

# Turning the Tide on Trash

2014 REPORT



International  
**Coastal  
Cleanup**<sup>®</sup>

Ocean   
Conservancy



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Ocean Conservancy educates and empowers citizens to take action on behalf of the ocean. From the Arctic to the Gulf of Mexico to the halls of Congress, Ocean Conservancy brings people together to find solutions for our water planet. Informed by science, our work guides policy and engages people in protecting the ocean and its wildlife for future generations.



In partnership with volunteer organizations and individuals around the globe, Ocean Conservancy's International Coastal Cleanup engages people to remove trash from the world's beaches and waterways, identify the sources of debris and change the behaviors that cause marine debris in the first place.

[www.oceanconservancy.org](http://www.oceanconservancy.org)

# Turning the Tide





## A MESSAGE FROM THE PRESIDENT AND CEO

# Shaping Solutions for Trash Free Seas

My first International Coastal Cleanup experience as CEO of Ocean Conservancy this past September was both inspiring and sad. Sad because, with gloves and a bucket, I found our stretch of coast thoroughly inundated by waste of all kinds. Inspiring because of the many volunteers surrounding me who were committed to keeping the ocean clean and healthy.

Ocean trash truly is a global problem that affects human health and safety, endangers marine wildlife and costs states and nations countless millions in wasted resources and lost revenue. At its core, however, ocean trash is not an ocean problem; it is a people problem – perpetuated by the often unwitting practices that industry and people have adopted over time. But I am convinced we can solve it if we have the audacity to confront the problem head-on.

For the past 28 years, Ocean Conservancy has inspired millions of volunteers, as well as industry players, the world over to take action by removing and recording trash during our International Coastal Cleanup. We are proud to report that last fall nearly 650,000 volunteers in 92 countries and locations joined the effort by gathering more than 12.3 million pounds from our beaches and waterways.

I am deeply proud of this volunteer effort. But our work has just begun. We need to learn how waste – particularly plastics – ends up in the ocean, how it hurts people and animals, and how we can devise global solutions to this growing problem.

We're on it. We are working with an international group of scientists to figure out answers to the big questions of "Where does it come from?" and "What harm does it do?" Preliminary results, I can tell you, are deeply concerning and include the sheer amount of plastic that is entering the ocean every year. Stay tuned for results later this year.

In addition, two of our own marine scientists joined expeditions in Alaska and Maine to survey ocean trash. And we are working with a group of waste management specialists to understand the most promising strategies for meaningful and global reduction of trash – and the role that we, as ocean advocates, must play.

Last fall, we also hosted our third meeting of the Trash Free Seas Alliance<sup>®</sup>, an Ocean Conservancy-led forum uniting leaders from industry, academia and the conservation community around the common goal of tackling marine debris. As we further our work with the Alliance in the coming year, we are optimistic that a combination of scientific research and industry commitment can spur lasting systemic solutions.

I invite you to read this report to see further how our collective efforts are leading to progress on the pervasive problem of marine debris. Many challenges still remain, but I am convinced the tide has begun to turn on trash. All of us at Ocean Conservancy remain confident that with the support of our partners and members, we will eliminate ocean trash once and for all. We hope you will join us on this quest.

Kind regards,



Andreas Merkl  
President and CEO  
Ocean Conservancy



USA

# Taking Action to Tackle Trash

Trash has infiltrated all reaches of our ocean, causing innumerable adverse impacts on ocean life and coastal communities. The problem can seem overwhelming, but it is entirely preventable. That's why Ocean Conservancy is engaging its network of partners and volunteers to stop the flow of trash at the source before it has a chance to reach the water and threaten wildlife, or soil our beaches and depress local economies.

During the past quarter century, volunteers have assembled through the International Coastal Cleanup to improve the condition of beaches and waterways and raise awareness about the trash problem. Now, ocean advocates worldwide are developing practical approaches that strengthen the science, promote sound policies and empower

people to engage in action for trash free seas.

