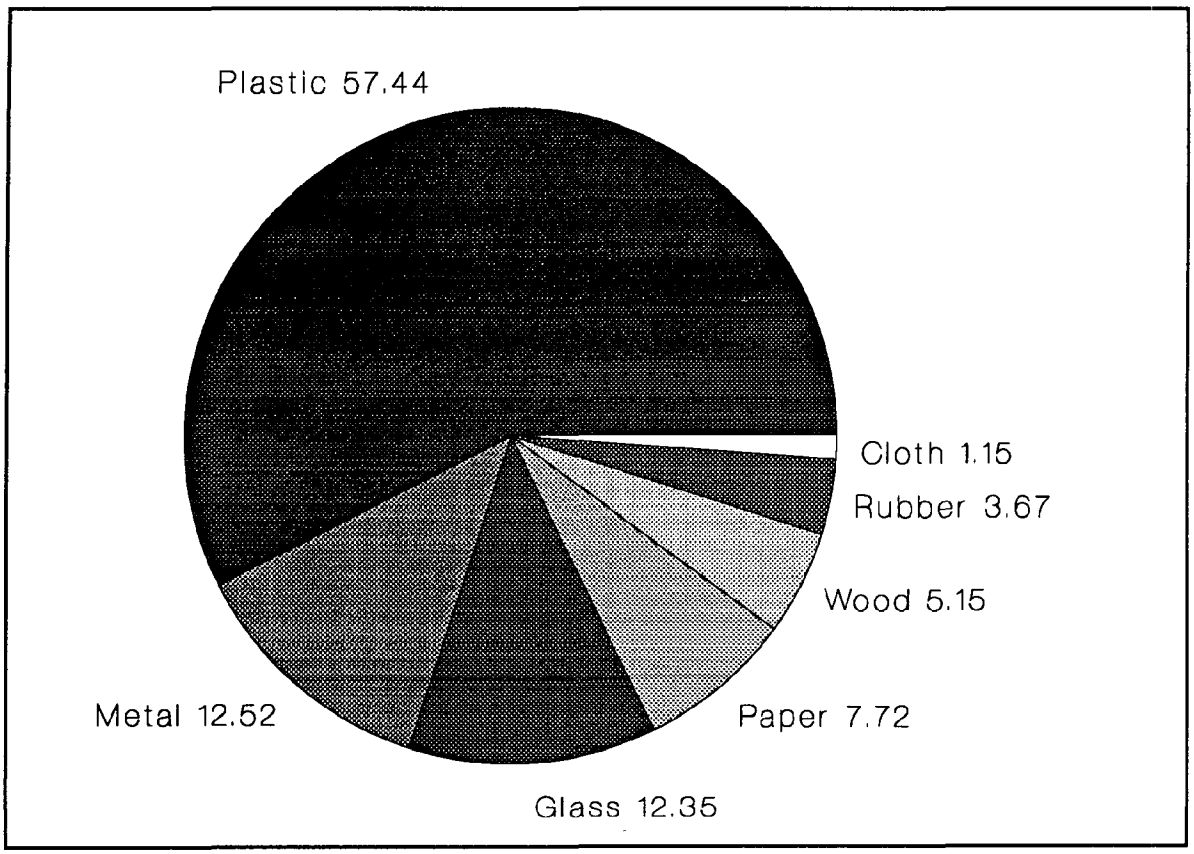
Foreign debris items were also collected. Items from Japan, Germany, and the United States were identified. These items were predominantly made from plastic.

Several peculiar items were indicated such as a bottle with a note inside, a leather jacket, two fire extinguishers, two record players, three shopping carts, a turkey baster, and two purses containing wallets and credit cards. One purse belonged to a woman from Arizona who lost her purse in June 1990. She was certainly surprised to learn of its whereabouts.

Many thanks go to our sponsor, Moosehead Breweries, Limited and the many volunteers who participated throughout the province.

Randy Miller

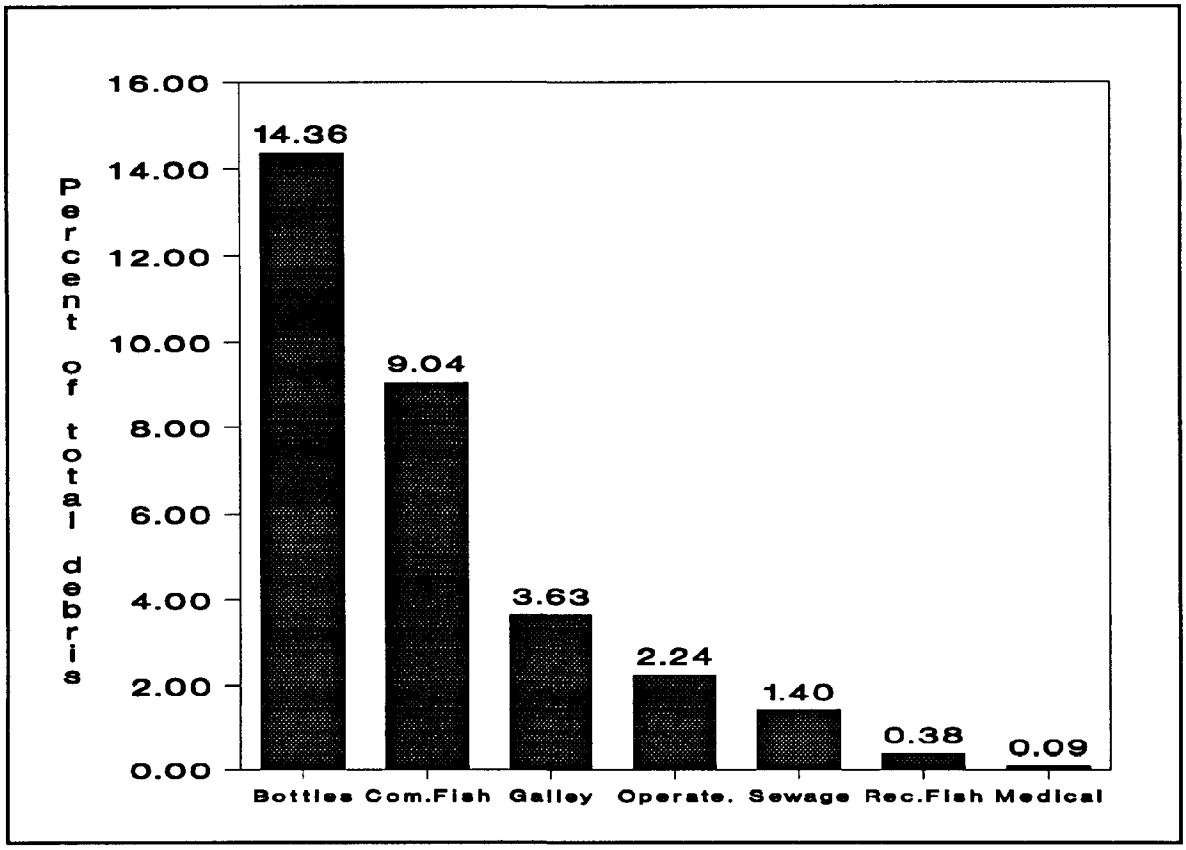
PERCENT COMPOSITION OF NOVA SCOTIA'S BEACH DEBRIS:



NOVA SCOTIA' S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic pieces	3,521	7.70
2. Glass pieces	3,121	6.83
3. Plastic rope	3,010	6.58
4. Foamed plastic pieces	2,256	4.94
5. Glass beverage bottles	2,086	4.56
6. Plastic caps/lids	2,041	4.46
7. Cigarette butts	1,764	3.86
8. Lumber pieces	1,731	3.79
9. Metal beverage cans	1,711	3.74
10. Plastic food bags/wrappers	1,561	3.41
11. Plastic beverage bottles	1,239	2.71
12. Paper pieces	1,061	2.32
Total	**25,102**	**54.91**

MAJOR TYPES AND SOURCES OF NOVA SCOTIA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Items Reported
New Edinburgh	57.18	Glass pieces
Scottis Bay	85.32	Plastic rope
Trout River	39.09	Glass beverage bottles
Inverness Town	67.29	Plastic food bags/wrappers
Sandy Beach	46.98	Glass pieces
Colindale Beach	52.10	Plastic rope
Hantsport	46.77	Foamed plastic pieces
Donnellens Brook	94.53	Plastic pieces
Pennys Beach	41.18	Glass beverage bottles
Avonport	48.13	Glass beverage bottles
Carter's Beach	57.30	Glass beverage bottles
Hunts Point	54.30	Glass beverage bottles
Eagles Head	73.80	Plastic food bags/wrappers
Sandhills Beach	49.86	Glass beverage bottles
Stoney Island Beach	48.68	Glass beverage bottles

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE: (cont.)

Zone Name	Percent Plastic	Most Prevalent Debris Items Reported
Cape Sable Island	40.17	Lumber pieces
The Hawk	58.93	Plastic rope
Crows Neck	56.22	Lumber pieces
Long Lake	50.31	Plastic food bags/wrappers
North Harbor	65.85	Plastic pieces
Boulardarie	57.40	Plastic pieces
Ross Ferry	39.79	Plastic pieces
Man 'O War Point	57.14	Plastic pieces
Sulis Cove	56.40	Plastic rope
Smiths Cove	58.51	Foamed plastic pieces
Digby Waterfront	43.41	Glass beverage bottles
Ragvette Beach	38.05	Glass pieces
Canon Banks	42.67	Metal beverage cans
Malagash Point	65.84	Foamed plastic pieces
Havenside	54.08	Cardboard pieces
Indian Beach	33.30	Glass pieces
Malignant Cove	75.54	Plastic rope
Dunns Beach	61.41	Plastic rope
Jimtown	21.78	Glass pieces
Mahoney's Beach	51.72	Plastic cups/utensils
Cape George	66.67	Foamed plastic pieces
Livingstones Cove	61.90	Plastic milk/water bottles
Ballantynes Cove	42.37	Metal beverage cans
Pomquet Beach	36.38	Lumber pieces
Alder Acres	47.11	Lumber pieces
Glasgow Head	52.99	Glass pieces
Weymouth North	62.82	Plastic pieces
Mauilette Beach	65.80	Plastic beverage bottles
Cape St. Mary	72.92	Plastic rope
Gilberts Cove	54.32	Plastic food bags/wrappers
Dartmouth	76.67	Foamed plastic pieces
Cow Bay	50.30	Plastic pieces
Grand Desert Isle	24.57	Glass pieces
Queensland	56.10	Cigarette butts
Rainbow Haven	52.69	Cigarette butts
Cleveland Beach	65.79	Cigarette butts
Lawrencetown	80.21	Foamed plastic pieces
Crystal Crescent	40.18	Metal plastic pieces
Fletcher's Lake	55.18	Foamed plastic pieces
Penhorn Lake	43.41	Metal beverage cans
Black Point	70.83	Plastic trash bags
Ketch Harbor	59.63	Cigarette butts

TRACEABLE DEBRIS ITEMS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris
Gilbert's Cove	USA	bottle
Cow Bay	Germany	electrical device
	USA	balloon
Grand Desert Isle	Cuba	cigar box
Lawrencetown	Japan	toilet bowl cleaner
Fletcher's Lake	Japan	car battery

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other reports
Dead duck strangled in fishing line	22 dead sea gulls
	2 dead ducks
	2 dead seals
	1 dead cat
	1 dead deer
	1 dead dog
	1 dead mink
	1 heron

MOST PECULIAR DEBRIS ITEMS REPORTED:

Scottis Bay	fire extinguisher, propane cylinder
Colindale Beach	rubber belt
Pennys Beach	old copper kettle
Avonport	car parts
Hunt's Point	tricycle
Cape Sable Island	door to car
The Hawk	oil storage tank, badly rusted
Ross Ferry	car seat, car parts
Man 'O War Point	screen window
Smiths Cove	windshield
Digby Waterfront	back of seat from bus, soap dish, engine
Raguette Beach	rug, battery
Canon Banks	two purses
Malagash Point	shower curtain, $2, bucket of oil
Malignant Cove	kid's bike
Mahoney's Beach	car parts
Ballantynes Cove	5 golf balls
Glasgow Head	sink, chimney
Gilbert's Cove	pants, shoes, bike tire, razor

MOST PECULIAR DEBRIS ITEMS REPORTED: (cont.)

Dartmouth	mask
Cow Bay	ironing board, car windshield, barrel, rug
Grand Desert Isle	shovel, bed frame, fire extinguisher, muffler, bike
Queensland	needles, insoles
Lawrencetown	wind speed indicator
Fletcher's Lake	stove
Penhorn Lake	shopping cart, leather jacket
Ketch Harbor	bike seat, rake

TRENDS IN MAJOR TYPES AND SOURCES OF NOVA SCOTIA'S BEACH DEBRIS:

Data collection from Nova Scotia's cleanup has only been carried out for two years (1989, 1991) and therefore trends cannot be assessed.

FOR INFORMATION ON NOVA SCOTIA'S 1992 COASTAL CLEANUP CONTACT:

Randy Miller
The Clean Nova Scotia Foundation
P.O. Box 2528, Station "M"
Halifax, Nova Scotia
Canada B3J 3N5
(902) 424-5245

CLEANUP DATE: COASTWEEKS

CANADA (ONTARIO)

September 21, 1991	Coordinated by: Bill Best
12 Volunteers	Sarnia
6.6 Miles Cleaned	Ontario, Canada
70 Pounds of Debris Collected	(519) 542-1684

Poor weather hampered Ontario's debut in the International Coastal Cleanup. Nonetheless, 12 intrepid volunteers turned out as part of the Great Lakes Beach Sweep. Since we only dida few kilometers on a relatively clean beach, our numbers are probably low compared to those of other beaches in the region. But similar to other areas, cigarette butts and plastic beverage containers and related items predominated. We expect a larger turnout next year, and we're sure our numbers will rise.

Karen Furnweger

Editor's Note: Data cards from Ontario's cleanup were mailed at the same time Canada was experiencing a postal strike. These cards never reached the CMC office. We hope the 1992 Ontario cleanup has better luck with both the weather and the postal service!

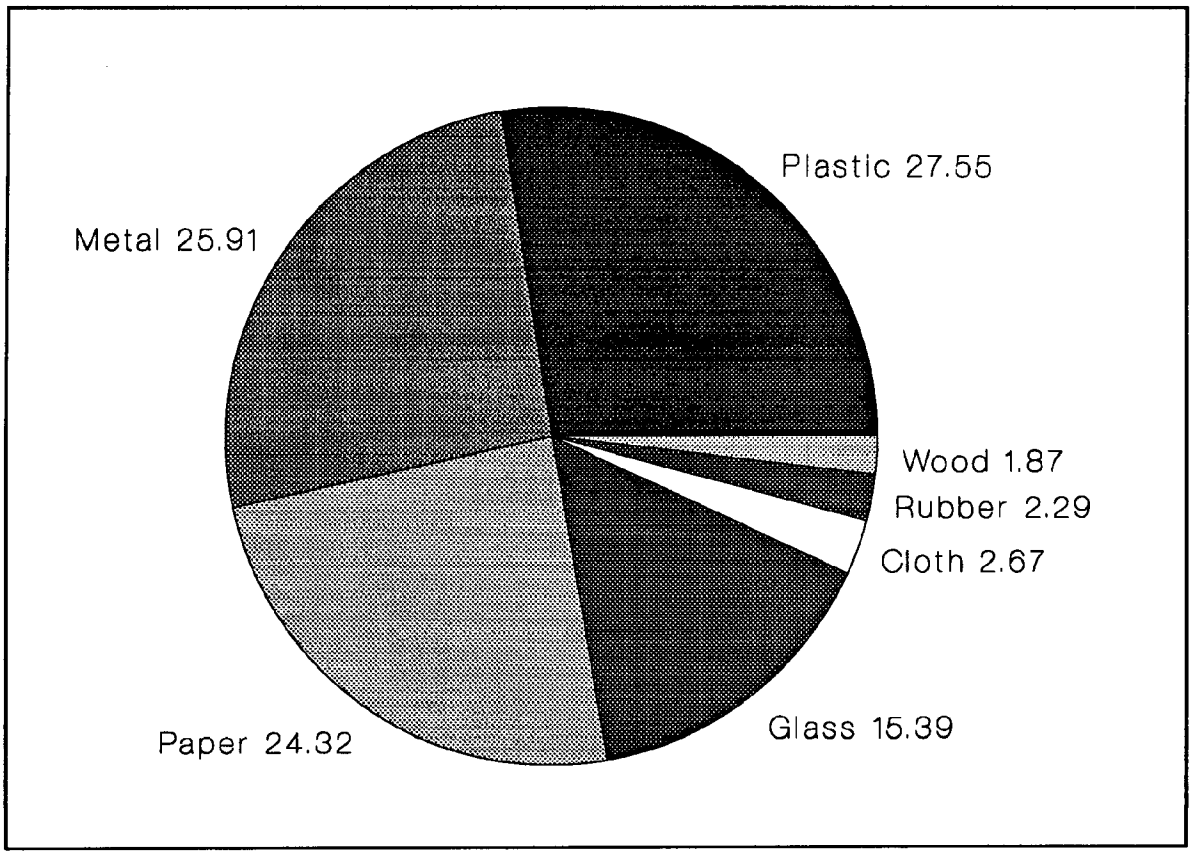
CUBA

September 21, 1991	Coordinated by: Dr. Luis Roberto Hernandez
17 Volunteers	Department de Investigaciones
1.02 Miles Cleaned	Museo Nacional de Historia Natural
320 Pounds of Debris Collected	Capitolio Nacional
2 Data Cards	Ciudad de la Habana, Cuba
	011-539-63-2589

The 1991 cleanup occurring in Cuba actually had its start in CMC's Virginia office in the summer of 1991. CMC was hosting an intern from the Dominican Republic. Pedro Reyes assisted with many projects, one of which was to work on expanding the International Coastal Cleanup into the Caribbean. Pedro made contact with many groups, including the Museo Nacional de Historia Natural in Cuba. Time was short when we sent them an information packet including copies of the Spanish version of the Beach Cleanup Data Card. We were not even sure the package would reach the Museo in time. But luck was with us, as Cuba was able to join the 1991 cleanup and provide specific data on the trash littering Cuba's beaches.