In 2013, scientists and industry players from the Trash Free Seas Alliance® came together in search of collaborative solutions. International experts at the National Center for Ecological Analysis and Synthesis continued to assess the scale and scope of the marine debris problem. Volunteers from the Wrightsville Beach Sea Turtle Project also embarked on a pilot project to protect sea turtles by examining their interactions with ocean trash.

By taking a holistic approach to tackling trash, instead of relying entirely on cleanups, together we can move one step closer to lasting solutions.

## Protecting Sea Turtles From Ocean Trash

Sea turtles, one of the oldest creatures on Earth, are severely imperiled. No marine animal is more susceptible to the range of threats posed by plastics and other trash. They often ingest plastic bags by mistaking them for jellyfish or become entangled in nets, line and other debris. Young hatchlings face incredibly low survival odds. From eggs laid in nests where beachgoers

are apt to tread, hatchlings mount a long and arduous migration to the water to survive. The faster they reach the water, the more likely they are to live, but physical objects like trash prolong migration. Debris diverts hatchlings from the shortest route, which can result in hatchlings following a path parallel to the ocean that leads to death.

In 2013, Ocean Conservancy partnered with the Wrightsville Beach Sea Turtle Project and Wrightsville Beach—Keep It Clean in North

Carolina to launch a pilot project aimed at better understanding,

and protecting sea turtles from the dangers of marine debris that litters nesting beaches.

Using a modified version of the International Coastal Cleanup's debris-monitoring protocol, volunteers removed trash from sea turtle nesting beaches in conjunction with their existing sea turtle monitoring efforts and recorded the findings on the data form. Then, Ocean Conservancy scientists analyzed the information and are using it to refine sampling protocols and expand the scope and scale of the monitoring effort in 2014.



## 2013 TRASH FREE SEAS® TIMELINE

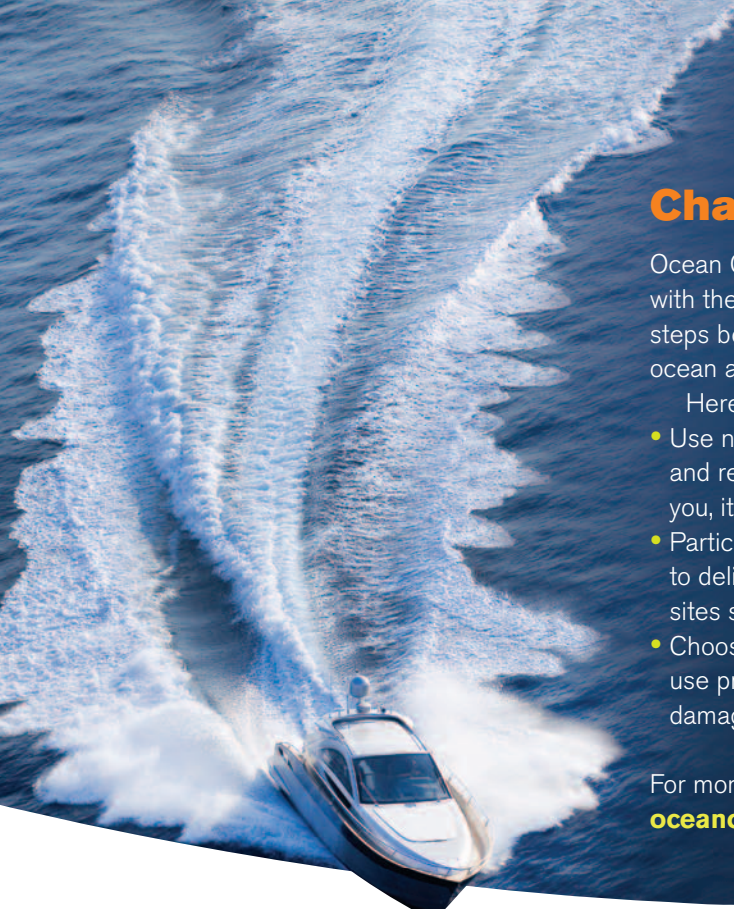
### FEBRUARY

New data form is released (*see page 14*)

### MAY

Results from 2012 International Coastal Cleanup released

Ocean Conservancy partners with Wrightsville Beach Sea Turtle Project and Wrightsville Beach—Keep It Clean to begin pilot project on protecting sea turtles from ocean trash (*see page 2*)



# Good Mate: Charting a Clean Course for Boaters

Ocean Conservancy's Good Mate program, created in collaboration with the Brunswick Public Foundation, promotes the best practical steps boaters and marinas can take to preserve the health of the ocean and waterways.

Here are a few Good Mate tips for green boating:

- Use nonhazardous materials when maintaining and repairing your boat. If it's hazardous to you, it's hazardous to the environment.
- Participate in oil recycling programs to deliver oil to designated collection sites such as service stations.
- Choose anchor sites carefully, and use proper techniques to avoid damaging sensitive habitats.

For more Good Mate tips, visit [oceanconservancy.org/goodmate](http://oceanconservancy.org/goodmate)

**In 2013,**  
**4,589** boaters traveled  
**399** miles of waterways and collected  
**108,981** pounds of trash.

Ocean Conservancy's Conservation Biologist and Marine Debris Specialist Nicholas Mallos and Program Coordinator Allison Schutes, along with Ginger Taylor of the Wrightsville Beach Sea Turtle Project, presented findings from this pilot at the 34th Annual Symposium on Sea Turtle Biology and Conservation in New Orleans this spring.

During the four-month pilot, about 700 hatchlings were born from nine nests in six nesting zones. There were also six "false crawls" – instances when sea turtle mothers move slowly up a beach but return to the water

without laying eggs.

Volunteers removed approximately 7,200 pieces of trash from the same zones. The abundance of children's toys – which accounted for 7 percent of all items found – is particularly worrying, because debris items of similar size and durability have been proven to significantly alter hatchlings' treks to the water.

As the project grows, amassed data will provide an enhanced understanding of the ways trash impacts nesting sea turtles and hatchlings. These findings also help increase awareness among beachgoers of the threats marine

debris, especially plastics, poses to sea turtles. This project is allowing us to think about new ways to augment sea turtle protection and mitigate harmful conditions for turtle populations in municipalities and communities where collaborative monitoring takes place.

Ocean Conservancy is expanding this project in 2014, working with partners down the Atlantic seaboard, on both coasts of Florida, and around the Gulf of Mexico. In addition, potential partners from as far away as Central America, Kenya and Malaysia have indicated interest in collaborating on similar efforts.

| JUNE   | AUGUST  | SEPTEMBER-OCTOBER  | NOVEMBER  |
|--|---|--|---|
| Conservation Biologist and Marine Debris Specialist Nicholas Mallos travels to Alaska to survey plastics with research team from Expedition GYRE ( <i>see page 8</i> ) | Trash Free Seas Coordinator Allison Schutes joins Rozalia Project on a research expedition to evaluate marine debris in the Gulf of Maine ( <i>see page 9</i> ) | Ocean Conservancy's 28th International Coastal Cleanup events held worldwide | Scientific Working Group on Marine Debris meets at the National Center for Ecological Analysis and Synthesis to finalize its evaluation of the state of marine debris science |



# Coordinating Cleanups

Ocean Conservancy's International Coastal Cleanup began in 1986 with a handful of volunteers collecting trash along the Texas coast. Twenty-eight years later, it has grown into the largest global volunteer effort on behalf of the ocean. Nearly 650,000 people participated in the 2013 Cleanup, with events held in 44 states and in more than 90 countries and locations around the globe. As the event has grown in popularity, several locations have begun hosting events year-round.

Local, state and international Coordinators are the backbone of the Cleanup and have been instrumental in its growth and organization. Year after year, the success of the Cleanup depends on their generous contributions of time and resources – as well as those of their organizations – in this global effort.

Today, there are more than 140 Coordinators worldwide.

“The Coordinators are a testament to the difference people can make when they make a commitment to ocean health,” said Sonya Besteiro, associate director of the International Coastal Cleanup. “Their continued dedication to the Cleanup is responsible for the event's growth and the elevated awareness around ocean trash and its impacts.”