Lisa K. Younger
Coordinator
International Coastal Cleanup

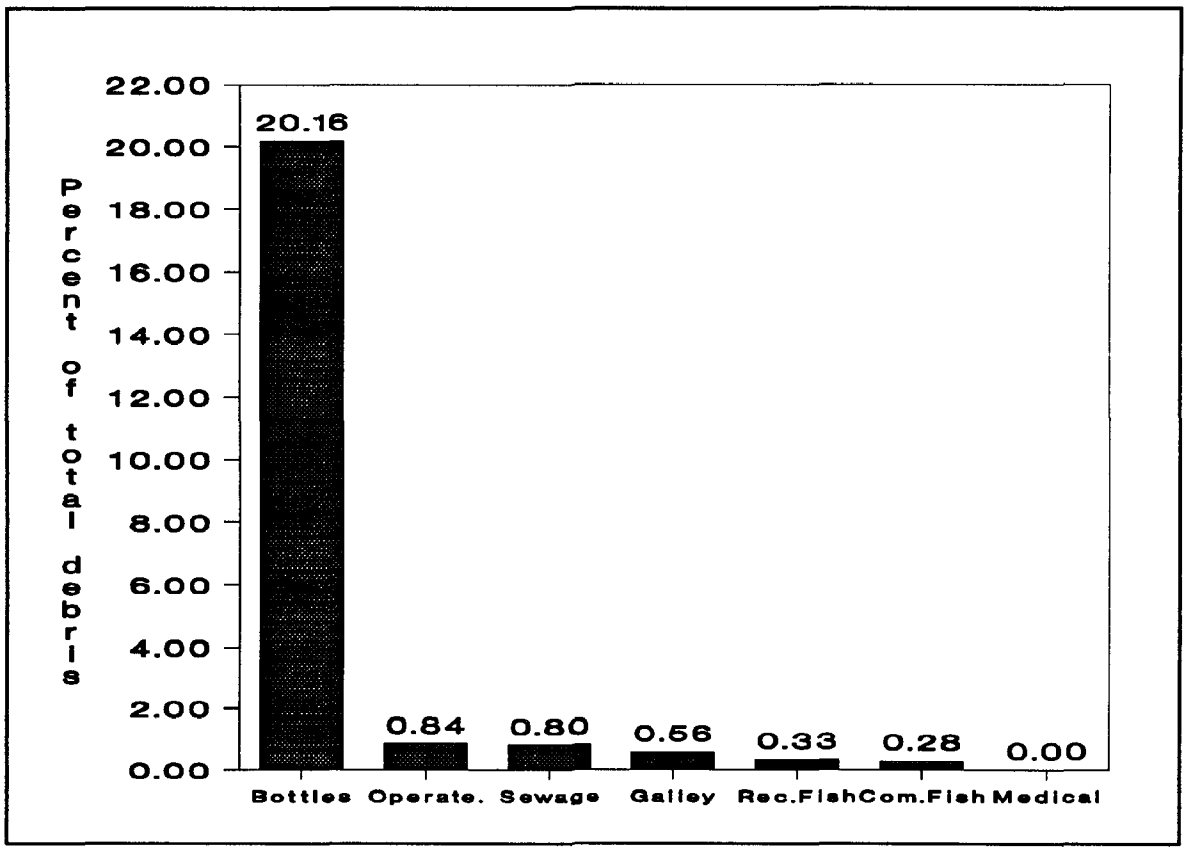
PERCENT COMPOSITION OF CUBA'S BEACH DEBRIS:



CUBA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Metal bottle caps	277	12.96
2. Glass pieces	272	12.72
3. Plastic caps/lids	219	10.24
4. Paper pieces	116	5.43
5. Plastic pieces	108	5.05
Paper bags	108	5.05
6. Newspapers	106	4.96
7. Metal pieces	104	4.86
8. Metal wire	103	4.82
9. Paper cartons	64	2.99
10. Cigarette butts	61	2.85
11. Glass beverage bottles	57	2.67
Clothing pieces	57	2.67
12. Metal beverage cans	37	1.73
Total	**1,689**	**79.00**

MAJOR TYPES AND SOURCES OF CUBA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Costa Litoral	29.96	Metal bottle caps
Guanabo	27.26	Glass pieces and metal bottle caps

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF CUBA'S BEACH DEBRIS:

Data collection for Cuba's cleanup has been carried out for only one year (1991) and therefore trends cannot be assessed.

Cyprus volunteers preparing to join in their country's first cleanup.

CYPRUS

September 22, 1991	Coordinated by: Andreas D. Demetropoulos
140 Volunteers	National Coordinator for MEDPOL
1.37 Miles Cleaned	Director, Fisheries Dept./Ministry of Agriculture and
7,000 Pounds of Debris Collected	Natural Resources
4 Data Cards	Aeolou 13
	Nicosia, Cyprus
	011-357-2-365-955

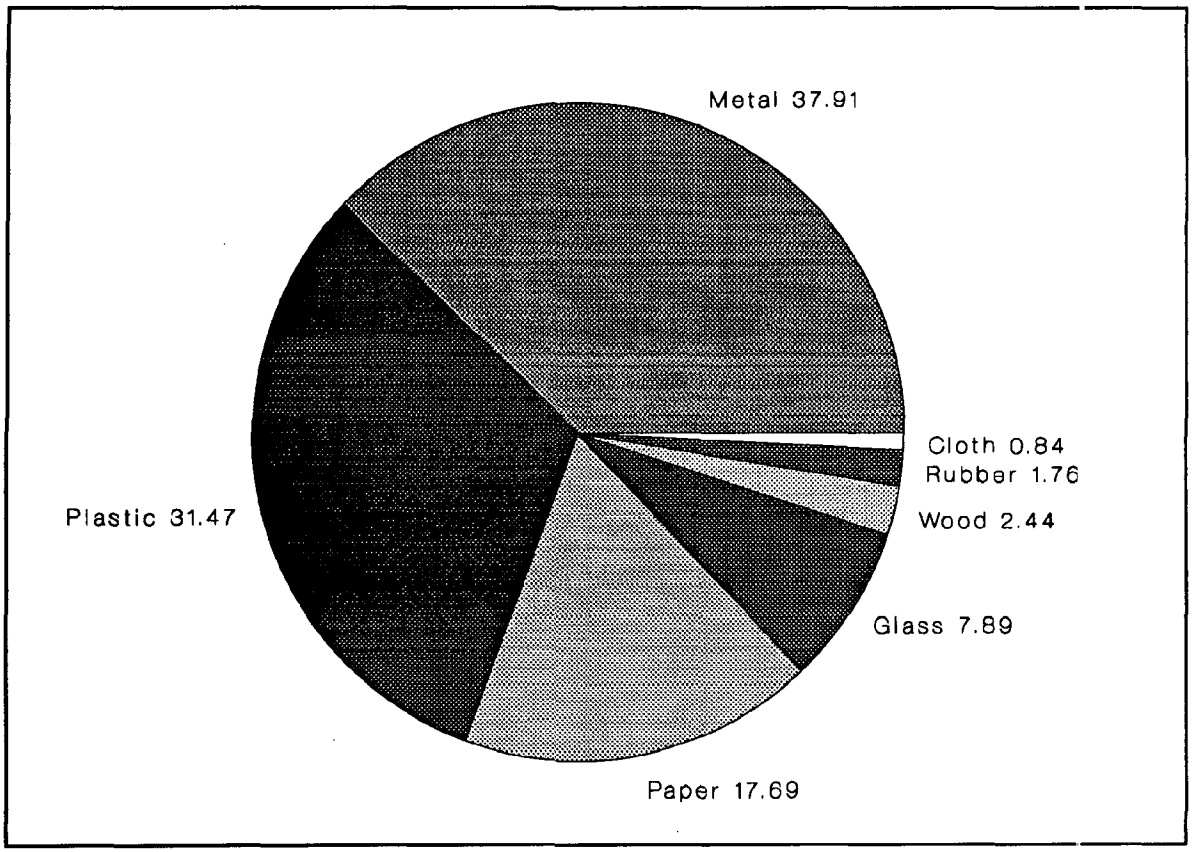
People started gathering very early in the morning at the pre-agreed places in the towns of Nicosia, Larnaca, and Limassol for the long journey to the beaches (200 kilometers away from Nicosia). During the trip, members of the Friends of Akamas that were traveling in each bus talked to the participants about the ecological significance of the beaches to be cleaned, about the efforts to protect them and about the efforts to declare the entire peninsula a National Park. In the meantime, reporters had an open line for live transmission of the entire operation over Radio Super. It was evident that for the most of the participants this was the first experience of an event like this, and they were quite enthusiastic about it.

On the beaches they were joined by lots of other people from neighboring towns who had heard about the campaign over the radio. The cleanup started about 10:00 and lasted for about five hours with small breaks for sandwiches and soft drinks. They were all amazed by the unexpected variety of things found on the beaches as well as by their abundance. It was apparent that some people had worked very much in organizing the entire event, providing for even the smaller details (like recyclable gloves, for instance).

They returned to their towns in the evening quite tired but also with the satisfaction of having contributed their little bit in fighting pollution and with a better understanding of the importance not only of cleanups but also of the prevention of pollution. From the comments made to the reporters, all would gladly participate in a similar event again.

Andreas D. Demetropoulos

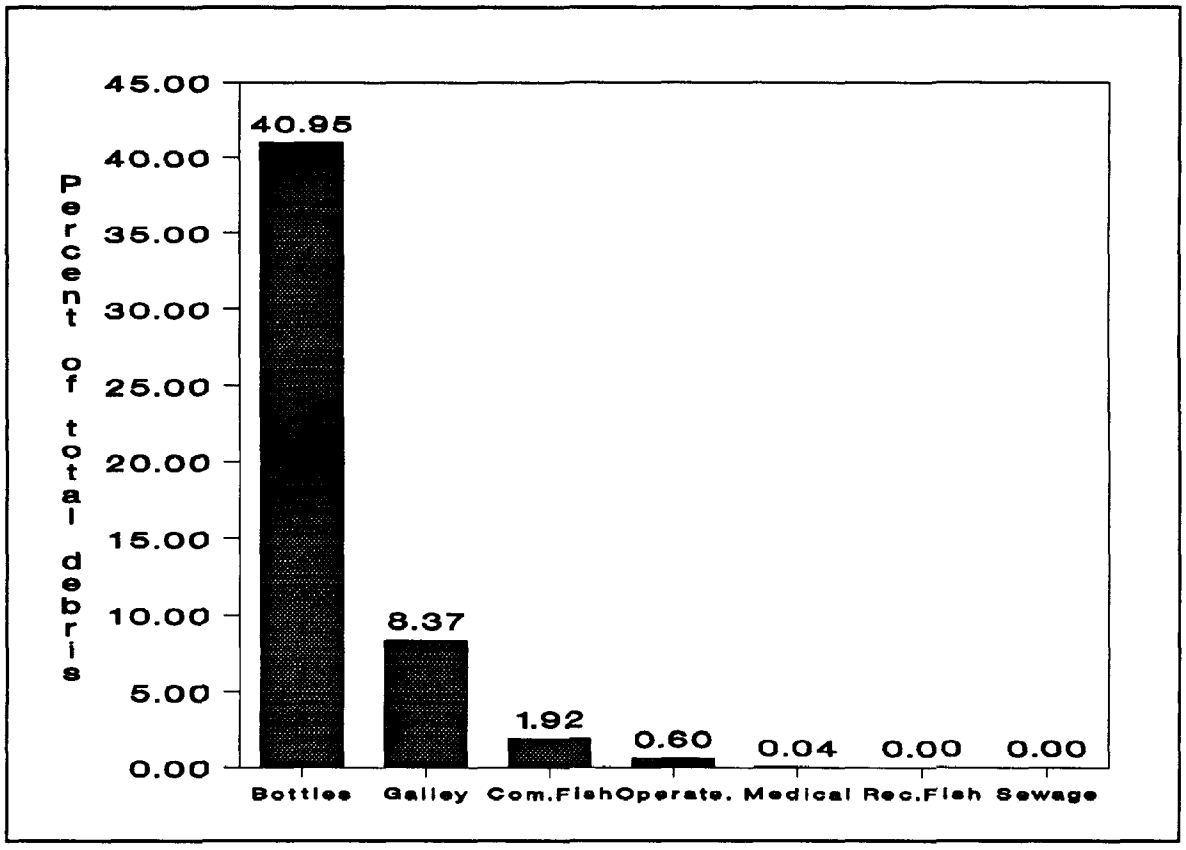
PERCENT COMPOSITION OF CYPRUS' BEACH DEBRIS:



CYPRUS' 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Metal beverage cans	650	26.02
2. Plastic cups/utensils	165	6.61
3. Metal bottle caps	150	6.00
4. Glass beverage bottles	135	5.40
5. Paper bags	130	5.20
6. Paper cups	105	4.20
7. Plastic milk/water bottles	102	4.08
8. Metal aerosol cans	100	4.00
9. Plastic beverage bottles	88	3.52
10. Plastic food bags/wrappers	78	3.12
11. Paper pieces	70	2.80
12. Plastic bleach bottles	69	2.76
Total	**1,842**	**73.74**

MAJOR TYPES AND SOURCES OF CYPRUS' BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Data was collected for only one zone, Nicosia.

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF CYPRUS' BEACH DEBRIS:

Data collection for Cyprus' cleanup has been carried out for only one year (1991) and therefore trends cannot be assessed.

FOR INFORMATION ON CYPRUS' 1992 COASTAL CLEANUP CONTACT:

Andreas D. Demetropoulos
National Coordinator for MED POL
Director, Fisheries Dept./Ministry of Agriculture and Natural Resources
Aeolou 13
Nicosia, Cyprus
011-357-365-955

CLEANUP DATE: COASTWEEKS

An abundance of plastic collected from Cyprus beaches during the 1991 cleanup.

ENGLAND

September 21, 1991	Coordinated by: Bill Foster
47 Volunteers	North Devon Environmental Trust
12 Miles Cleaned	Braunton Countryside Centre, Kaen Field Car Park
4,002 Pounds of Debris Collected	Braunton, Devon EX33 1AA
9 Data Cards	England
	011-44-0271-816957

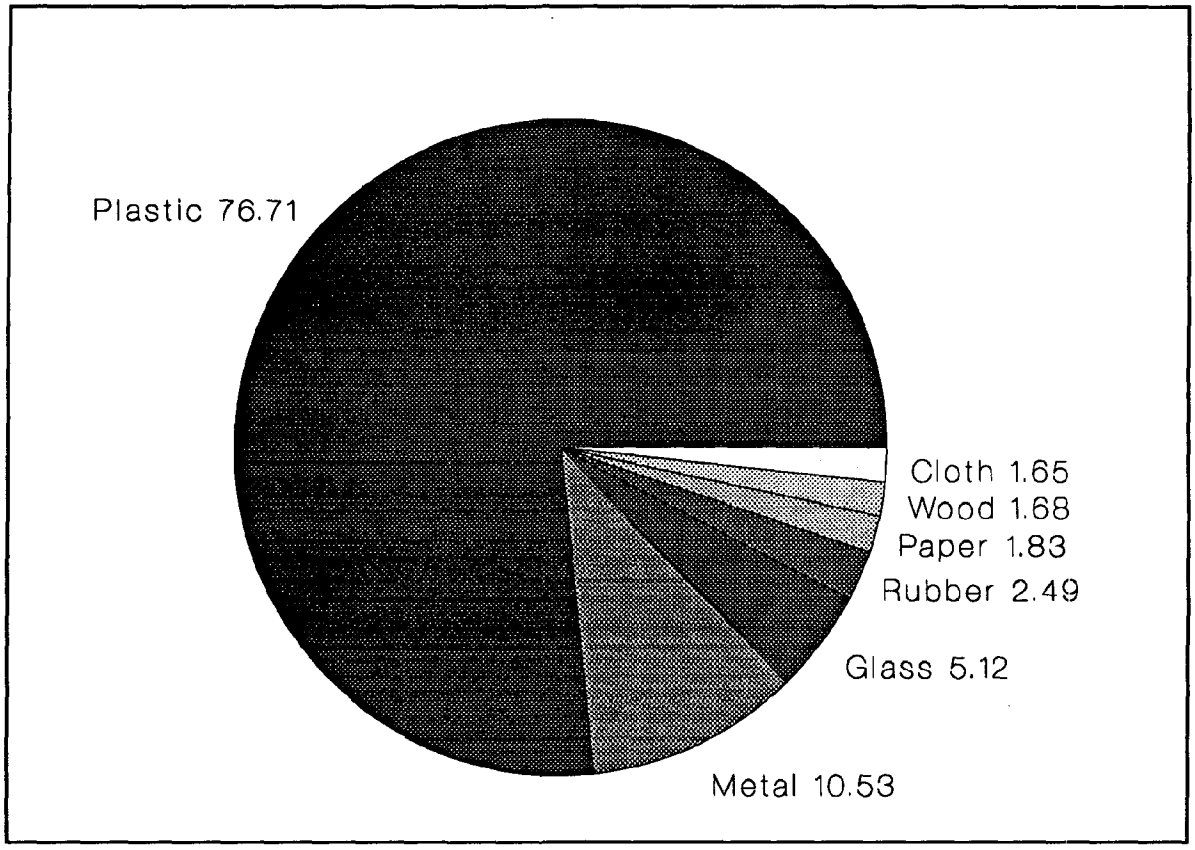
On Saturday morning, September 21, over 40 volunteers traveled to six beaches along England's coast to begin the country's first beach cleanup as part of the International Coastal Cleanup. The North Devon Environmental Trust organized the event under the direction of Bill Foster, the manager of the Brauton Countryside Centre, who used the help of local/newspapers, radio stations, and television stations to spread the word to the area's citizens.

The volunteers spent three hours collecting trash from approximately twelve miles of coast. Following the cleanup, volunteers began to make debris displays to demonstrate to the press and to the public the magnitude of litter they found on their beaches. One such display, pictured in a local newspaper, presented the shocking amount of garbage collected by one person in the single morning the cleanup took place.

With determined effort from mariners, government agencies, and continued vigilance and monitoring by beach cleanup volunteers, the coastline and seas will be a safer place for people, boats, and wildlife.

Bill Foster

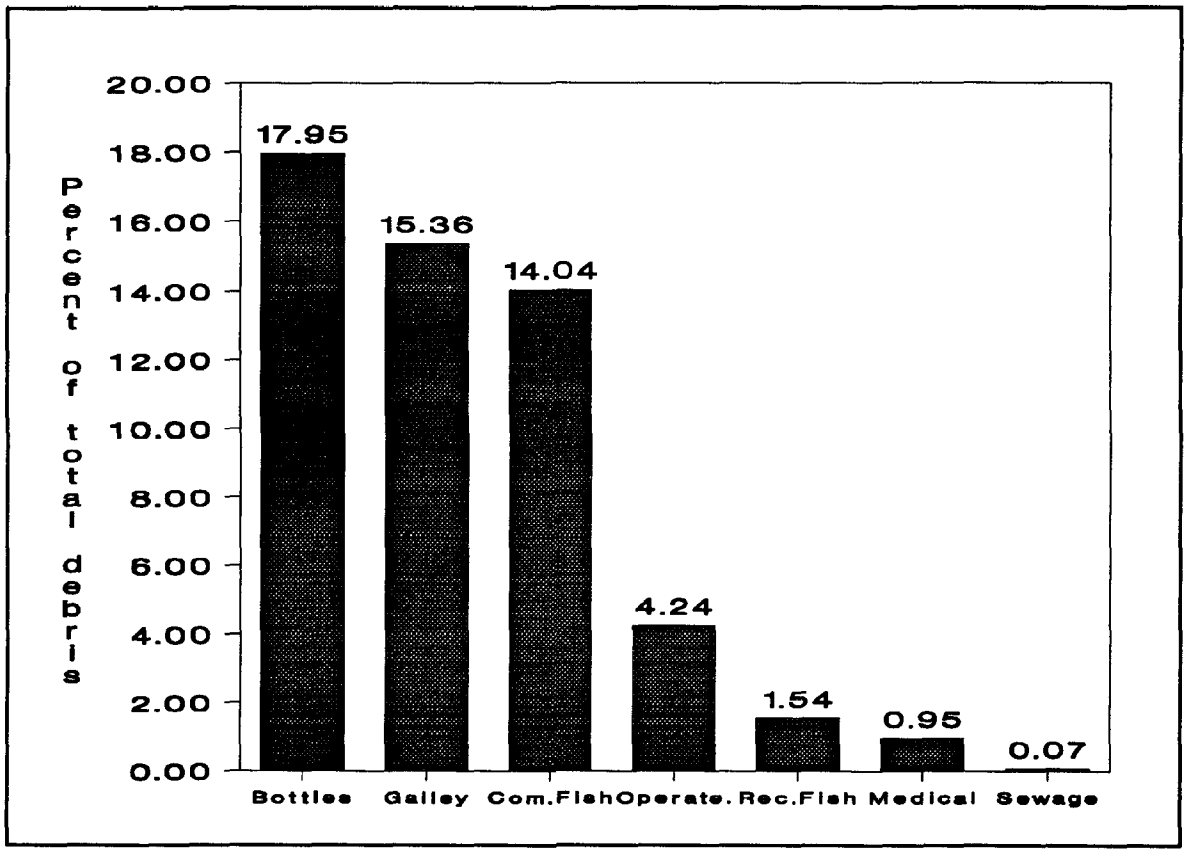
PERCENT COMPOSITION OF ENGLAND'S BEACH DEBRIS:



ENGLAND'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Plastic trash bags	296	10.82
2. Plastic rope	247	9.03
3. Plastic pieces	185	6.74
4. Miscellaneous plastic bags	182	6.65
5. Plastic beverage bottles	178	6.51
6. Foamed plastic pieces	141	5.16
7. Metal beverage cans	134	4.90
8. Plastic fishing nets	104	3.80
9. Foamed plastic cups	90	3.29
10. Plastic caps/lids	86	3.14
11. Glass beverage bottles	80	2.93
12. Plastic bleach bottles	67	2.45
Total	**1,790**	**65.45**

MAJOR TYPES AND SOURCES OF ENGLAND'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Woolacombe	64.38	Plastic beverage bottles
Saunton	79.23	Miscellaneous plastic bags
Crow Point	74.67	Plastic trash bags
Croyde	84.57	Foamed plastic pieces

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris
Woolacombe	Belgium	ant spray
	France	washing liquid
	Greece	oil container
Saunton	France	preserved fruits
	Japan	pharmacy bottles
	USA	fuel stick
Crow Point	France	coffee can

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
None reported	1 dead gannet
	1 dead sheep

MOST PECULIAR DEBRIS ITEMS REPORTED:

Saunton rocking horse, bed sheet

TRENDS IN MAJOR TYPES AND SOURCES OF ENGLAND'S BEACH DEBRIS:

Data collection from England's cleanup has been carried out for only one year (1991) and therefore trends cannot be assessed.

FOR INFORMATION ON ENGLAND'S 1992 COASTAL CLEANUP CONTACT:

Bill Foster
North Devon Environmental Trust
Braunton Countryside Centre, Kaen Field Car Park
Braunton, Devon EX33 1AA
England
011-44-0271-816957

CLEANUP DATE: COASTWEEKS

GREECE

•HELMEPA•

September 21, 1991
3,000 Volunteers
46.58 Miles Cleaned
10,250 Pounds of Debris Collected

Coordinated by: Dimitri Mitsasos
Director General/HELMEPA
5 Pergamou Street
Nea Smyrni
171 21 Athens, Greece
011-30-1-935-3847

The call for a voluntary beach cleanup on 21 September 1991, organized by HELMEPA, received a positive response throughout Greece. Previous public awareness campaigns and mobilization efforts of this Association helped motivate those who warmly respond to our call.

HELMEPA's invitation was announced through the press, on a local and national level, as well as on radio stations, and resulted in a wide participation of volunteers in spite of the limited time allowed for preparation.

Those who responded to our call included:

The Ministry of Macedonia-Thrace (N. Greece)
Three municipalities
Eight coastal communities
Education Departments from 11 Prefectures
12 environmental organizations
70 Boy Scouts/Girl Guides

Plastic remains the most abundant form of the garbage. Significant percentages are also materials which can be recycled, as aluminum cans. The origins of most of the garbage are households.

We are looking forward to continuing and strengthening our institutional cooperation.

Dimitri Mitsatsos

Editor's Note: CMC began coordinating with Greece only a very short time before the 1991 cleanup. Due to this shortage of time, detailed data collection was not carried out in 1991.

FOR MORE INFORMATION ON GREECE'S 1992 CLEANUP CONTACT:

Dimitri Mitsasos
Director General/HELMEPA
5 Pergamou Street
NEA Smyrni
171 21 Athens, Greece
011-30-1-935-3847

CLEANUP DATE: COASTWEEKS

*William Brown , U.S. Ambassador to Israel, participates in Israel's cleanup.

ISRAEL

September 21, 1991
1,500 Volunteers
42 Miles Cleaned
60,000 Pounds of Debris Collected

Coordinated by: Ellik Adler
Head, Marine and Coastal Environmental Division
Ministry of the Environment
P. O. Box 6234
Jerusalem, Israel 91061
011-972-2-701606

Israel has two coastlines: the Mediterranean in the west and the Gulf of Elat (Aqaba) in the south. The Mediterranean coastline is about 200 kilometers long, whereas that of Elat is only 10 kilometers. It is estimated that about 2/3 of the Israeli population (more than three million people) is concentrated along the coastal plain. This is where the major cities of Israel and most of its industry are located. The beaches are used for harbors and anchorages, electrical power plants (which need vast quantites of water as coolant), oil and coal terminals, as well as sewer outfalls. In addition, these beaches are very attractive to bathers because they are covered by soft, fine quartz sand, because the water is warm most of the year, and because of the long hours of sunshine they enjoy. Indeed, during the summer vacation as well as weekends in the swimming period (May-November), the beaches are crowded with bathers. All these intensive and variable activities cause, in one way or another, littering of the beach with solid waste.

There are three sources to the litter which pollutes the Israeli coastline: a) land-based litter which results mostly from bathers who litter the beach but also from (illegal) dumping of construction, and other, waste on the beach; b) litter which was dumped from ships at sea and lands on the beach; c) litter which is disposed of on the beaches of Lebanon and which is carried with the littoral drift to the Israeli coastline.

Cleanups of the Israeli beaches were carried out in the past in two forms. The Ministry for the Environment together with the coastal local councils have carried out a cleanup of most of the Israeli coastline once or twice a year, during the summer, since 1985. These were performed by contractors which were hired for that purpose. In addition, in the past, there were sporadic drives of groups of volunteers who conducted beach cleanups in their neighborhood.

The 1991 cleanup operation was triggered by Dr. Roberta Weisbrod, New York Department of Environmental Conservation, who suggested to Mr. Ellik Adler, head of the Marine and Coastal Environment Division in the Ministry of the Environment, that Israel participate in the International Coastal Cleanup. Due to the shortage of time, it was thought at the beginning to carry out a token operation at one of the beaches. However, the enthusiastic response of the Rotary International Clubs to the suggestion that this club undertake to carry out this operation made it a nationwide endeavor.

Abraham Golik

Editor's Note: CMC began coordinating with Israel only a very short time before the 1991 cleanup. Due to this shortage of time, detailed data collection was not carried out.

FOR INFORMATION ON ISRAEL'S 1992 CLEANUP CONTACT:

Ellik Adler
Head, Marine and Coastal Environmental Division
Ministry of the Environment
P. O. Box 6234
Jerusalem, Israel 91061
011-972-2-701606

CLEANUP DATE: September 18, 1992

U.S. Ambassador to Israel, William Brown, greets a fellow volunteer.

Staff from Japan's cleanup national office, handing out data cards and bags.

JAPAN

September 21, 1991
6,600 Volunteers
150 Miles Cleaned
90,000 Pounds of Debris Collected

Coordinated by: Yumi Kikuchi
JEAN
2-21-17 Azusawa
Itabashi-ku
Tokyo 174 Japan
011-03-5970-0851

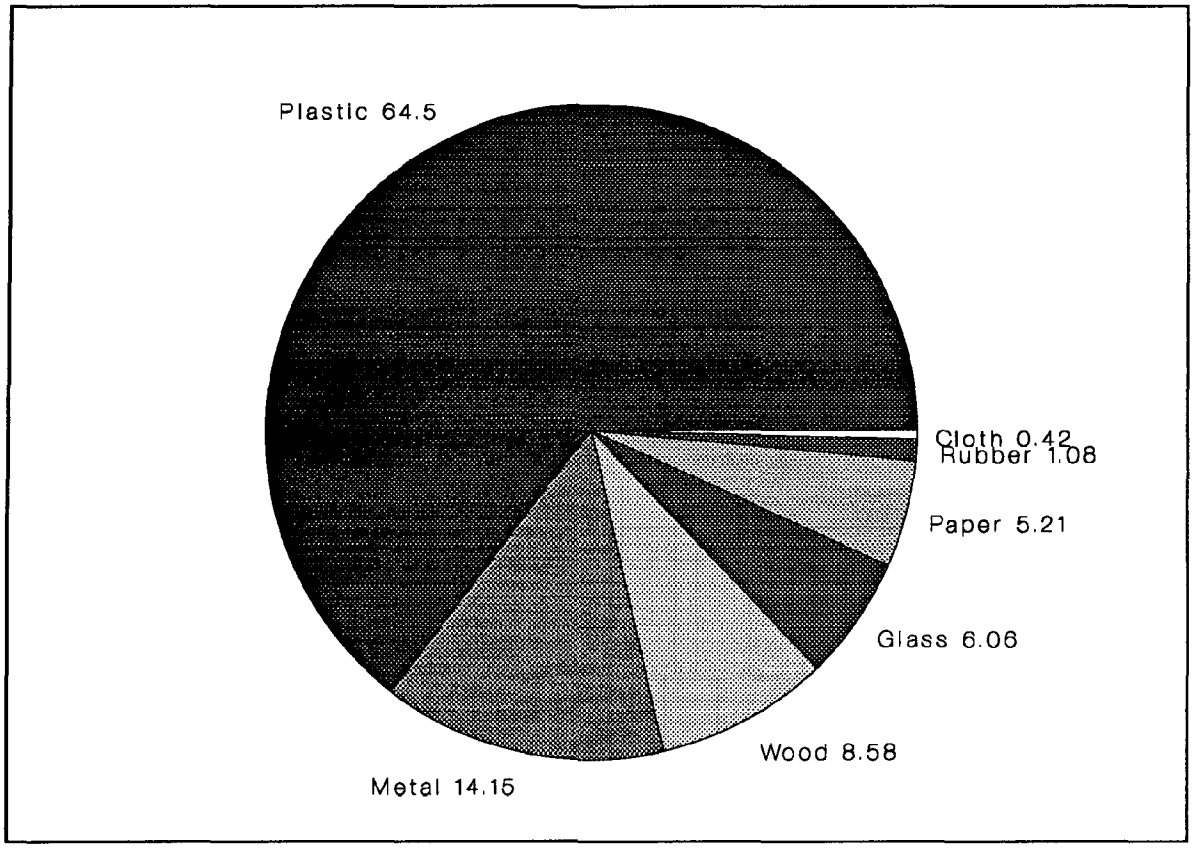
The International Coastal Cleanup 1991 was a great success here in Japan with almost 7,000 participants, eight times more than last year, cleaning 150 miles of beaches and waterways, collecting 90,000 pounds of garbage. For the Earthday campaign, Kathy O'Hara and Jill Kauffman of CMC joined in to help us, giving us a lot of knowledge and strength in order to accomplish the cleanup. As Kathy says, "It's more than a garbage problem because it kills." This is not known yet in Japan. In 1992, we will be holding a national meeting for captains and coordinators and presenting a slide show so that all the people involved can share in the knowledge and make an action based on it.

To deal with a fast growing cleanup campaign, the Cleanup National Office was established in Tokyo with regional offices in Kansai, Chubu, and Shikoku. As the campaign gets larger, the costs also grow, making our ends harder to meet. To solve the financial problems, we started to contact corporations and government agencies (Environment Agency, Fishery Agency, Ministry of Health and Welfare, Maritime Safety Agency). Fortunately, some of the corporations such as NEC, Sapporo Beer, Isetan, Sankus, ARSOA, and Hino Jidosya Green Fund are interested in participating in and sponsoring the cleanup. We are hoping that this company list will grow this year so we can finally be free of financial burden. The Environment Agency has chosen this cleanup as one of the official events of EARTH YEAR. We hope to get financial support, too!

Without the help of the 200 captains throughout Japan, the cleanup in Japan would never have been possible. Without a letter from Maria Brown of CMC California, we could never have organized this wonderful event. I just want to say THANKS to each person involved. We are all part of the Earth, and our lives derive from the OCEAN. Let's keep up the good work and do our best to heal the Earth, our mind and body. Our body is just a reflection of the Earth. If water is polluted, so is our body. When the ocean dies, so do we. Right?

Yumi Kikuchi

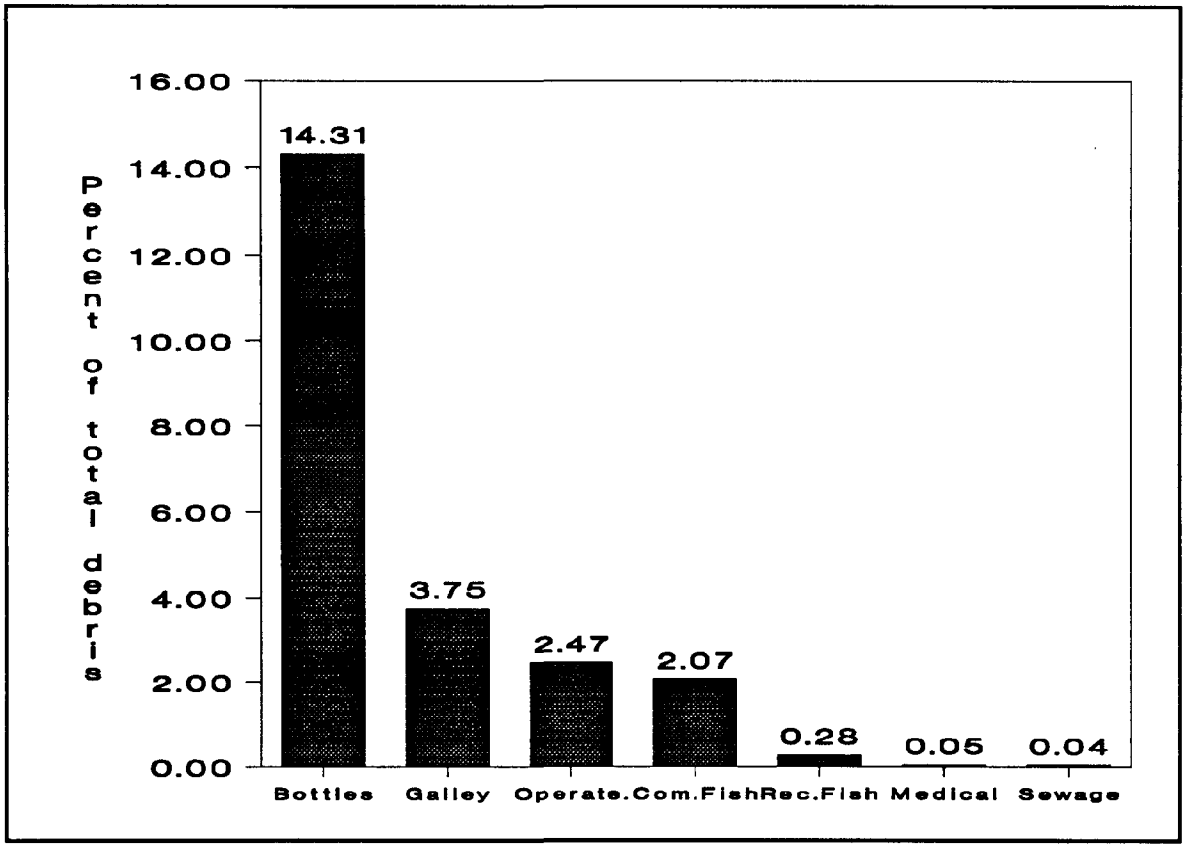
PERCENT COMPOSITION OF JAPAN' S BEACH DEBRIS :



JAPAN'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Foamed plastic pieces	31,571	12.11
2. Cigarette butts	23,768	9.12
3. Plastic pieces	21,071	8.08
4. Metal beverage cans	17,590	6.75
5. Miscellaneous plastic bags	16,188	6.21
6. Lumber pieces	15,936	6.11
7. Plastic food bags/wrappers	12,981	4.98
8. Glass pieces	7,060	2.71
9. Glass beverage bottles	6,527	2.50
10. Plastic caps/lids	6,264	2.40
11. Paper pieces	5,156	1.98
12. Metal pull tabs	4,982	1.91
Total	**169,094**	**64.87**

MAJOR TYPES AND SOURCES OF JAPAN'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Hokkaido	49.96	Metal beverage cans
Iwate	63.19	Cigarette butts
Miyagi	63.98	Foamed plastic pieces
Akita	37.50	Metal beverage cans
Fukushima	51.18	Metal beverage cans
Ibaraki	63.68	Foamed plastic packaging
Gumma	17.44	Metal beverage cans
Saitama	72.07	Foamed plastic pieces
Chiba	61.04	Foamed plastic pieces
Tokyo	71.59	Foamed plastic pieces
Kanagawa	69.85	Plastic pieces, foamed plastic pieces
Nagano	52.34	Metal beverage cans
Niigatfi	66.76	Foamed plastic pieces
Toyama	17.69	Lumber pieces
Ishikawa	47.11	Lumber pieces
Shizooka	90.96	Plastic pieces
Aichi	82.71	Cigarette butts

MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
Mie	50.82	Lumber pieces
Shiga	91.01	Foamed plastic pieces
Kyoto	51.62	Paper pieces
Osaka	41.99	Cigarette butts
Hyogo	75.32	Cigarette butts
Shimane	79.41	Plastic pieces
Hiroshima	57.91	Metal beverage cans
Yamaguchi	58.55	Plastic pieces
Tokushima	66.73	Foamed plastic pieces
Kagawa	48.76	Foamed plastic pieces
Ehime	49.67	Metal beverage cans
Kochi	81.21	Cigarette lighters
Fukuoka	68.38	Cigarette butts
Nagasaki	88.48	Plastic caps/lids
Oita	64.85	Foamed plastic pieces
Mitazaki	88.79	Plastic pieces
Kagoshima	39.04	Glass pieces
Okinawa	78.96	Plastic beverage bottles

TRACEABLE DEBRIS REPORTED:

Location	Type of Debris	Source Indicated
Nagasaki	artificial seasoning	Wei-Chuan Foods Corp. Taiwan

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris	Other Remarks
Ishikawa	Korea	detergent container	
Kochi	China	pesticide	
	Korea	glass bottle	
	Taiwan	glass bottle	
		lighter	
		medicine container	
		glass buoy	
	United States of America	baby powder	
		tomato ketchup	
Fukuoka	Korea	glass bottle	
		plastic container	
Nagasaki	Taiwan	artificial seasoning	Wei-Chuan Food Corp.
Niyazaki	Korea	plastic container	

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

Debris Related	Other Reports
Gold fish entangled in fishing net Mussel entangled in fishing line	None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

Hokkaido	futon duster, pillow, coat, hanger, jeans, hot plate, pocket heater, car mat
Miyagi	sandals, rain boots, television
Fukushima	battery, wheel cap
Ibaraki	ball, vacuum, part of a fishing boat, flashlight, fireworks
Gumma	sofa
Saitama	signboard, pillow, umbrella
Chiba	sweater, toothbrush, motorscooter, bike, enema, cosmetics
Tokyo	chair, battery, slippers, lunch boxes, hat, tea pot
Kanagawa	poster, boots, fire extinguisher
Niigata	clothes pins
Toyama	helmet, broom, toothbrush
Ishikawa	nylon sheets
Aichi	chair, umbrella, bike, wheel to stroller, antenna
Nagasaki	hood, video tape
Oita	sandle
Kagoshima	television, bike

TRENDS IN MAJOR TYPES AND SOURCES OF JAPAN'S BEACH DEBRIS:

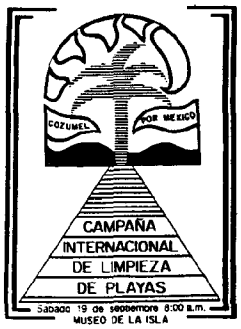
Data collection for Japan's cleanup has only been carried out for two years (1990, 1991) and therefore trends can not yet be assessed.

FOR INFORMATION ON JAPAN'S 1992 COASTAL CLEANUP CONTACT:

Yumi Kikuchi
JEAN
2-21-17 Azusawa
Itabashi-ku
Tokyo 174 Japan
011-03-5970-0851

CLEANUP DATE: September 20, 1992

Another truckload of marine debris leaves the beach at Cozumel, Mexico.