Coordinators are responsible for identifying Cleanup sites, mobilizing volunteers, organizing site logistics and materials, and engaging journalists.

And after all the trash has been collected, Coordinators ensure that it has been tallied on Ocean Conservancy's data form so that the data are ready to be analyzed by our team of scientists and marine debris experts.

## Peru Coordinator Uses Data to Advocate for Solutions

Arturo Alfaro founded VIDA Institute for Environmental Protection to encourage citizens to safeguard Peru's natural resources. Since 1999, as the country's Coordinator for the International Coastal Cleanup, he has used the Cleanup's data to influence businesses and policymakers to address ocean trash.

For example, Alfaro noticed that while volunteers were finding fewer plastic bottles over time along the coastline, the large amount of bottles found at inland Cleanups had not changed. He observed a correlation between the number of discarded bottles and the presence of recycling centers that paid consumers for them. Near the ocean, easy access to recycling centers encourages consumers to cash in their bottles. But the lack of recycling centers inland creates no financial incentive to recycle, leading to more scattered bottles along



lakeshores. VIDA is now working with businesses and local governments to increase the presence of recycling centers around inland waterways.

“The data helped pinpoint the problem and allowed us to take an informed approach,” says Alfaro.

Similarly, when 6 tons of mysterious construction waste was recorded along a small beach, VIDA determined that

debris had traveled via ocean currents from a coastal dump site. VIDA then helped move several construction dump sites farther inland to prevent trash from washing out to sea.

“It is difficult to craft solutions until we know what's polluting our beaches and waterways,” says Alfaro. “And the International Coastal Cleanup helps us do just that.”



USA



## Florida Boy Shows Anyone Can Make a Difference

Ryan, a 7-year-old boy who lives near St. Petersburg, Fla., shows how anyone, regardless of age, can work toward a trash free ocean. Along with his parents, he organizes cleanups every few months.

"It makes me so sad that animals are hurt by pollution," Ryan said of his motivation.

In 2013, he wrote and illustrated *Puffy the Pufferfish Saves the Ocean*, a fictional account of his favorite animal's attempt to rescue other marine life from ocean trash. He also started The Fishes Wishes, a company that sells ocean-themed ornaments and magnets, to raise money for ocean conservation.

Ryan constantly encourages others to do their part by picking up trash on the beach. He reminds his audiences to recycle and reduce the products they use.

"Everyone is the solution to pollution," he says.

## Cleanup Elevates Trash Problem in Great Lakes

For more than 40 years, the Alliance for the Great Lakes has worked to restore the world's largest surface freshwater resource. Since 1991, the Alliance has also served as the International Coastal Cleanup Coordinator for Illinois and Michigan, and later as the Coordinator for Indiana, Minnesota and Wisconsin as well.

"The Cleanup has been an effective way to connect and engage people in caring for this special freshwater resource," said Jamie Cross, program manager.

After volunteers expressed over-

whelming interest, the Alliance expanded its efforts and began holding year-round cleanups in all eight Great Lakes states in 2003. Cross also credits the Cleanup with helping the Alliance establish a partnership with the National Oceanic and Atmospheric Administration to host strategy sessions for the development of the first ever Great Lakes Marine Debris Action Plan.

"Ocean Conservancy has helped us tremendously in elevating the trash issue," she said. "We went from being a lone voice to being part of a global voice."

## WEIRD FINDS

### Enough items to furnish an entire studio apartment,

including an air conditioner, sink, refrigerator, dishwasher, oven, microwave, washing machine, couch, table and chairs, television set, coffee table, rug, curtains, toilet, dresser, desk and a bed complete with mattress, pillows and pillow cases.

### All the items necessary for caring for a baby,

including baby blankets, clothes, shoes, bottles, pacifiers, a rattle, a stroller, a crib, a baby gate, a high chair and a baby monitor.

### Most of the items needed for a wedding,

including a wedding dress, wedding ring, veil, top hat, bowties, wine glasses and flowers.