MEXICO

September 21, 1991
265 Volunteers
6 Miles Cleaned
1,440 Pounds of Debris
7 Data Cards

Coordinated by: German Mendez
P.O. Box 396
Cozumel, Quintana Roo
Mexico 77600
011-529-872-1232

Prof. Rosalinda Jinich Domingo
Museo de la Isle de Cozumel
Avenue Rafuel Melgar, Calle 6 North
Cozumel, Quintana Roo
Mexico 77600
011-987-2-15-45

On the 21st of September, Cozumel participated for the third year in the International Coastal Cleanup, in accordance with the Center for Marine Conservation in Washington D.C. and organized here by the Museum of Cozumel with the help of the local people. Due to the importance of the event they invited the Elementary, Junior, and Senior High schools and the entire community as well to collaborate in the campaign.

The calling up for people and the promotion of this activity was realized by radio, press, and posters created by the Museum using the slogan "COZUMEL FOR MEXICO." Even though it was raining, the enthusiastic participation of the volunteers made possible the clean up of our east coast (10 beaches), cleaning about four kilometers in total.

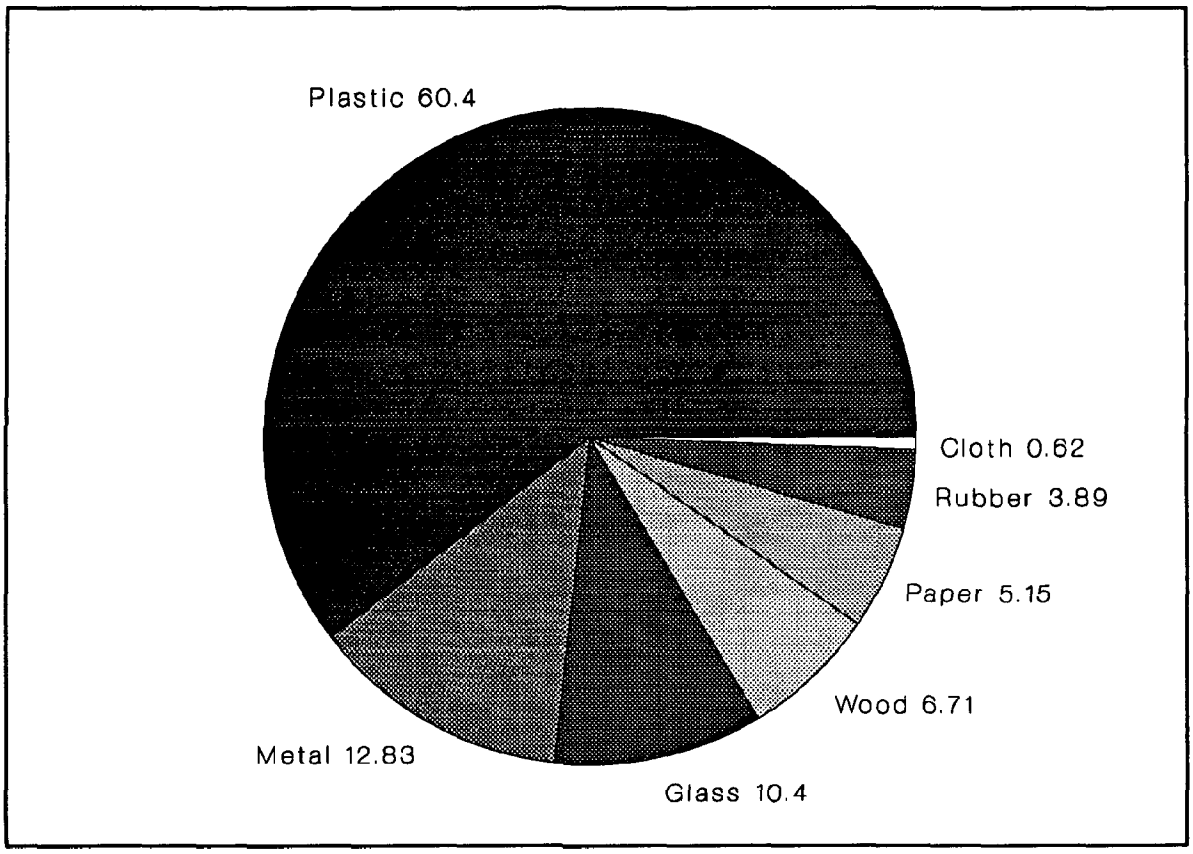
The total number of volunteers was 265 of which 90% were children. They were organized by 20 coordinators and divided in groups, one on each beach. The cleanup started at 9 a.m. and finished at 11 a.m. After the cleanup there were some social activities, but these did not last for very long due to the bad weather.

The amount of trash picked up measured 10 cubic meters, almost two tons. From all that trash, much of it was plastic, (bottles, nets, boxes, buoys, etc). From all that marine debris, we noticed also that a portion of it was from foreign countries (North and South America, Europe, and other Caribbean countries).

For three years now, we have been collecting information sending it to CMC, but also locally, we organize a beach cleanup every month with the help of a different school each time.

German Mendez

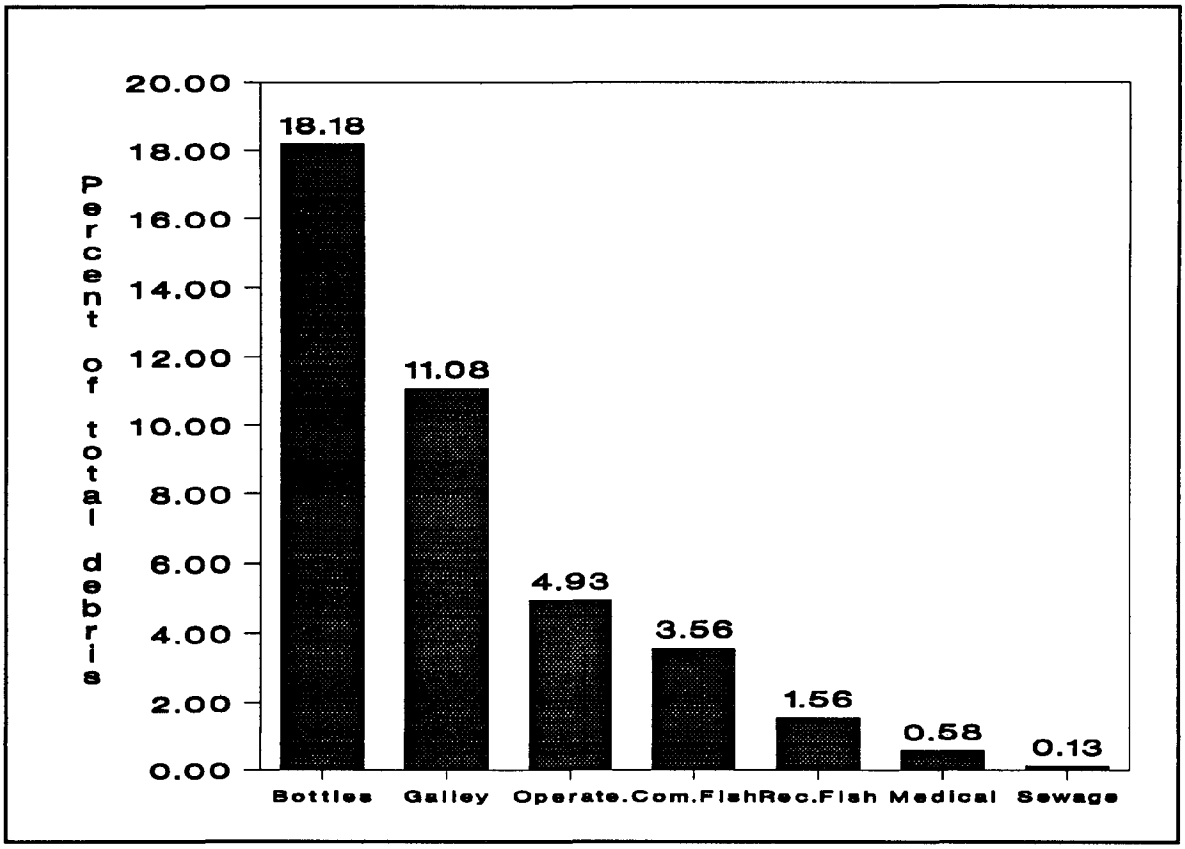
PERCENT COMPOSITION OF MEXICO'S BEACH DEBRIS:



MEXICO'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Cigarette butts	204	6.61
2. Lumber pieces	185	5.99
3. Glass beverage bottles	168	5.44
4. Miscellaneous plastic bags	166	5.38
5. Plastic trash bags	147	4.76
6. Plastic beverage bottles	132	4.28
7. Glass pieces	100	3.24
8. Plastic bleach bottles	96	3.11
9. Metal bottle caps	83	2.69
10. Plastic gallon bottles	81	2.62
11. Plastic six-pack holders	80	2.59
12. Plastic oil/lubricant bottles	75	2.43
Metal wire	75	2.43
Total	**1,592**	**51.59**

MAJOR TYPES AND SOURCES OF MEXICO'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported
El Mirador	50.81	Lumber pieces
North Hotelera	26.23	Metal bottle caps
Tumba Del Caracol	75.99	Plastic cups/utensils
Rosalinda	72.17	Miscellaneous plastic bottles
Celarain	63.45	Plastic trash bags
Mezcalitos	83.40	Plastic pieces
Fide Caribe	70.63	Miscellaneous plastic bottles

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

Location	Source	Type of Debris
Mezcalitos	France	plastic bottle
	USA	plastic bottle

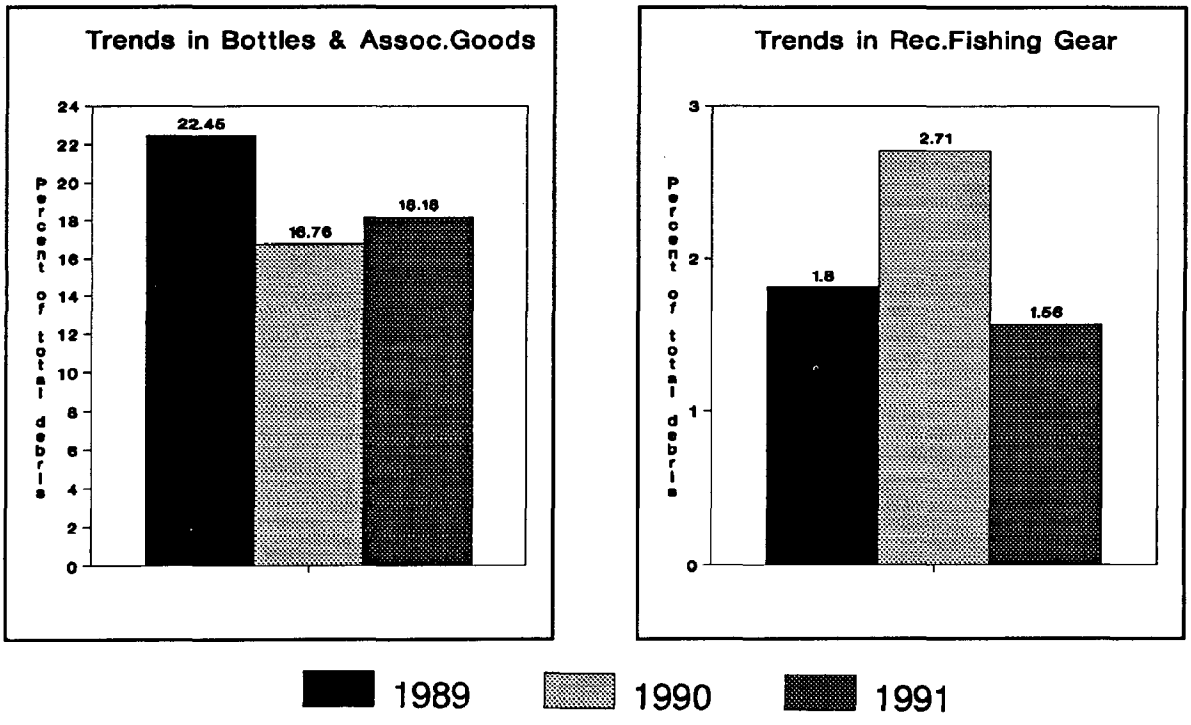
STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

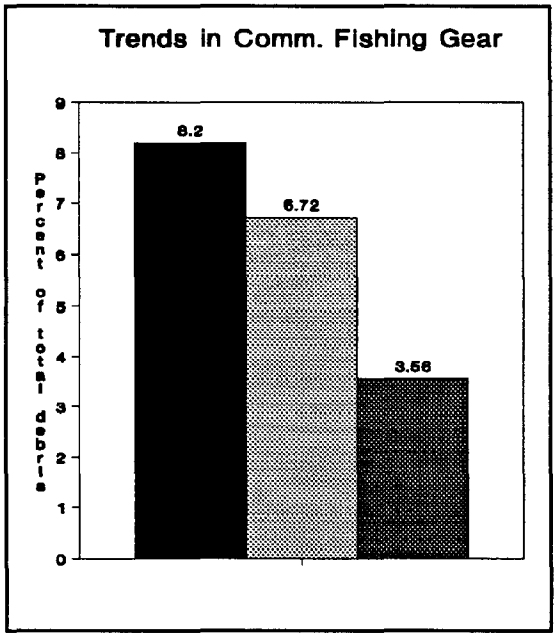
MOST PECULIAR DEBRIS ITEMS REPORTED:

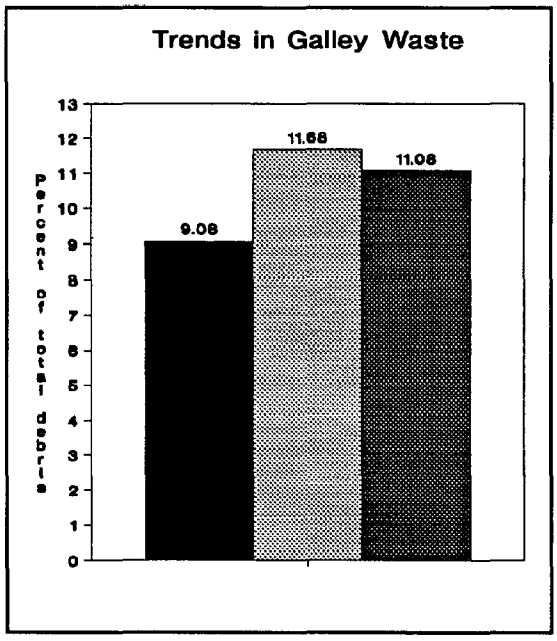
Tumba Del Caracol soap

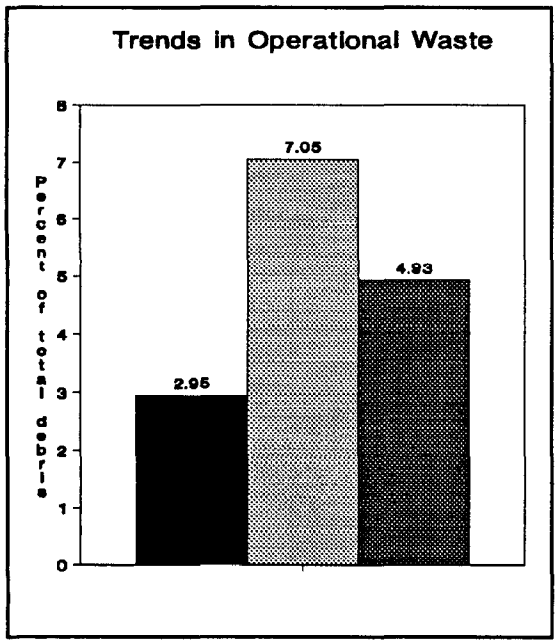
TRENDS IN MAJOR TYPES AND SOURCES OF MEXICO'S BEACH DEBRIS:

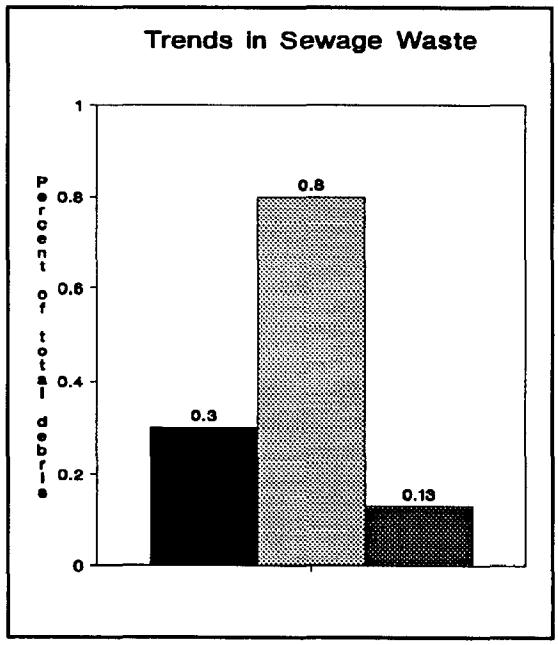


TRENDS IN MAJOR TYPES AND SOURCES OF MEXICO'S BEACH DEBRIS: (cont.)



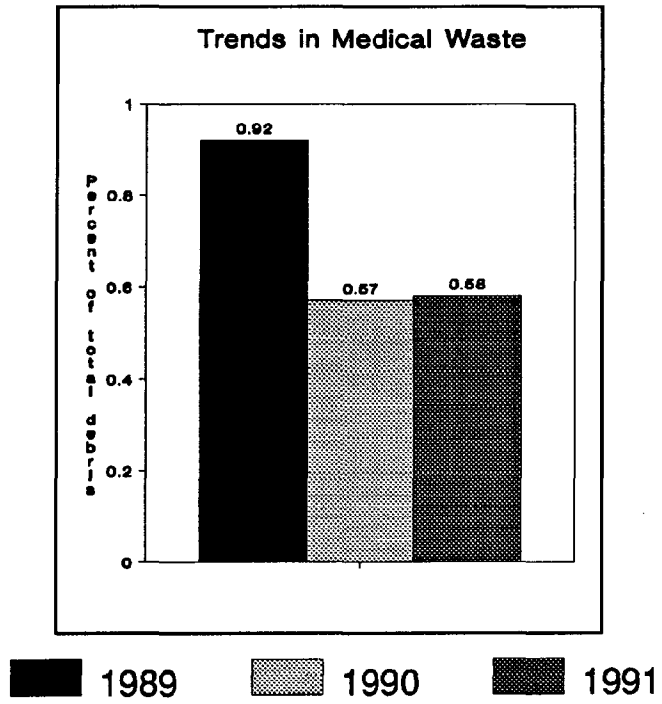






1989 1990 1991

TRENDS IN MAJOR TYPES AND SOURCES OF MEXICO'S BEACH DEBRIS: (cont.)



FOR INFORMATION ON MEXICO'S 1992 COASTAL CLEANUP CONTACT:

German Mendez
P.O. Box 396
Cozumel, Quintana Roo
Mexico 77600
011-529-872-1232

OR

Prof. Rosalinda Jinich Domingo
Museo de la Isla de Cozumel
Avenue Rafael Melgar, Calle 6 North
Cozumel, Quintana Roo
Mexico 77600
011-987-2-15-45

CLEANUP DATE: September 19, 1992

At Cozumel, Mexico volunteers find a large fishing net.

NETHERLANDS ANTILLES (SABA)

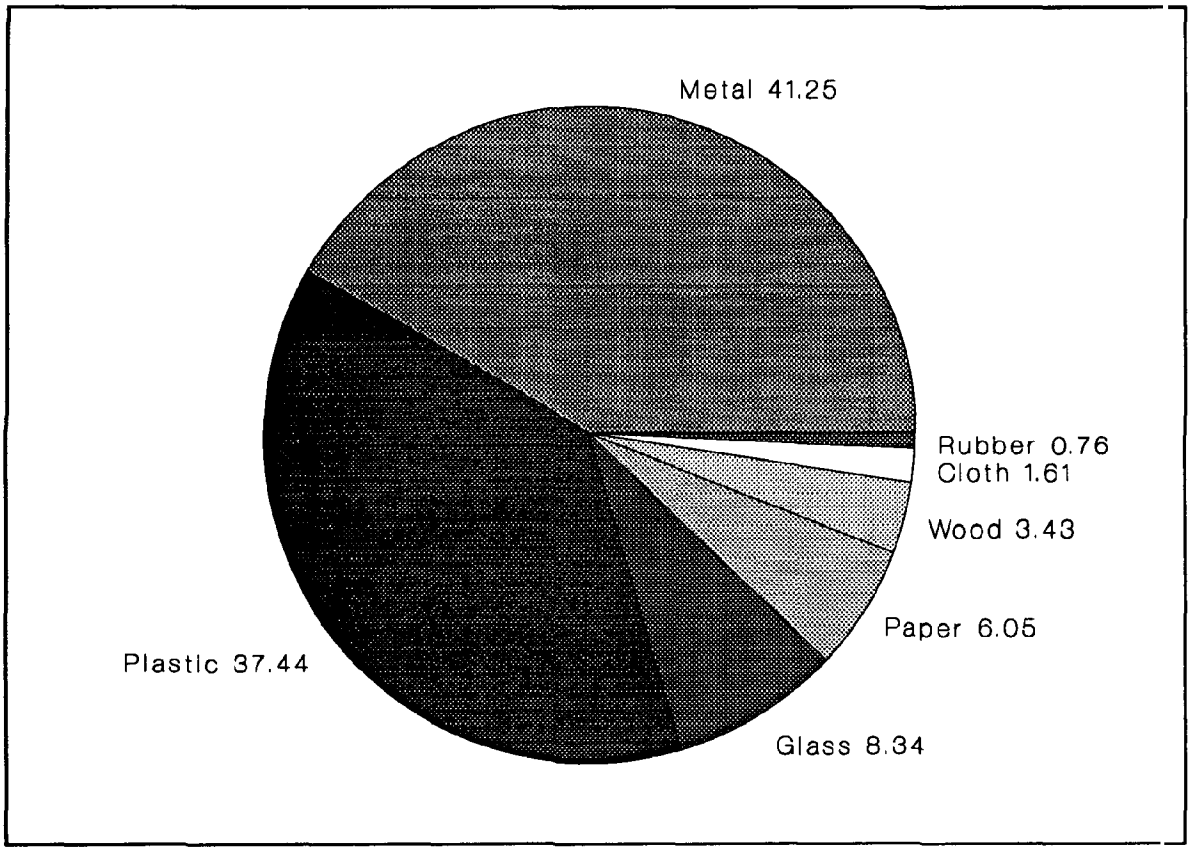
September 21, 1991
21 Volunteers
.2 Miles Cleaned
8,000 Pounds of Debris Collected
6 Data Cards

Coordinated by: Susan Walker
Manager, Saba Marine Park
P.O. Box 18
The Bottom, Saba
Netherlands Antilles
011-599-4-63348

On Saba, the smallest island (only five square miles) in the Dutch West Indies (Netherlands Antilles), 21 volunteers participated in cleaning up two of the island's bays. In the Fort Bay Harbor, 16 people cleared away about four tons of garbage which was scattered around. Much of this wasn't marine debris, but rather garbage which has its origins in Saba itself. The majority of the weight was from scrap iron which littered the harbor area. In the Cove Bay, which receives a lot of incoming debris from the sea, six volunteers meticulously cleaned. They collected trash left behind from on-island picnics in the area (cigarette butts, bottle caps) and debris brought by the sea (plastics primarily). Overall, it was a very successful event.

Susan Walker

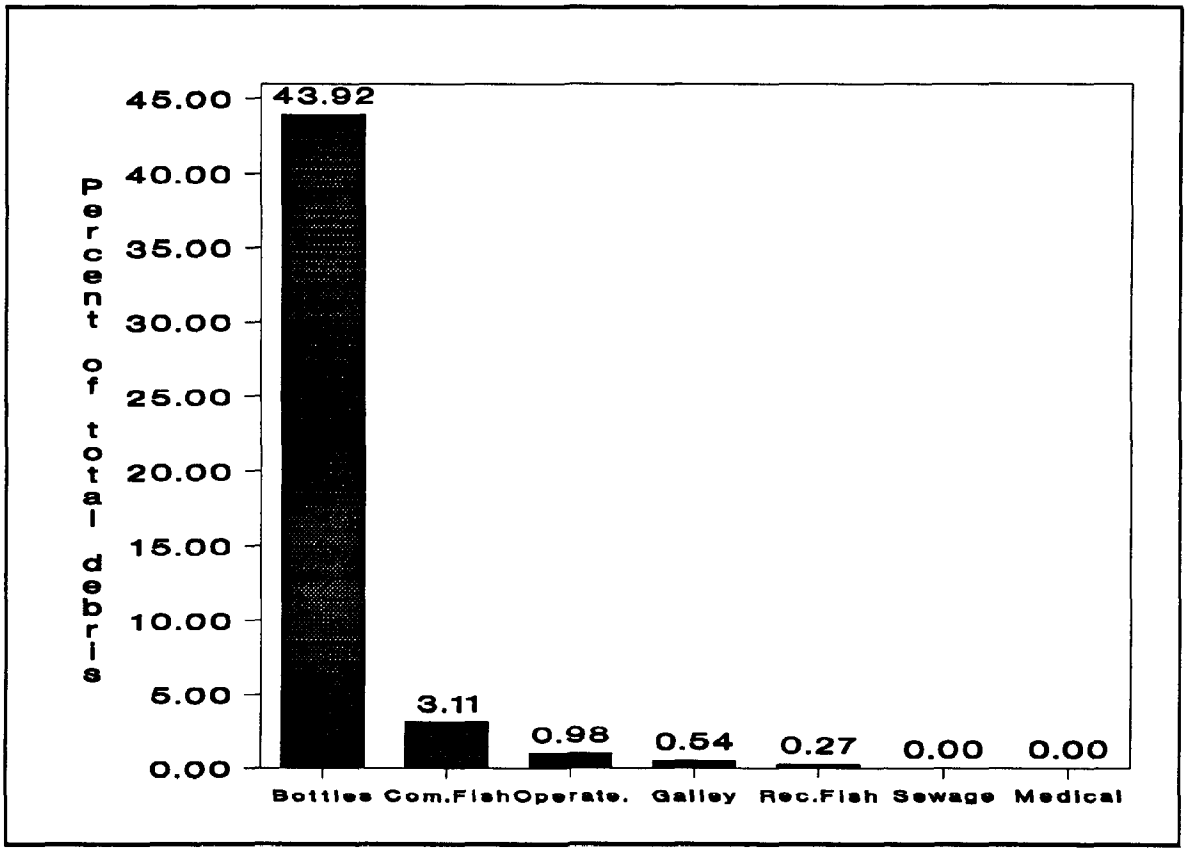
PERCENT COMPOSITION OF SABA'S BEACH DEBRIS:



SABA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Metal bottle caps	546	29.75
2. Plastic cups/utensils	179	9.75
3. Glass beverage bottles	118	6.43
4. Cigarette butts	110	5.99
5. Metal beverage cans	95	5.18
6. Plastic straws	64	3.49
7. Lumber pieces	62	3.38
8. Clothing pieces	50	2.72
9. Cardboard pieces	37	2.02
10. Metal pieces	36	1.96
Plastic rope	36	1.96
Plastic caps/lids	36	1.96
11. Paper pieces	35	1.91
12. Foamed plastic packaging	30	1.63
Total	**1,434**	**79.89**

MAJOR TYPES AND SOURCES OF SABA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Data was collected for only one zone, Saba's bay area.

TRACEABLE DEBRIS ITEMS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED:

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF SABA'S BEACH DEBRIS:

Data collection from Saba's cleanup has only been carried out for one year (1991) and therefore trends cannot be assessed.

FOR INFORMATION ON SABA'S 1992 COASTAL CLEANUP CONTACT:

Susan Walker
Manager, Saba Marine Park
P.O. Box 18
The Bottom, Saba
Netherlands Antilles
011-599-4-63348

CLEANUP DATE: COASTWEEKS

A truck is brought onto the beach in Venezuela to help carry away the bags of marine debris collected.

VENEZUELA

September 21, 1991	Coordinated by: Diego Diaz Martin
439 Volunteers	Fundacion para la Defensa de la Naturaleza
19.45 Miles Cleaned	Apartado 70376
53,240 Pounds of Debris Collected	Caracas 1071-A Venezuela
3 Data Cards	011-582-238-2930

In Venezuela, the Coastal Cleanup is organized annually by the Foundation for the Defense of Nature (FUDENA). This year, more than 500 volunteers from six regions of eastern, central, and western Venezuela cleaned 35 kilometers of coastline, and collected more than 27 thousand kilos of trash, the majority of which was plastic...an astonishing amount when we think that this was accomplished in a single day.

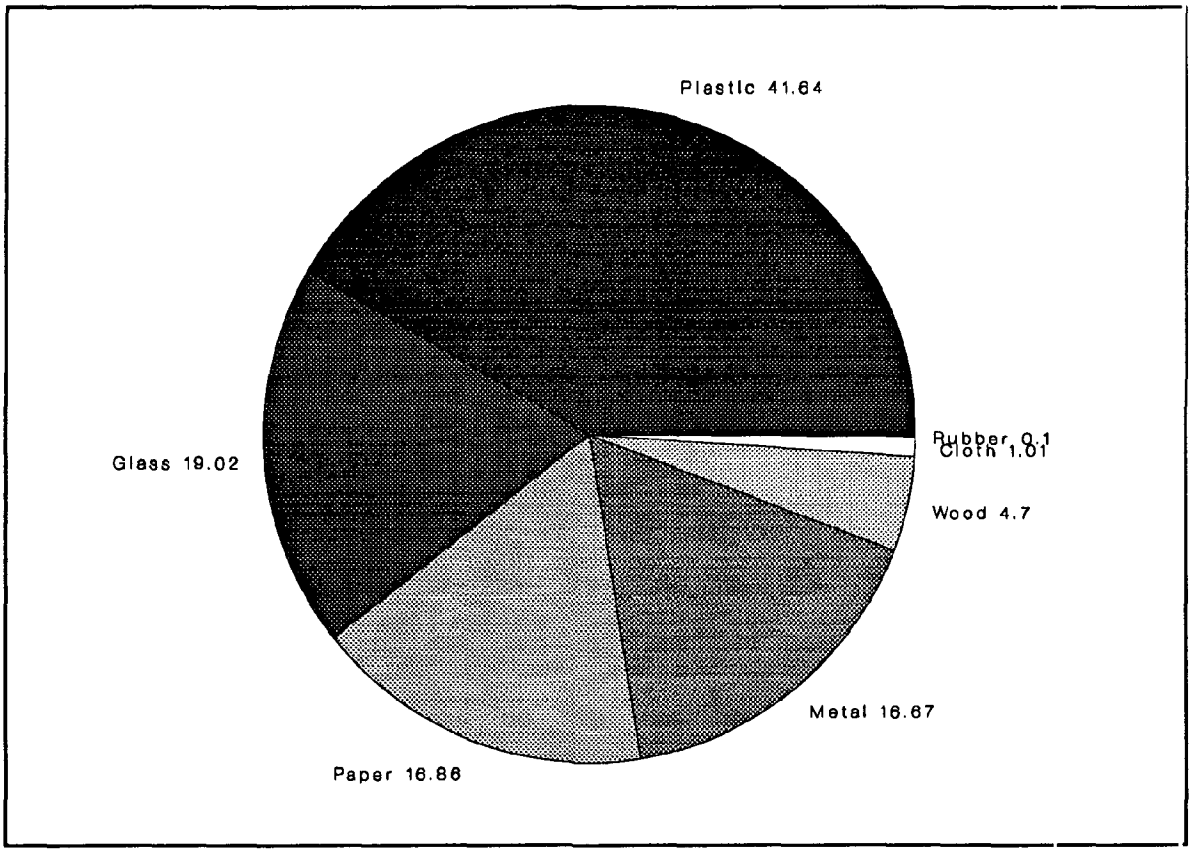
The problem of trash in Venezuela is a serious one, and this is known throughout the world. Perhaps what is not so well known is how each citizen can participate in a solution. In order to reach a solution, public awareness towards this problem is fundamental and can be a strong first step. Participation must be effective, not only on an individual level but also on a community level where most of the trash is generated.

International Coastal Cleanup Day is only a temporary solution to the problem, but it has served well to demonstrate to the world how the amount of garbage we generate had greatly surpassed our capability of collection and treatment. Until the next International Coastal Cleanup Day on September 19, we will be preparing for the event with special actions such as "Operation Paradise" in the keys of Morroony National Park in Venezuela.

It was well said by someone once that "Donde no hay basura hay cultura" (where there is no trash, there is culture).

Diego Diaz Martin

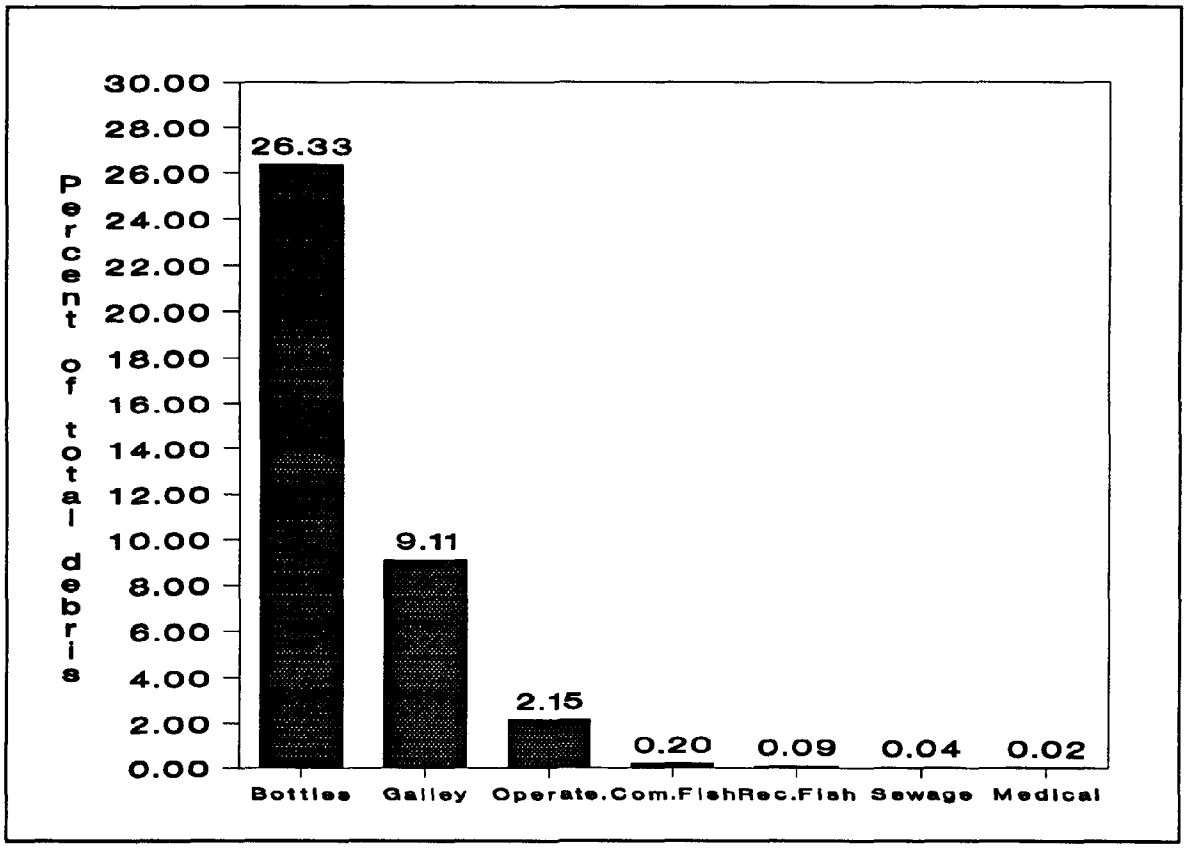
PERCENT COMPOSITION OF VENEZUELA'S BEACH DEBRIS:



VENEZUELA'S 1991 DIRTY DOZEN:

	Total Number Reported	Percent of Total Debris Collected
1. Glass beverage bottles	6,523	12.46
2. Paper pieces	5,551	10.49
3. Plastic trash bags	3,898	7.37
4. Plastic caps/lids	3,290	6.22
5. Plastic beverage bottles	3,116	5.89
6. Metal beverage cans	2,662	5.03
7. Metal food cans	2,613	4.94
8. Miscellaneous plastic bags	2,410	4.55
9. Paper bags	2,263	4.28
10. Plastic cups/utensils	2,208	4.17
11. Plastic food wrappers/bags	2,026	3.83
12. Miscellaneous metal cans	1,907	3.60
Total	**38,467**	**72.68**

MAJOR TYPES AND SOURCES OF VENEZUELA'S BEACH DEBRIS:



MAJOR CHARACTERISTICS OF DEBRIS IN EACH ZONE:

Zone Name	Percent Plastic	Most Prevalent Debris Item Reported:
La Guairar & Naiguata	55.15	Glass beverage bottles
Chichiriviche & Tucacas	41.14	Plastic caps/lids

TRACEABLE DEBRIS REPORTED:

None reported

FOREIGN DEBRIS ITEMS REPORTED:

None reported

STRANDED AND/OR ENTANGLED WILDLIFE REPORTED:

None reported

MOST PECULIAR DEBRIS ITEMS REPORTED;

None reported

TRENDS IN MAJOR TYPES AND SOURCES OF VENEZUELA'S BEACH CLEANUP:

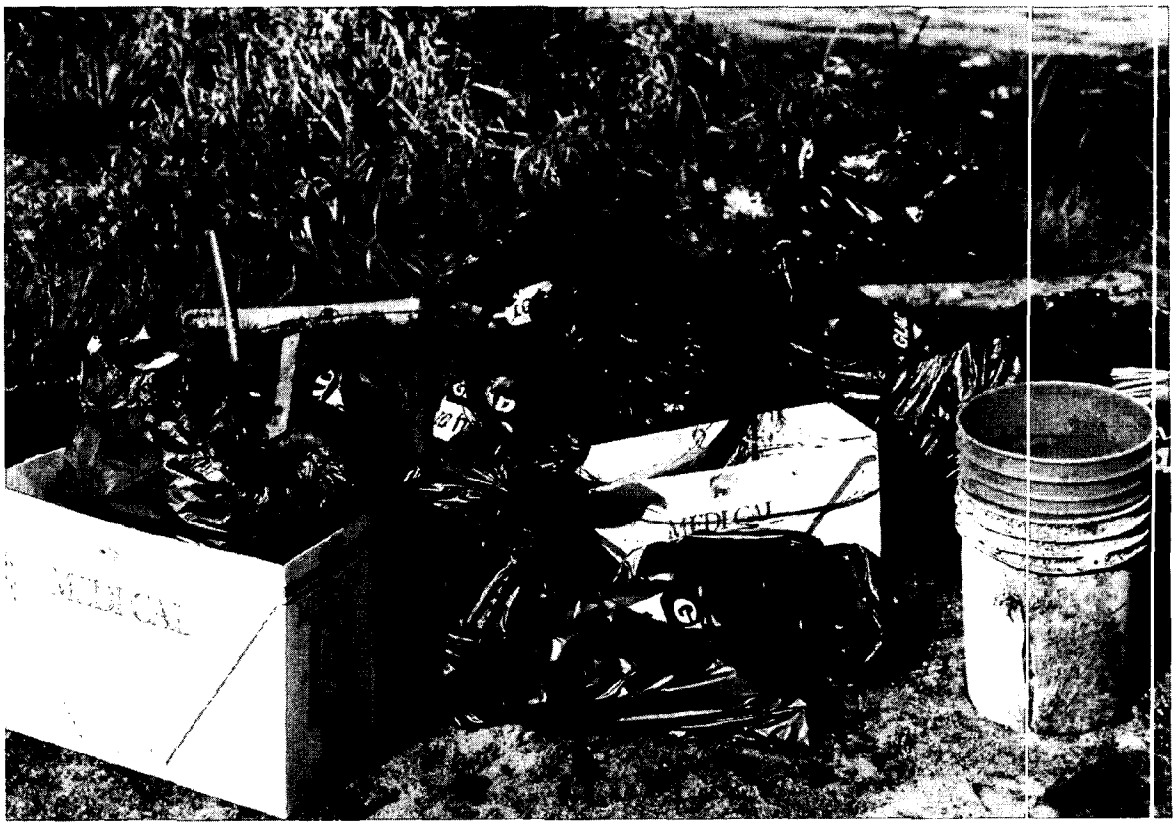
Data collection from Venezuela's cleanup has only been carried out for one year (1991) and therefore trends cannot be assessed.