## OTHER ITEMS FOUND

- 1904 typewriter
- Blond wig
- Correctional officer's uniform
- GPS unit
- Guitar
- Half-marathon medal
- Lava lamp
- Letter in a bottle
- Loaded handgun
- Math textbook
- Pink tu tu
- Plastic eye ball
- Prison bracelet
- Rosary beads
- Stethoscope
- Torn up love letter
- Trampoline
- Treasure map in a bottle
- Voodoo doll in a jar
- Working iPad



**CANADA**

**4**

**1**

**UNITED STATES**

**9**

**MEXICO**

**8**

**DOMINICAN REPUBLIC**

**7**

**VENEZUELA**

**ECUADOR**

**6**

**5**

**PERU**

# Bringing Together Volunteers Worldwide

Nearly 650,000 volunteers in 92 countries and locations in over 5,500 sites participated in Ocean Conservancy's 2013 International Coastal Cleanup®, the largest global volunteer effort to remove trash from beaches and marine and freshwater environments.

## Participating U.S. States

Alabama  
Alaska  
Arizona  
Arkansas  
California  
Colorado  
Connecticut  
Delaware

Florida  
Georgia  
Hawaii  
Idaho  
Illinois  
Indiana  
Kansas  
Kentucky

Louisiana  
Maine  
Maryland  
Massachusetts  
Michigan  
Minnesota  
Mississippi  
Missouri

Nebraska  
Nevada  
New Hampshire  
New Jersey  
New Mexico  
New York  
North Carolina  
Ohio

Oregon  
Pennsylvania  
Rhode Island  
South Carolina  
South Dakota  
Tennessee  
Texas  
Utah

Vermont  
Virginia  
Washington  
Wisconsin



## 2013 TOP 10 PARTICIPATING COUNTRIES AND LOCATIONS

INDIA 10

3

HONG KONG

2

PHILIPPINES

### Participating Countries and Locations

|                        |                    |           |                          |                                  |                      |
|------------------------|--------------------|-----------|--------------------------|----------------------------------|----------------------|
| Argentina              | China              | Grenada   | Mozambique               | Puerto Rico                      | Sri Lanka            |
| Australia              | Colombia           | Guam      | Namibia                  | Qatar                            | Sweden               |
| Azerbaijan             | Costa Rica         | Honduras  | Netherlands              | Republic of Korea                | Switzerland          |
| Bahamas                | Croatia            | Hong Kong | New Zealand              | Saba                             | Taiwan               |
| Bangladesh             | Curaçao            | India     | Nicaragua                | Saint Kitts and Nevis            | Thailand             |
| Barbados               | Dominica           | Indonesia | Nigeria                  | Saint Lucia                      | Trinidad and Tobago  |
| Belize                 | Dominican Republic | Ireland   | Northern Ireland         | Saint Vincent and the Grenadines | Turkey               |
| Bermuda                | Ecuador            | Italy     | Northern Mariana Islands | Saudi Arabia                     | U.S. Virgin Islands  |
| Bonaire                | Egypt              | Jamaica   | Norway                   | Scotland                         | Ukraine              |
| Brazil                 | El Salvador        | Japan     | Oman                     | Singapore                        | United Arab Emirates |
| British Virgin Islands | England            | Kenya     | Panama                   | Sint Maarten, Dutch West Indies  | United States        |
| Brunei                 | French Polynesia   | Kuwait    | Paraguay                 | Slovenia                         | Uruguay              |
| Cambodia               | Germany            | Malaysia  | Peru                     | South Africa                     | Vanuatu              |
| Canada                 | Ghana              | Maldives  | Philippines              | Spain                            | Venezuela            |
| Channel Islands        | Gibraltar          | Malta     | Portugal                 |                                  | Wales                |
| Chile                  | Greece             | Mexico    |                          |                                  |                      |