FOR INFORMATION ON VENEZUELA'S 1992 COASTAL CLEANUP CONTACT:

Diego Diaz Martin
Fundacion para la Defensa de la Naturaleza
Apartado 70376
Caracas 1071-A Venezuela
011-582-238-2930

CLEANUP DATE: September 19, 1992

A beach in Venezuela sectioned off for cleanup activities.



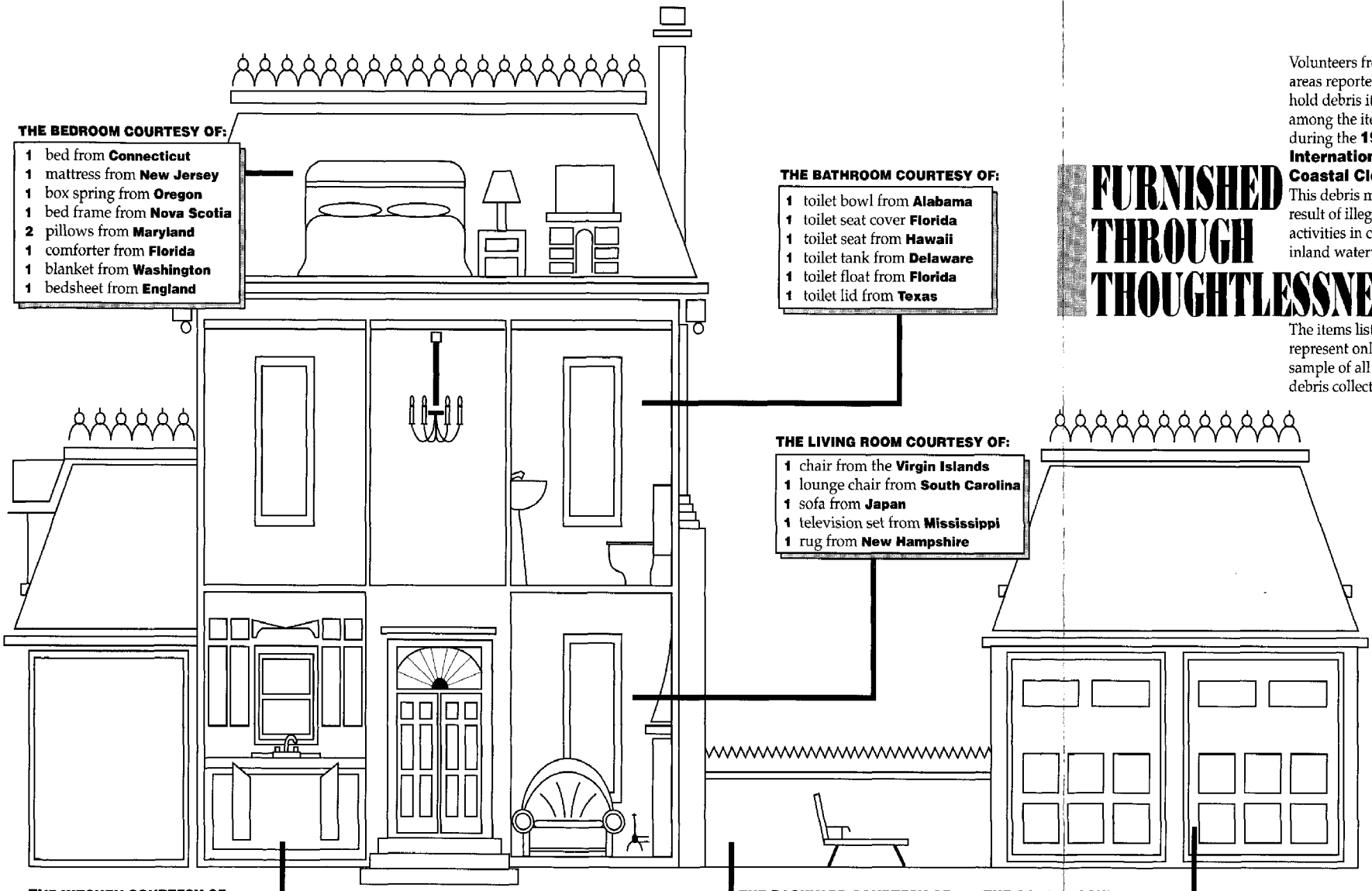
Just a small amount of the many pounds of marine debris collected during New Brunswicks' cleanup.

Appendix 1. Furnished Through Thoughtlessness (see following fold-out)

FURNISHED THROUGH THOUGHTLESSNESS

Volunteers from many areas reported household debris items among the items found during the **1991 International Coastal Cleanup**. This debris may be the result of illegal dumping activities in coastal and inland waterway areas.

The items listed here represent only a small sample of all household debris collected.



THE BEDROOM COURTESY OF:

- 1 bed from **Connecticut**
- 1 mattress from **New Jersey**
- 1 box spring from **Oregon**
- 1 bed frame from **Nova Scotia**
- 2 pillows from **Maryland**
- 1 comforter from **Florida**
- 1 blanket from **Washington**
- 1 bedsheet from **England**

THE BATHROOM COURTESY OF:

- 1 toilet bowl from **Alabama**
- 1 toilet seat cover **Florida**
- 1 toilet seat from **Hawaii**
- 1 toilet tank from **Delaware**
- 1 toilet float from **Florida**
- 1 toilet lid from **Texas**

THE LIVING ROOM COURTESY OF:

- 1 chair from the **Virgin Islands**
- 1 lounge chair from **South Carolina**
- 1 sofa from **Japan**
- 1 television set from **Mississippi**
- 1 rug from **New Hampshire**

THE KITCHEN COURTESY OF:

- 1 kitchen sink from **Rhode Island**
- 1 refrigerator from **North Carolina**
- 1 refrigerator door from **Massachusetts**
- 1 coffee pot from **Michigan**
- 1 toaster from **Florida**
- 1 blender from **Massachusetts**
- 1 counter top from **Virginia**
- 1 frying pan from **Maine**
- 1 tea kettle from **Maine**
- 1 microwave from **Hawaii**
- 1 stove from **North Carolina**

THE BACKYARD COURTESY OF:

- 1 lawn chair from **Georgia**
- 1 beach chair from **California**
- 1 grill from **Louisiana**

THE GARAGE COURTESY OF:

- 1 washing machine from **California**
- 1 car from **Delaware**
- 1 trash can from **Florida**
- 1 lawn mower from **Maine**
- 1 bicycle from **Maryland**

Appendix 2. Major Sponsors of the 1991 International Coastal Cleanup - Presented as Provided by State /Country Coordinators.

INTERNATIONAL SPONSORS

ARCO Chemical Company
Chevron, USA, Inc.
DOW Chemical USA
Jantzen, Inc.
Merck Family Fund
NAPCOR
National Oceanic and Atmospheric Administration
PAXON Polymer
Pew Charitable Trusts
Prospect Hill Foundation
The Kettering Family Foundation
The Society of the Plastics Industry
U.S. Environmental Protection Agency

U.S. NATIONAL IN-KIND DONATION

First Brands Corporation (124,500, 33-gallon trash bags)
Professional Association of Diving Instructors
(Promotion and participation of SCUBA divers worldwide)
R.J.Reynolds (Bumper stickers)
Tillotson Rubber Co. (Gloves)

STATE/COUNTRY SPONSORS

ALABAMA
Arco Oil Company
Browning-Ferris Industries
BP Exploration
Exxon Company, USA
LL & E Petroleum Marketing
Mobil Exploration & Producing U.S. Inc.
Pepsi Cola- Buffalo Rock Bottling Company
Scott Paper Company

CALIFORNIA
California Coastal Commission
Foote, Cone & Belding, Inc. Advertising
KCBS-TV, Los Angeles
Lucky Stores, Inc.
The California Department of Conservation
The California State Parks Foundation

County Coordinators and Supporting Agencies
Joe Gillespie, Del Norte County
Mysti Duncan, Mendocino County
Chris Gallagher, Bay Model Visitor Center
Elaine Porter, S. San Francisco City
George Drake, Common Sense-Lake Tahoe

CALIFORNIA (cont.)
Patty Donald, Shorebird Nature Center
Joan Suzio, San Leandro
Ruth Gravis, Save San Francisco Bay
Bob Green, San Mateo County Parks
Dave Dixon, State Parks, Monterey Co.
Ed Redig, San Luis Obispo State Parks
Kitty Dill, Ventura Rgnl. San. Dist.
Santa Monica Bay Restoration Project
Edwin Neely, Doheny Longboard Surfing Association
Rick Reisenhoffer & John Kelso-Hutton
State Parks Orange Coast District
Micheal Gaughan, US Ocean Safety
Marianne Excell, Orange County Parks
Tim McKay, North Coast Environmental Center
Carol Vellutini, Sierra Club, Sonoma
Maria Brown, CMC, San Francisco
Dave Cosper, City of Suisun
Carole Matthews, State Parks, Delta Division
Carol Keiper, Benicia
Kathleen Fusek, East Bay Regional Parks
Louise Irwin-Jones, Port of Oakland
Jill Abrams, City of San Mateo
Michael Grant, State Parks, San Mateo Co.
Bonnie Wilson, Santa Cruz Ecology Action
Natalie Schaerffer, Aromas School District
Kip Evans, Santa Barbara County
Gloria Gonzales, LA Co. Beaches & Harbors
Brenda Goeder & David Lederer, Heal the Bay, Santa Monica
Terry Brandt, City of Laguna Beach
Jim Way, City of Huntingdon Beach
Steve Long, State Parks, Pendleton District
Silvia Edwards, I Love A Clean San Diego
Ken DeSilva & Theresa Brand, Albany
Raymond Lambert, Richmond

CONNECTICUT
Boy Scouts of America
City of New London
Clean Sound, Inc.
Connecticut Department of Environmental Protection
Connecticut Sea Grant Marine Advisory Program
Conservation Commission of Greenwich

Appendix 2. (cont.) Major Sponsors of the 1991 International Coastal Cleanup - Presented as Provided by State /Country Coordinators

CONNECTICUT (cont.)
Darien Nature Center
Garden Club of Greenwich
Girl Scouts of America
Green Fingers Garden Club
Greenwich Audubon Society
Greenwich Central Middle School Environmental Club
Greenwich Clean and Green
Greenwich Parks Preservation Coalition
Greenwich Point Committee
Junior League
League of Women Voters
Long Island Sound Task Force
Maritime Center at Norwalk
Mashantucket Land Trust
Mystic Marine Life Aquarium
Mystic River/Whitford Brook Association
Schooner, Inc.
Sea Explorer Ship 25
Sierra Club
SoundWaters
The Soundkeeper
Town of Groton
Trekkers Outing Club, Mohegan Community College
Westbrook Beach Association
WPLR Radio
WSHU Radio

DELAWARE
Browing-Ferris Corporation
Delmarva Power Company
Department of Natural Resources and Environmental Control
First Brands Corporation
Playtex Family Products
Wilmington Trust Company

FLORIDA
COAST 97.3FM
Cowles Charitable Trust,
George W. Jenkins Foundation Inc.
Southern Bell
The National Association for Plastic Container Recovery
The Society of the Plastics Industry
Mrs. Howard F. Whitney, Jr.

In-Kind contributions:
Faber-Castell Corporation
First Brands Corporation (GLAD wrap and bags)
Florida Department of Natural Resources
Newswatch 8 Earthwatch
Tampa Tube Containers, Inc.

FLORIDA (cont.)
The Bayfront Center in St. Petersburg

GEORGIA
Clean Coast Inc.
First Union Bank
Mobil Oil Corporation

HAWAII
Community Work Day Program
County of Hawaii Department of Parks and Recreation
Governor's Advisory Committee on Litter Control
Maui Community Work Day Program
Pacific Whale Foundation
State Litter Control Office

ILLINOIS
Chicago Park District
Coors Beer
First Brands Corporation
Illinois Tool Works
Lake Michigan Federation
Libra Industries
Outside Magazine
Pioneer Industrial Products
Shedd Aquarium
Starbucks Coffee Co.
Tillotson Rubber Co.

MAINE
Lindenmeyr Munroe, Portland, ME
Maine Media, Portland, ME
Penmor Lithographers, Lewiston, ME
Randall Landry, Portland, ME
Shaw's Supermarkets
Shop 'N' Save Supermarkets
WCBB-TV Channel 10, Lewiston
WCSH-TV Channel 6, Portland
WGME-TV Channel 13, Portland

MARYLAND
Assateague Island National Seashore
Assateague Mobile Sport Fishermen's Association
Assateague State Park
First Brands Corporation
Senator Barbara Mikulski
Worcestor Environmental Trust

Appendix 2. (cont.) Major Sponsors of the 1991 International Coastal Cleanup - Presented as Provided by State /Country Coordinators

MASSACHUSETTS
Dunkin' Donuts
Conigliaro Industries
Harvard Community Health Plan
Massachusetts Coastal Zone Management Office
Stop & Shop Supermarkets
WBZ-TV4 (NBC affiliate)

MICHIGAN
First Brands Corporation
Illinois Tool Works
Pioneer Industrial Products of Willard, Ohio
Shedd Aquarium

MINNESOTA
Duluth's Parks and Recreation Department
Illinois Tool Works
Northwoods Greens
Shedd Aquarium

MISSISSIPPI
BFI Waste Systems
Chevron U.S.A., Pascagoula Refinery
Coca-Cola
Mark Grace
Hancock Bank
Hancock County Chamber of Commerce
Hancock County Road Department
Hardees
Harrison County Sand Beach Department
Jefferson Bank
Keesler Air Force Base
Keesler Federal Credit Union
Lamar Advertising Co. of South Mississippi
Lil Rays
Mobil Exploration and Production U.S. Inc.
Mississippi Gulf Coast Chamber Of Commerce
Mississippi Power Company
National Marine Fisheries Service
Pepsi-Cola
Tillotson Corporation
The Chevron Companies
The Ross Agency, Inc.
Waste Management
Wayne Lee's Grocery and Market

NEW HAMPSHIRE
Annabelle's Inc.
Big Dipper
Browning Ferris Industries
Hampton Shop 'N' Save

NEW HAMPSHIRE (cont.)
New Hampshire Coastal Program
Portsmouth Pepsi Cola Bottling Co.

NEW JERSEY
Asbury Park Press
Environmental Protection Agency

NEW YORK
Addison Funeral Home
Blarney Castle Social Club
C.I.D. Refuse
City of Buffalo
City of Dunkirk
C.O.L.T.
Dickies Donuts/Woodlawn
Erie Co. Dept. Parks
Evans Chamber of Commerce
Evans Highway Department
Evans National Bank
First Brands Corporation (GLAD bags)
Great Lakes United
Health Care Plan
Illinois Tool Works
McDonald's/Derby
Modern Disposal
Nabisco
N.F.T.A.
Nichter Construction
Nichter Utilities
Pioneer Industrial Products
Sahlen's Hot Dogs
Sorrento Cheese
Spoth Enterprize
Town of Evans
Town of Hamburg
US Cable of Evangola
Wegmans

NORTH CAROLINA
Carteret Clean County
Coastal Living Show
C P & L
First Citizens Bank
Duke Power
ITW HiCone
Kennametal
North Carolina Beer Wholesalers Association
North Carolina Power
North Carolina Wildlife Federation

Appendix 2. (cont.) Major Sponsors of the 1991 International Coastal Cleanup - Presented as Provided by State /Country Coordinators

NORTH CAROLINA (cont.)
North Carolina Wildlife Resources Commission
R.J. Reynolds
Telecom USA
Texasgulf
TVA
Yadkin/ALCOA

OHIO
First Brands Corporation
Tillotson Rubber Co.

OREGON
Chevrolet Motor Division
KGW-TV, Portland
Oregon Department of Fish and Wildlife
Oregon Sanitary Service Institute
Portland General Electric Company
Safeway Stores, Inc.
Stop Oregon Litter and Vandalism (SOLV)

PENNSYLVANIA
Burger King
First Brands Corporation

PUERTO RICO
BFI Waste Systems Co.
Department of Natural Resources
Foods & Spirits, Bacardi Co.
McDonald's Fast Foods Restaurants
Owen Illinois, Co.
Puerto Rico Hotel & Tourism Association
University of Puerto Rico Sea Grant College Program

RHODE ISLAND
Audubon Society
Brown University
CCRI Oceanography Club
Charlestown Conservation Commission
City of Newport
Common Fence Point Association
East Province Shoreline Association
Eliza Volkmann
Hospital Trust Bank
Keep Bristol Clean
Middletown Conservation Commission
Mil Kinsella-Sullivan
Narragansett Bay Commission
Newport & Old Colony Railroad
Rhode Island Sportsfishermen

RHODE ISLAND (cont.)
Save the Bay, Jr. Members
Town Planner (S. Kingstown)
Town Planning Department (Middletown)
Tiverton Cons. Comm.
Tiverton Garden Club

SOUTH CAROLINA
Amoco Chemical
Dillared Paper Co.
Furlong Printing
Hilton Head Ocean Front Rentals
Lockheed Aeronautical Systems Company
Macalloy Corporation
Oneita Industries
Palmetto Dunes
Santee Cooper
SC Economic Developers' Association
SC E & G
SC State Ports Authority
Sierra Club, SC Chapter
Silkworm
Sunoco
The Charleston News and Courier
The Evening Post Foundation
The Governor's Office
Waste Management of Charleston
Wellman, Inc.
Westvaco

TEXAS
Beach Motel
Diamond Ice Company and
Announcments Plus
Elder Distributing Company (Coors)
Jim Cox and Crowsnest Restaurant
Magnolia Beach
Mobil Oil
Sam's Beach Store
The Port Lavaca Wave
U.S. Navy
Victoria Advocate
Ken Wendler

VIRGINIA
Chincoteague Chamber of Commerce
Chincoteague High School Ecology Club
Chincoteague Town Council
Chincoteague Volunteer Fire Department
Committee to Preserve Assateague

Appendix 2. (cont.) Major Sponsors of the 1991 International Coastal Cleanup - Presented as Provided by State/Country Coordinators

VIRGINIA (cont.)
National Fish and Wildlife Service
National Park Service
The Audubon Naturalist Society of the Central Atlantic States
The Marine Science Consortium
U.S. Coast Guard
U.S. Navy

VIRGIN ISLANDS
Baker Street Sound
Cafe Madeleine
Chanay Bay Resort
Deep End Bar
Department of Housing, Parks and Recreation
Department of Planning and Natural Resources
Grog & Spirits
Luncheria Mexican Restaurant
Out of the Blue
Sailboat Supply
Solitude Store
Sprat Hall
Sundowner
Virgin Islands Coca Cola Bottling Co.
West End Beach Club

WASHINGTON
Department of Ecology
Puget Sound Bank (Puget Sound Fund)
Washington State Parks and Recreation Commission

WISCONSIN
First Brands Corporation
Illinois Tool Works
Lake Michigan Federation
Pioneer Industrial Products
Shedd Aquarium

CANADA (NOVA SCOTIA)
Moosehead Breweries

ISRAEL
Israel Oceanographic & Limnological Research Ltd.
The Ministry of the Environment

JAPAN
HINO JIDOSHA GREEN FUND
ISETAN
Kanagawa Beach Cleaning Foundation
Maruzen Petrochemical
Maruzen Polymer

JAPAN (cont.)
NEC
Nichimen
Sapporo Beer
Sanko Co.

NETHERLANDS ANTILLES (SABA)
Big Rock Market
Captain's Quarters Hotel
E.F.B. Heavy Machinery
Eskay Home and Hardware
Government of Saba
H.E.S. Home Center
My Store
Pops' Place Snack
Promart Utilities—Saba
Saba Drug Store
Saba Self Serve Supermarket

VENEZUELA
Alcaldia de Chichiriviche
Association de Lancheros de Chichiriviche
Association de Scouts de Venezuela
Cigarrera Belmont
Cerveveria Polar
Consolidada de Cementos
Hotel Capri
Hotel La Garza
Hotel Manaure
Hotel Mario
Hotel Nautico
Hotel Vaya Vaya
Instituto Nacional de Parques
Marina La Nautico
Marina Los Flamingos
Marino Nauticentro
Medicatura Rural de Chichiriviche
Pequiven
Y Chalet Turistico Playa Sur

Volunteers work together to get the job done.

Appendix 3. Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
ALABAMA		
West Mobile Bay	dairy milk case	Acadia Dairy
	2x4 piece of plastic	Burke
Dauphin Island	plastic jug	Veritas Petroleum Services
	plastic lid	Bennett Industries
	rusty drum	Unitone Marine Chemicals
	"For Sale" signs	Smith Pickett
Gulf State Park	certified TX oyster tag	United Shrimp
Romar Beach	plastic cups	Pink Pony Pub
ALASKA		
Kodiak	large box top	Sweeney Fisheries, Nova Scotia
CALIFORNIA		
Humboldt	wooden fish crate	Caito Fisheries Inc.
	prescription bottle	Gail Hunt, Dr. Wieland, Red Cross Pharmacy
Contra Costa	metal strip	Dow
	plastic sign	Dress For Less
	packing slip	McGrath Steel Co.
	computer printout paper	Southern Pacific
	plastic bag	Trvit & White Lumber
San Francisco	bait bag	Anglers Choice
	toothpick	Bally's Reno
	band	NB Salmon code #3411008
	shampoo bottle	Princess Cruise Lines
	balloons	San Francisco Sheriffs Dept.
Santa Cruz	balloon	Chinca Guadalupe
Ventura	work hat	Gaviota Offshore Oil
	balloon	Longo Toyota
Los Angeles	newsletter	Adopt-A-Beach
	balloon	Churches Chicken
	baggage tag	Korean Air
	balloon	John Wayne Airport
	drink bill	Jonathan Club
	balloons	Longo Toyota
	balloon	Northwest Airlines
	plastic	Oceanic U.S. patent 3844281
	plastic bag	Pacific Supermarket
	balloons	Radio Algeria 930am
	receipt	Santa Monica Beach Hotel
	plastic bottle	Sheraton Hotel
Orange	halibut rig	Jed Welsh Fishing Equipment
	napkin	Newport Beach (714) 499-4841
	plastic bag	Water Gromlin Fishing Tackle
San Diego	rental agreement	CP Inc. #7921134061
	flyer	Midas Annual Picnic
	plastic cup	Norwegian Cruises
	shampoo container	Princess Cruises
	mailing envelope	Radiation Detection Company

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
CALIFORNIA (cont.)		
San Diego (cont.)	plastic strapping	Rotex
	cups	Sea World
	shampoo bottle	Sundance Cruises
CONNECTICUT		
Stratford	Porta-potty sign	BFI
DELAWARE		
Battery Park	plastic bottle	DuPont
Augustine	pencil	Wilmington Builders
	balloon	Mercy Health Plan
Fort Delaware	truck tire flap	Lykes Brothers Shipping Line
Kitts Hummock	plastic case	Johanna Farms Inc., Fleminington, N.J.
Fowler	plastic top to case	Jackson Marine Sales, Pompano Beach, Florida
Cape Henlopen (Ocean)	pen	Property of New Castle County
DE Seashore S.P.	strapping band	Al-Ahmad M.K. Overseas, PVT. Ltd. Sahibabad Up, India
FLORIDA		
Nassau	plastic tubing	Imperial Eastman
St. John's	plastic shampoo bottle	Holland American Lines
	balloon with party horn attached	Morrisons Family Dining
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines
Flagler	plastic rim	Chaque Orifice
	plastic jar	Destapacanos (En Escamas 100) Poison
	oil drum	Gretna, LA
	building supplies	Martin's Restaurant
	milk container	Mivaca Lacteos Dee, Venezuela C.A.
	shampoo container	Royal Caribbean Cruise Lines, Grace Line
	5 gallon basket	Shell Rottelle Oil 40, John W. Stone, Oil Dist. Inc. 87 1st St., Gretna, LA 70053, (504) 366-3401, Prod. Code 54004
Volusia	packing crate and styrofoam	ACSA
	balloons	Caribbean Cruise Lines
	balloon	Carnival Cruise Lines
	ID tag B12	Commodore Cruise Lines
	plastic drink mixer	Hilton
	2 shampoo bottles	Princess Cruise Lines
	plastic bag	Publix (supermarket)
	plastic cups	Quality Inn
	plastic cup	Royal Caribbean Cruise Lines
	plastic wrapper	Royal Caribbean Cruise Lines
	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	2 plastic conditioner bottles	Royal Caribbean Cruise Lines

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
FLORIDA (cont.)		
Brevard	frozen whole eggs	Sunny Fresh Foods, Monticello, MN
	paper cups	AAFES
	2 pieces of balloons	Carnival Cruise Lines
	balloon	Carnival Cruise Lines
	6 tea bags	Europa Cruise Lines
	pen	Howard Johnson's
	plastic cups	Holiday Inn
	blood bag	Orlando
	balloons	Ron Jon's Carnival Cruise
	2 plastic hair conditioner bottles	Royal Caribbean Cruise Lines
	plastic cup	Royal Caribbean Cruise Lines
	2 shampoo bottles	Royal Caribbean Cruise Lines
	paper band	Western Australian Meat Company
	plastic cap lid	Zima-Ljubljana
Indian River	5 liter plastic bucket	Hacedor
	conditioner bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
St. Lucie	shampoo bottle	Royal Caribbean Cruise Lines
	plastic bottle	Royal Caribbean Cruise Lines
	ball point pen	Royal Caribbean Cruise Lines
Martin	plastic cup	Carnival Cruise Lines
	Eau De Javel Disinfectant	Products Research and Chem Corp., Glendale, CA
	shower cap	Hyatt
	plastic cup	Grand Caymen British
	3 shampoo bottles	Royal Caribbean Cruise Lines
	plastic bottles	Royal Caribbean Cruise Lines
	fragrance bottle	World Marketing, Iver, Bucks, England
Palm Beach	candy wrapper	Carnival Cruise Lines
	plastic glass	Discovery Cruise Lines
	med ampule, 20cc	Inadrox Intenuvscula, J. Logeais
	shampoo containers	Princess Cruise Lines
	shampoo bottle	Royal Caribbean Cruise Lines
	balloon	Shell Oil
Dade	plastic planned maintaince systems manual	Dept. of Navy, USA
	plastic eye shades	England Virgin Airways
	frozen shrimp 3 lb. bag	Indianola, Port Lavaca, TX
	plastic hair conditioner bottle	Royal Caribbean Cruise Lines
	3 packages	Royal Caribbean Cruise Lines
	coupon	Studebalder
Monroe	2 plastic shampoo bottles	Royal Caribbean Cruise Lines
	shoe polisher	Royal Caribbean Cruise Lines
Lee	10 invoices	ARA fleet maintaince
	plastic shrimp bag	Bait Master
Hillsborough	plastic milk case	Coburg Dairy, Charleston, S.C.
	plastic hard hat	Hankin Construction

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
FLORIDA (cont.)		
Pinellas (Beaches)	realty sign	Prudential Florida
Bay	plastic food bags	Air Force
	plastic cups	Glass Bottom Boat
	plastic cup	Holiday Lodge
	plastic cup	JR Store
Okaloosa	plastic bags	AAFES
	plastic cups	B W Aloha Village
	cardboard box	Genpak Polytherm Products
GEORGIA		
Wassaw Island	balloon	Camp Hilton Head
	glass bottle	Gae Pong Ginsing Corp.
	bait trap	Taylor and Son Seafood, (919) 225-3151
Pine Island	harness float	Berkley & Co., Spirit Lake, IA 51360
	small shampoo bottle	Premier Cruise Lines
Sapelo Island	shampoo bottle	Princess Cruise Lines
HAWAII		
Oahu	plastic shopping bag	Times Supermarket
LOUISIANA		
Breton Island	salt bag	Cargill, Gulf Shore Rock Salt
Grand Gossier Island	half of plastic chemical bottle	Dewitt Chemical Company
Grand Isle	plastic stand	Alliance Plastic
	plastic oil barrel cap	Chevron
	55 gal. drum	Construction Materials Inc. (504) 291-4000
	plastic cup	Patterson Rental Tools
Fourchon Beach	empty drum	British Petroleum
Cameron	sign	Sandifer Campaign
Rutherford	5 gal. bucket	Johnstone, 87 First Street, Gretna, LA 70053
Holly Beach	1/2 plastic drum	New Orleans-based Petrochemical
	plastic bucket lid	Texaco, URSA SP40
MAINE		
Eastport/Lubec	plastic strapping band	Canada Lob. SF 35-87 ID# 006005
	3 plastic fish tags	New Brunswick Aquaculture Salmon, Canada
	plastic pan, salmon feed	Moore-Clark
	6 shipping bands	Canada Lobster
Steuben	band (1990)	Canada Lobster
S.Portland/ Cape Elizabeth	plastic warning label	Webber 8555
	plastic cover	Friendship Trap Co. R. Turner 5021
MARYLAND		
Baltimore	plastic cup	Mumm's, 3203 Belair Road
	bait box	Mike's Bait Co.
Mason Neck NWR	plastic tie and seal	Snyder of Berlin, #1907

Appendix 3. (cont.) Traceable Debris Reported During the 1991 InternationalCoastal Cleanup

Location	Type of Debris	Source Indicated
MARYLAND (cont.)		
Assateague Island	metal ID band # 1298	U.S. Coast Guard
MASSACHUSETTS		
North Shore	4 custom seals	Canada Lobster
	red tag, S-F 36-87, #044905	Canada Lobster
	plastic bands	Wang Laboratories
	plastic lid for bucket	Letrica Corp., Rochester, MN
	plastic saline bottle	Armor Pharmacal
Metro Boston	plastic part label, # 71754	Marcrafts Inc., Freeport, ME
South Shore	100 lb. net bag	Webster Company
	plastic frame	C.E. Shepherd Co. Inc., Houston, Texas
	plastic strapping band, #2752995	Canada New Brunswick Aquaculture
	cardboard box	Alliance Rubber Co.
	bottles	Dairy Juice Products, Verona, PA
Buzzard's Bay	lumber scraps	Tolleson Lumber Co., Perry, GA
MICHIGAN		
Makinac	cardboard box	Kings Fishing, Naubinway, MI 90647-6282
Muskegon	line leader connectors	Bear Paw Tackle Co. MI 49615
MISSISSIPPI		
Harrison County	receipt paper	Dave's Auto Service
	label	Garcia's & Sons Seafood, Texas
NEW HAMPSHIRE		
Hampton Beach	menu	Chowderhead's Restaurant
NEW JERSEY		
Sandy Hook	shipping crate	Dellwood Shipping Food Co.
Long Beach Island	balloon	Dr. David C. Dickson III
		Yalich Clinic of Timanlium (301) 561-1940
	balloon	Bill Justin
	balloon	Friendly Ice Cream
	balloon	Commercial Bank
	balloon	Pizza Hut
	balloon	McDonalds
	balloon	Chicago Club
	red balloon	Pizza Hut
	2 balloons	Blockbuster Video
	balloon	DCA Dunleith United Family Fun Festival
	balloon	Johns Hopkins Childrens Center
	balloon	Purple Moose Saloon, Ocean City, MD
	balloon	The Record
	balloon	Sona's Reha Program
	balloon	Wendy's
	balloon	Olden 1265 B'way at 33rd St. NY, NY 10001
	balloon	US Healthcare
	balloon	Fiesta Zone Canteen of the 90's

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
NEW JERSEY (cont.)		
Long Beach Island	balloon	Ground Round
(cont.)	balloon	Tyson Ford
	balloon	The Fun Ships
	balloon	Home Federal Savings Bank
Brigantine	balloon	Fantasy Island Amusement Park
Avalon	cardboard carton	Caspack Corp.
NEW YORK		
Westchester	plastic "caution" strip and wire	The Irwin Co. Wilmington, Ohio
New York City	I. D. band	Brooklyn Medical Center
	TLC hospital bath bottle	Ploy Chem Corp., New Haven, CT
Lake Erie	balloon	Olive Branch Restaurant
	balloon	Paxton Hospital
	fishing lure box	Fabrique Inverin Co., Galway, Ireland
	sour cream	Sunnyside Dairy Co., Ltd - Canada
	large mug w/ cloth insulator	Cruzin Bar & Sports Grill, West Palm Beach
	milk container	Auit Foods Limited, Toronto, Canada
NORTH CAROLINA (INLAND)		
Buncombe	wheel	Carolina Auto Parts
OHIO		
Mentor Headlands	balloon	Tiger Cubs, Ann Arbor, MI
OREGON		
Columbia River - Arch Cape	pallet	Chiquita Bananas
Bay City - Sand Lake	55 gallon drum	Caltex
Cascade Head - Depoe Bay	cardboard box	RP Rondell Products, Inc.
Yachats - Florence	plastic bag, frozen herring	Narrows
	55 gallon drum	BP
Florence - Reedsport	lg. plastic bag for fish	Puget Sound Herring Sales
PENNSYLVANIA		
Lighthouse Beach	balloon with ribbon	Sarnia Clearwater Police
PUERTO RICO		
Ocean Park	plastic wrapper	Carnival Cruise Line
Pinones	plastic items	Carnival Cruise Line
	plastic items	Royal Caribbean Cruise Line
	baggage claim tickets	Royal Cruise Line
	plastic bag	Royal Cruise Line
	plastic items	Norwegian Cruise Line
Rio Grande	2 cups	Royal Carribean Cruise Line
	Lisboa aftershave	Norwegian Cruise Line

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
PUERTO RICO (cont.)		
Rio Grande (cont.)	face cream	Cunard Princess Cruise Line
	cups	Costa Lines
Bahia Lucia	plastic cup	USS Josephus Daniels, CG27
	plastic items	Norwegian Cruise Line
Levittown	face cream	Princess Cruises
Fajardo	cartons	Kikuet Product Inc.
RHODE ISLAND		
Middletown	plastic crate	Atlantic Coast Fish
Newport	plastic blood bag	Newport Naval Hospital
East Providence	fish/salmon tag (2)	New Brunswick Aquaculture
Prudence Island	shipping tags (2)	Rosco Steel Co. Warwick, RI
	boat	RI 49701/ Reg. 92 26493
Goddard Park	plastic bottle	Colyte
S. Kingtown (Ocean)	balloons with ribbons	Real New York Bargain, NY, NJ, and CT
Charleston	packing box	Frown Fish
Westerly	salmon tag	New Brunswick Aquaculture
SOUTH CAROLINA		
Isle of Palms	plastic tag	New South Osmose American Wood Camden, SC
Folly Beach	plastic cup	Spirit of Charleston
TEXAS		
McFadden Beach	plastic covers	Tameem Shipchandlers Tel. (06) 598828, Fax, (06) 549683
	bag	Sparkle Ice Co. 3535 Tavis, Dallas 75204
	hard hat	Arco Oil and Rig Co.
	shampoo bottle	Princess Cruise Line
	fishline spool	Ultralon
	corrosive waste/rusty drum	CXY Energy Inc.
	RTV sealant, 732 multi-purpose	Dow Corning
	shampoo	Holiday Inn, Chateau le Moyne
	plastic food package	Ve Wong Corp., Taipei, Taiwan ROC
	return envelope	Clayton Thomas Funeral Home
Bolivar Peninsula	balloons	Shell Oil
	lg. plastic container	Fulton Seafoods, Inc., LA
	cap	City Pump Works
	plastic label	Milt's Seafood
	acid descaling compound	Drew Ameroid Marine Div.
Galveston	barrel containing oil	Exxon USA, SAE 40 Formula 01731 Batch 1706, LOC PAL, PC211731
	ammonium chloride	The Dollar Group of America, Inc.
	5 gallon bucket	Conoco Tracon Motor Oil
	gallon bucket	Rotellat, Shell, SAE 15W40
	plastic bag	Gulf Shores Rock Salt
	plastic packaging	Ear Division Corp.
	gauze	Sherwood Medical

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
TEXAS (cont.)		
Galveston (cont.)	milk crate	Borden
	brochure	Jehovah's Witness
	coupons from contest	Exxon
	chemical bottle	Barcelona, 661 2550
Sargent Beach	50 lb. bag of salt	Sea and Land
	5 gallon plastic bucket	Texaco
Port Lavaca	paper	Mobile Oil
	milk crate	Land O Pinca
Matagorda Island	plastic irrigation control valve cover	Brooks Products
	bag	Atlantic Ice Co.
	piece of plastic	Retur & Babrand
	military grease, 1/2 full	Oil Center Research P.O. Box 51871 Lafayette, LA 70505
	box	Jefferson Smurfit Corp.
	plastic bags	Morton Salt
	cold galvanizing compound	Crown
	chemical gun	Whistle Bond lifeboat
	pallet wood	Ortho
	plastic w/detonator	Patelt-Detenador FHASA 55212V
	label	Coray Payton
Port Aransas	shipping bag	U.S. Army Corps of Engineers
Corpus Christi	piece of cloth	Montgomery Wards
	paper	Heinelsco
	pallet	Red Coach
	pallet	Jergens 11-90
	receipts	Walmart
	plastic cap, 3" diameter	Pemex
	bucket of X-ray processing chemical	Baltimore, MD
	assorted family waste & pill bottle	Velma Leith
	paint thinner carton	Devoe & Reynolds Paint
	plastic cup	Days Inn
	industrial machinery aerosol	Lab Inc.
	plastic label	Mobil
	piece of styrofoam	Tex Lic. No. 1050-1176 P.O. Box 9570, TX 78945
	plastic cup	Holiday Inn
N. Padre Island	plastic hat	Book Div., Grace offshore
	injection bottle	Lakeside
	bag	Mission Party Ice
	bag	Country Heath, Village Pack Ice
	egg carton	HEB grocery
S. Padre Island	plastic lid and cup	Pemex
	7 plastic bags	HEB grocery
	plastic top 6" diameter	Data Chem Inc.
	plastic	HEB grocery