# Tracking Trash

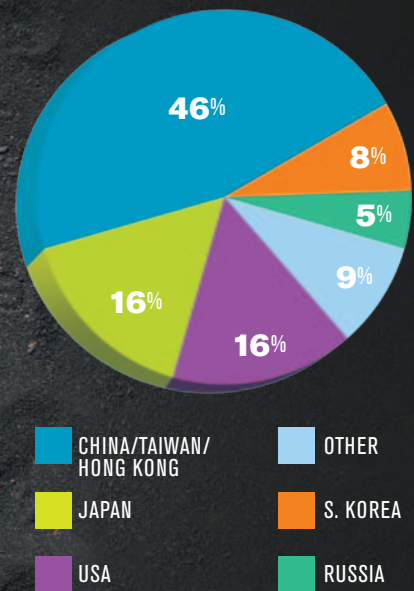
## on the Water

Ocean Conservancy's Trash Free Seas® scientists and program experts travel far and wide to study the problems caused by marine debris and seek solutions. In 2013, two staff members journeyed to opposite coastlines to join sailing expeditions and get up close with marine debris – and

plastics, in particular. Nicholas Mallos, conservation biologist and marine debris specialist, participated in a research expedition with Expedition GYRE in Alaska. Allison Schutes, Trash Free Seas coordinator, joined the Rozalia Project crew in Maine.



**COUNTRIES OF ORIGIN FOR PLASTIC BOTTLE CAPS COLLECTED DURING EXPEDITION GYRE.**



TOTAL NUMBER OF CAPS REPRESENTED IS 547

### Alaska Adventure Highlights State's Marine Debris Problem

Last summer, Ocean Conservancy's Nicholas Mallos joined a team of educators, artists and filmmakers – collectively known as Expedition GYRE – on a voyage that examined the most persistent types of debris plaguing the Alaskan wilderness. As a state with a 45,000-mile coastline filled with myriad coves and pocket beaches that capture large quantities of trash, Alaska has one of the biggest marine debris problems in the United States.

The team, which sought to bring attention to the problem through art and science, discovered hundreds of plastic beverage bottle caps and bottles. They also discovered other debris that likely originated from the 2011 Great East Japan Earthquake and Tsunami. This winter, the Anchorage Museum opened an exhibit – with Mallos as a keynote speaker – on Expedition GYRE's findings.

During the journey, Mallos also witnessed some of the state's magnificent landscapes and wildlife, such as humpback whales and brown



bears, in their natural habitats.

"These beautiful landscapes have been blemished by marine debris, but they have not been ruined," says Mallos. "The protection of incredible wildlife is all the more reason we must keep working to keep trash out of the ocean and waterways."





## Maine Voyage Shows How Trash Travels

In August, Ocean Conservancy's Allison Schutes teamed up with a crew in Maine as a guest scientist of the Rozalia Project, an organization dedicated to finding and removing marine debris. Sailing aboard *American Promise*, the team collected more than 7,500 pieces of trash during the weeklong, 200-mile trip.

Despite traveling to remote islands and uninhabited areas, the crew found many of the same items – such as bottles, food wrappers, and foam cups and plates – that top the list of items

gathered during the International Coastal Cleanup each fall.

"This is not too surprising because we know that trash travels," says Schutes.

The team also collected large amounts of fishing gear, which reflects one of the region's most important industries and a source of its marine debris problem.

"If we really want to combat this problem," Schutes adds, "we all have to play our parts, whether on water or on land."

## Rozalia Project Addresses Trash From "Surface to Seafloor"

Diving, trash-eating robots? Garbage-hunting ships? Cool underwater cameras? Sign us up!

The person to see is Rachael Z. Miller. She co-founded the Rozalia Project in 2010 with the vision of addressing ocean pollution through innovation and education. Since 2012, Miller has also served as Vermont's Coordinator for the International Coastal Cleanup.

"We believe in attacking marine debris from the surface to the seafloor," says Miller. "We need to do everything we can not just to remedy the problem, but also to understand it better."

In addition to collaborating with scientists, including several from Ocean Conservancy, the organization conducts its own studies and data collection. Its Urban Waters Floating Trash study, for example, examines trash accumulation zones in ten major North American cities to make cleanup and prevention more viable and effective.

Miller has deployed *American Promise*, the Rozalia Project's mother ship for on-water trash removal, to host scientists, professors and students on scientific research missions around New England.