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
TEXAS (cont.)		
Galveston (cont.)	cup	Raspa, "Self Serve Saves"
	water jug	HEB-Park manor
VIRGINIA		
Wallops Island	balloon	Star States Co. (WSFS)
Assateague Island	plastic bucket	Texaco Hydraulic Oil, Drew Oil Co., Cranston, RI 02920
	balloon	Chartered Health Plan
	balloon w/ribbons	Tri M Corp.
	plastic hat	Combustion Engineering
James River	plastic container	Sea, Lake and Shore Bait Co.
Buckroe	shopping cart	Food Lion
Portsmouth	plastic shipping wrapper	Tastee Freez, Int.
Oceanview	blanks carton	Navy
	dye marker	Dye Chem
	bait bag, 8 oz.	Jack's Bait P.O. 152 Currituck, NC 27929
	bait bag, 16 oz.	Harrison's Boathouse, Norfolk, VA 23503
	plastic bag, roller, paint	U.S. Government
	plastic grate	Cumberland Chattanooga, Tenn.
	military ID	Thomas W. Trumbauer
Lynnhaven	hat	Sanford Bros.
False Cape State Park	key	Boys Club
VIRGIN ISLANDS		
Hassel Island	paper cups	Carnival Cruise Line
	candy wrappers	Carnival Cruise Line
	plastic	Gourmet Gallery
	plastic slip sheet	Amuri Extusion
	menu	The Bridge Restaurant
	plastic cups	Caneel Bay Hotel
	stamp	Nurieux Ref #222
	paper box	St. Thomas Dairies Market
St. Thomas	milk carton	St. Thomas Dairies Market
	Jungle Juice Box	St. Thomas Dairies Market
	plastic ice bag	St. Thomas Dairies Market
Red Hook	plastic cup	Virgin Grand Hotel
Mary's Creek	plastic cup	Caneel Bay Hotel
	beer holder	Peter Island
	plastic cup	Pusser's Landing, Tortola
WASHINGTON		
Kitsap	battery	Military Ind., Missouri
	several balloons	Exeter Lines, Ltd.-Luxury Dinner
Pacific	shampoo bottle	Princess Cruise Line
	plastic bags	Princess Cruise Line
WISCONSIN		
Bay View Beach	"Gulf Lite"	Rickett & Colman
	flare	Lakeside Fusee

Appendix 3. (cont.) Traceable Debris Reported During the 1991 International Coastal Cleanup

Location	Type of Debris	Source Indicated
CANADA (NEW BRUNSWICK)		
Sackville/Dorchester	plastic lobster trap tags	Newfoundland Department of Fisheries
Campbell Island	two totes	Connors Brothers, Ltd.
JAPAN		
Nagasaki	artificial seasoning	Wei-Chuan Foods Corp. Taiwan

Appendix 4 . Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
ALABAMA	Mexico[1]	plastic bleach bottles	
	Thailand	plastic water bottles	
	USSR	soft drink can	
	"Oriental"	plastic oil container	oriental writing
CALIFORNIA	Canada	plastic bottles	
	Germany	candy wrapper	
	Guadalupe	balloon	Chinca Guadalupe
	Hong Kong	drink box	Vita Soy
	Japan	candy wrapper	
		plastic bag	Prosweat
		label	Shonan toy
		food packaging	
		metal aerosol can	
	Korea	whiskey bottle	
	Mexico	candy wrapper	
		orange "pica" pack	
		plastic containers	
		plastic bags	
		shoes/toothbrushes	
		styrofoam bottles	
		plastic syringes	
	Taiwan	aerosol can	insecticide
	Vietnam	newspaper	
	"Asia"	bleach bottle	
		dish soap bottles	
	"Spanish"	AA batteries	
DELAWARE	India	strapping band	Al-Ahmad M.K. Overseas, PVT. Ltd. Sahibabad Up, India
FLORIDA	Belgium	spray can	deodorant
	Cuba	plastic lid	
		glass bottle	wine
	England	tobacco	Three Games
		snack bag	London
		plastic eye shades	Virgin Airways
		table salt container	DRI-PAK Derryshire
		formula cap	Baby Milk Plus, Trewbridge, Wiltshire, England
		fragrance bottle	World Marketing, Iver, Bucks, England
		plastic cup	Grand Caymen British
	Egypt	plastic water bottle	

1 All sources are listed as indicated by volunteers. In some cases the sovereign state could not be determined.

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
FLORIDA (cont.)	France	med ampule, 20cc	Inadrox Intenuvscula, J. Logeais
		dessert cup	Cito dessert
		bridal bourgnarre	
		aerosol perfume	
		Eau De Javel	Products Research and Chem Corp.,
		Disenfectant	Glendale, CA
		bottle	toilet bowl cleaner
		hair spray	
	Greece	Florex	Eureka Hellas S.A. Volos
	Germany	black plastic bags	
		electric transistor	Osram
	Istanbul	bottles	lotion and shampoo
	Italy	shampoo bottle	Division Cosmetica, Malizia,
			Balsam Shampoo
	Jamaica	plastic pen	
		shower cap	
	Japan	thermo syringe-needle	Tokyo
		plastic container	
		20 ltr. drum	SLCC-A (Cononsote Corrison Inhibitor)
		battery storage cont.	Japan Storage Battery Co.
		candy wrapper	
		aluminum can	
		plastic bottle	
	Mexico	plastic bottle	fuel additive
		bottle	Veedol
	Norway	5 gal. can	Jotun Protective Coating
	Republic of Dominica	plastic lid from bottle	
	Spain	water bottle	Fuente Alto
	Venezuela	piece of plastic	Topoplast C.A., Hecho En Venezuela
		milk container	Mivaca Lacteos Dee, Venezuela C.A.
		green bin	
		pen	
	USSR	liquor bottle	
		2 aerosol cans	
		light bulb	
	"Arabic"	aluminum can	
	"Foreign"	light bulb	
	"Greek"	bug spray	
		milk carton	
	"Oriental"	2 plastic bottles	
	"Spanish"	bottle	
		plastic container	Hacedor, 5 ltr.
		plastic salt box	H520, Made in Halenill
		big plastic bag	
		aerosol can	shaving cream
		plastic bottle	Clorolex
		cap for oil container	Spanish writing
		bottle	Maalox written in Spanish
	Unknown	foreign aerosol can	

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
GEORGIA	Germany	aerosol can	Holts Spray Paint
		glass bottle	Heineken Duty Free
		plastic tea container	Skipper
		plastic bubble bath container	Fa Beauty
	"Asian"	plastic bottle	Trio
	"Oriental"	plastic wrapper food	
	"Spanish"	plastic tub	Ponds Cold Cream
		plastic laundry soap	La Masse
HAWAII	China	black float	
	Japan	buoys, rubber pieces	
		silicon gel	
		plastic bottles	
		aerosol can	
		wrapper	
		bottle	bleach
	Mexico	plastic bottle	bleach
LOUISIANA	China	plastic sealed bag	condiment
	France	aluminum can	
	Germany	plastic container	
		bottle	
	Italy	container	oil
	Japan	bottle	
		2 glass bottles	
		box	
		soya drink	Singapore
		pen	
		plastic container	shampoo
	Mexico	can	deodorant
	Panama	plastic bottle	
	Thailand	can	
	Taiwan	wrapper	noodles
	Vietnam	plastic food container	
	"Hispanic"	bottle	sulfuric acid
	"Oriental"	bottle	
		food bag	
	"Spanish"	food container	powdered milk
	Unknown	bottle	oil
MAINE	Canada	plastic strapping band	Canada Lobster, S-F 35-87, ID # 006005
		3 plastic fishing tags	New Brunswick Aquaculture
		6 shipping bands	Canada Lobster
		band 1990	Canada Lobster
		plastic strapping band	CO, 69900
MARYLAND	Japan	cloth tag #464	

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
MASSACHUSETTS	Canada	4 custom seals	Canada Lobster
		red tag, S-F 36-87 # 044905	Canada Lobster
		plastic strapping band	Canada New Brunswick Aquaculture
NEW YORK	Canada	sour cream milk container	Sunnyside Dairy co., Ltd Auit Foods Limited, Toronto, Canada
	Ireland	fishing lure box	Fabrique Inverin Co., Galway, Ireland
	France	wheel guard	Geismar, France
	Taiwan	plastic spoon	
	Mexico	coveralls clothing	Kappler, Mexico
	Canada	cigarette pack	Du Maurier, Canada
NORTH CAROLINA (COASTAL)	Ireland	wrapper	Kilkan Candy Co.,Ireland
OREGON	Asia	plastic food wrapper	
	Germany	container	Gouldband Koffie Melk Vlag
	Iceland	plastic bottle	Maalox Plus
	Japan	plastic disc	
		oil bottle	
		plastic wrapper	
		mosquito repellant	
		plastic aerosol lid	
		plastic drink bottle	
		food wrapper	
		light bulb	
	Korea	tea bag wrapper	
		rice noodle package	
	Mexico	plastic bottle	Mexsana Polvo Plough
	USSR	light bulb	
	"Oriental"	cigarette lighter	
PUERTO RICO	Belgium	detergent	
	Germany	spices	
	France	milk bottle	
		plastic bottle	Bridel Lait Sterilise
	Holland	plastic bottle	
	Japan	dried food in plastic	
	Spain	plastic deodorant bottle	
RHODE ISLAND	Canada	plastic salmon band	Quebec Importation #8248228
		2 plastic salmon bands	New Brunswick Aquaculture Salmon
		salmon bands,	#3131835
	Thailand	50 lb. rice bag	Sun Lee Inc.
SOUTH CAROLINA	Mexico	eye drop bottle	Registro Sanistrio
TEXAS	Australia	plastic vinegar bottle	Anchor-Australia
	Brazil	bug spray	Brazil Baygon

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
TEXAS (cont.)	China	metal container	
		shoe	
	Columbia	glass bottle	Laboratory bottle
	Cuba	bleach jug	No Cadel
	England	plastic bracket	
		foam fire extinguisher	
		plastic	Liquid detergent
	Ecuador	bottle	QQuesiblanguea
	France	bottle	
		styrofoam package	
		bottle	De-Sodorisant D'Atmosphere Francais
		plastic bottle	
		cap	Chembourcy
		plastic bottle	cleaner
		metal bottle	olive oil
	Germany	glass bottle	
		disinfectant	
		cigarette lighter	
		nasal spray	Merok products
	Greece	plastic bottle	Nice
		2 plastic bottles	
		chemical bottle	x^Opion
	Holland	canned milk	Ceteco Zoo Gramos
		shampoo bottle	
	Japan	lid	
		bottle	
		Clorox bottle	
		condom	
	Malaysia	plastic	
	Mexico	32 plastic bottles	Cloralex
		23 plastic bottles	Veedol Intl.
		19 plastic bottles	Clarasol
		15 plastic bottles	
		9 plastic bleach jugs	
		4 talc bottles	
		4 plastic bottles	1 with syringe
		3 plastic medicine bottles	
		5 plastic drink bottles	
		3 shampoo bottles	
		2 plastic bottle caps	
		2 plastic bottles	Clarion
		2 bottle caps	Allen
		2 plastic water bottles	
		shampoo bottle	Caprice
		straw hat	
		plastic bottle	Que Si Blanqui,
		liquor bottle	
		plastic food wrapper	Montezuma, Mexico
		plastic shampoo pouch	Vanart Shampoo del Centro
		plastic bottle	Armstrong Las, Herklin

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
TEXAS (cont.)	Mexico (cont.)	plastic	
		mayonnaise lid	Hellmans
		bottle	Bristol
		cup	Motor oil
		moisture cream	
		plastic bag	
		butane cylinder	
		glass bottle	
		plastic oil can	Imemsa Yamaha Mexico
		beer bottle	Carta Blanca
		cigarette filter	
		plastic bottle	Kaomycin
		plastic bottle	Alcohol
		plastic bottle	Mr. Clean
		handcream bottle	
		drink box	
		deodorant	Matchebelli
		plastic bottle	Avon shampoo
		plastic bottle	Afrin brand drug
		plastic bottle	Valencia Blanquerdor
		plastic container	Mr. Leche
		plastic bag	
		not recorded	Puebla S.H. De Mexico, Muratic acid
		oil bottle	Transmission oil
		plastic lid	Plastipol
		cleaner	Vero Vetril
		tuna	
		tube of hand cream	
		bleach jug	Alen Products Quimcos Alen
		oil bottle	
		cleanser	
		alcohol	
		plastic pieces	
		bag, bottle	Produce of Mexico, Medico
		plastic lid	Agua Parifacado
		bleach jug	El Nevado, Blanquedor
		pen	Fonde
		plastic cap, rope	Pedro Domeco Mexican
		plastic bottles	Detergent
		syringe	
		plastic wrapper	
		shampoo bottle	Lindy
		cap	Hellmans
		food bags	
		disenfectant bottle	Sol
		ice cream stick	Montes
		bottle cap	Mexico Yogurt
		plastic bottle	Yamaha oil
		plastic container	
		plastic bottle	Alen Sevicio de su Hogar

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
TEXAS (cont.)	Mexico (cont.)	pouch	Creme Enjuague
		plastic beverage bottle	Pino Mex
		motor oil bottle	
		plastic cleaning bottle	Amonnid Mex
		plastic cleaning bottle	Pino
		bottle	
		acid bottle	
		plastic bag	Protexa Mexico 576-7300
		plastic bag	Bimo Read
		egg carton	Koug Huevo Mexico
		shampoo sample	Vanart shampoo
		shampoo	Nuevo Shampoo Caprice
		plastic bottle	Juice
		plastic bottle	Drain cleaner
		shampoo	Vanart
		bottle	Solucion de hyprochloric
		Vicks Medicine	
		bic pen	
		plastic bottle	Texaco chassis grease
		bottle	Beiersdorfde Mexico Saz
		vegetable bag	
		Vick Vapo Rub	
		plastic bottle	Pegamento
		vitamin container	
		shampoo samples	
		milk carton	
		jar, platter	Boldocynnara
		plastic bottles	Medical waste, Methiolate
		plastic food bag	
		cigarette package	
		baby powder	Mexana
		acid chemical	Alamo
		insect repellant	
		glass bottle	
		butter container	Primavera
		face creme container	Laila
		plastic container	Lactel
		plastic bottle	El Rendidor
		shampoo sample	
		chocolate wrapper	
		cracker wrapper	
		plastic bottle	Disinfectant
		plastic	
		plastic container	Magnopynol
		plastic container	Cadena
		yogurt container	
		bottle top	Alen Servico
		plastic chemical container	
		plastic dairy products	
		plastic oil container	

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remark
TEXAS (cont.)	Mexico (cont.)	plastic beverage bottles	
		yogurt container	Chamourgey
	Nicaragua	kasbiotic suspension	Kalamazoo A.P. John Co.
	Norway	bleach bottle	
	Singapore	drink container	Bean drink
		plastic bag	Yeo's soybean drink
		container	Harpic Toilet Cleaner, 250g NET
		drink carton	Yeo's soy drink
		paper carton	
		drink box	
		instant noodles	Mi Hai Cua
		plastic container	Toilet cleaner, Reckitt & Coleman Ltd.
		plastic cleaner bottle	
	South America	glass bottle	Empacadora Bufalo
		plastic bottle	
		plastic container	Blanquedor Valenciana, S.A. (c12)
	Spanish	Vicks Vapor	
		plastic bottle	
		shampoo bottle	
		plastic bottle	Acetate
		2 plastic bottles	Acido Muriatic Jr.
		plastic vaseline jar	
		plastic bottle	Descodorante Producto Higenilo
		plastic bleach bottle	Valenciana
		plastic cookie sack	Galletas puig presquistias, spanish
	Switzerland	aerosol can	
	Taiwan	plastic food package	Ve Wong Corp., Taipei, Taiwan ROC
		plastic wrapper	Kmu-tu noodles
	Thailand	beverage container	Penny Royal Soda
		food container	
		glass jar	
	USSR	plastic bottle	
		insect repellant can	
		cleaner bottle	
		jar	Aribecar
		glass medical jar	Oxycyclosolum, Happy Hoe
	Venezuela	pump spray bottle	
		oil container	Quaker
		butter container	
	Vietnam	food package	
	West Germany	shampoo bottle	
	Yugoslavia	hairspray	
	"Asian"	plastic shampoo bottle	Elida-London
	"Far East"	glass bottle	
	"Oriental"	food pack	
		plastic package	
		beverage container	Soybean drink

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
TEXAS (cont.)	"Oriental" (cont.)	drink box	Longan soy bean drink
		glass bottle	
	"SE Asia"	glass bottle	Fish sauce
	Unknown	plastic piece	Vacunado Contra Rabia
		bleach jugs	
		spray bottle	Touch of Scent
		bottle	Mam RVOC Thvong Hang
		drink container	Kin Wong Rong
		bag of noodles	Nouilles Instantanees Au Gout
		plastic lighter	Trialta
		2 plastic bottles	Suavitel
		8 bottles	Cloradon
		plastic bag	Chikara, oriental style
		1 plastic bottle	Talco Para Ninos Mennen
		1 plastic bottle	Nivea
		1 plastic bottle	Ospho
		1 plastic bottle	Suave
		margarine dish	
		salad oil	
		plastic circle	DelGolfo
		plastic bottle	Survitol
		plastic cleaning bottle	
		plastic oil bottle	Vertias petrdem
		plastic, drain cleaner	Destop
		plastic bottle	Cruz Verde
		2 bleach jugs	
		lid	Fundador Pedro Domeco
		bottle	Vera Cruz, diostic
		plastic cosmetic bottle	
		plastic bottle	Marca Registraoa
		plastic bottle	Frescolin
		plastic bottle	Yamaha Actite
		murine eye drops	
		glass bottle	Valenlina
		plastic bottle	Pebalemento
		plastic cap	Chamboucy
		cigarette butts	Maruror Cig. Co.
		plastic bottle	Fresco Limonaca
		plastic bottle	El Rendido, Para Su Protoeel
		plastic bottle/lid	Danone, Degulfo
		rice bag	Empecacoraa la Mared
		plastic piece	Adena
		plastic lid	Aurelita
		plastic bag	Thinhsaigon
		plastic bottle cap	Pedro Cardora Company
		plastic bag	Mustao
		plastic bag	Cameron Fresco Concelad
		tear gas	Samre
		metal tube, zinc oxide	Pennwalt
		plastic bottle	Pritt

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

State	Sources	Type of Debris Item	Other Remarks
TEXAS (cont.)	Unknown (cont.)	glass	Fuera de borda, Nestle dolca
		shampoo in plastic	Nuevo Aroma
		plastic bottle	Electolito
		bottle	Aceitas Lubricantoe
		bottle	Arasas Camkadi Sa 3
		plastic bottle cap	Delgoled, Poza Rica, Veracruz
		plastic bottle	Fruts Bebida Defuta, Tiempo
		plastic bottle, caps	Vanart Intermezzo
		plastic bottle	Pegamento
		antiperspirant	Erlandi
		milk carton	Nutrileche
		plastic lid	Svenska Toaksao
		plastic cup	Pinol
		Hellmans	Conjugo de Limon
		plastic oil container	Exxon
		plastic bottle	Electrolilo para
		carton	Frica, Cocel De Jugos
		medicine	
VIRGINIA	Germany	milk carton	
	Japan	plastic bottle	
	"Arabic"	milk carton	
	"Greek"	plastic bottle	
VIRGIN ISLANDS	Aruba	plastic bottle	
	China	industrial gloves	
	France	plastic wine bottle	
		plastic milk jug	Bridel
		plastic milk jug	
		plastic bucket	
	Puerto Rico	plastic bottle	
	Switzerland	plastic container	
WASHINGTON	Canada	20 liter container	Exxon, Nuto H46
		bait box	Vancouver Bait Co., British Columbia
	China	fireworks	
	Japan	food containers	
		laundry detergent bag	
		hard plastic	
		juice bottle	
	Korea	sales slip	
	Scandinavia	can of lubricant	
	West Germany	milk carton	
	"Oriental"	food container	

Appendix 4. (cont.) Foreign Debris Items Reported During the 1991 International Coastal Cleanup

Country	Sources	Type of Debris Item	Other Remarks
CANADA (NOVA SCOTIA)	Cuba	cigar box	
	Germany	electrical device	
	Japan	toilet bowl cleaner	
		car battery	
	United States	bottle	Clorex
		balloon	
ENGLAND	Belgium	ant spray	
	France	washing liquid	
		preserved fruits	
		coffee can	
	Greece	oil container	
	Japan	pharmacy bottles	
	United States	fuel stick	
JAPAN	China	pesticide	
	Korea	detergent container	
		2 glass bottles	
		2 plastic containers	
	Taiwan	glass bottle	
		lighter	
		medicine container	
		glass buoy	
		artificial seasoning	Wei-Chuan Food Corp.
	United States	baby powder	
		tomato ketchup	
MEXICO	France	plastic bottle	
	United States	plastic bottle	

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