It is equipped with two collection robots capable of diving up to 1,000 feet below the surface, along with other garbage-hunting technology. "This is our ship of opportunity, giving people up-close access to the issue," Miller explains.

Using its robot, Hector the Collector, as its centerpiece, the organization holds education programs year-round

with schools, museums, waterfront facilities and town halls to build support around the issue from all stakeholders.

"It's important to maintain optimism about marine debris, and we are proud to join Ocean Conservancy in this effort," says Miller. "Everyone has a stake in a clean and healthy ocean."



# Engaging Our Partners

Ocean Conservancy is honored to partner with companies, government agencies and organizations whose generosity has helped make the International Coastal Cleanup a success. In addition to their financial support and spirit of volunteerism, these partners provide expertise that helps advance Trash Free Seas® objectives.



## Hollomon Price Support Grows

The Hollomon Price Foundation has supported Ocean Conservancy's conservation agenda, including the International Coastal Cleanup and efforts to protect wildlife, for nearly a decade. And our partnership is growing.

Wayne Hollomon Price, who created the foundation, passed away in May 2011, but her spirit of giving and connecting lives on. "Everybody on the board has a deep, personal connection to Wayne, so we try to fulfill her mission to serve and to help our world be a better place," says John Bellett, executive director. "Ocean Conservancy is a crucial partner in that mission."

## Bank of America Shows Ocean Commitment

As a committed partner in ocean health, Bank of America has proudly supported and participated in the International Coastal Cleanup since 2000.

"The event's results are quantifiable and measurable and highlight the impact that each one of us can have," says Alex Liftman, global environmental executive at Bank of America.

During the 2013 event, 529 employees removed more than 5,000 pounds of trash from the ocean and waterways. Flagship Cleanups with Bank of America were organized domestically in Connecticut, Delaware, and Long Island, N.Y. International

events were held in Hong Kong, Sao Paulo, Singapore, and Guadalajara, Mexico.

In 2012, the company was quick to respond when Ocean Conservancy organized cleanups in California, Oregon and Washington as debris from the 2011 Great East Japan Earthquake and Tsunami made its way onto U.S. shores.

From supporting employee engagement to responding to emergency needs, Bank of America is committed to promoting ocean sustainability worldwide. "Regardless of where you live, your well-being depends on a healthy ocean," Liftman says.





# 2013 INTERNATIONAL COASTAL CLEANUP SPONSORING PARTNERS

## The Coca-Cola Company

## Bank of America

## National Oceanic and Atmospheric Administration

## Altria Group, Inc.

## The Dow Chemical Company

## Landshark Lager

## Hollomon Price Foundation

## Glad

## Brunswick Public Foundation

## Johnson & Johnson Family of Consumer Companies

## Booz Allen Hamilton

## ITW

## Teva

## Owens-Illinois, Inc.

## The Walt Disney Company

## U.S. Environmental Protection Agency

## OUTREACH PARTNERS

- Earth Day Network
- Keep America Beautiful
- Project AWARE
- United Nations Environment Programme

The foundation has deepened its support for the Trash Free Seas Alliance® and is helping fund work to advance scientific knowledge about the sources and fates of ocean trash and to develop new mitigation strategies.

Trustee Nancy Zatarain believes the ocean is an important, though often overlooked, aspect of the environmental puzzle. "We look to Ocean Conservancy for advice on the best ways the foundation can address vexing ocean challenges like marine debris."

### Cox Joins as Newest Partner

Ocean Conservancy is proud to welcome Cox Enterprises, a leading communications, media and automotive services company, as our newest partner for 2014. Cox came to Ocean Conservancy looking for an ocean partner to round out its sustainability platform known as Cox Conserves. We look forward to working with Cox employees to help keep our ocean clean and healthy.

### PERU



# The Search for Scientific Solutions

Achieving durable solutions for trash free seas can be accomplished only if we work to advance the science on marine debris and figure out ways to stop trash at the source. This search for “upstream” solutions is one reason Ocean Conservancy shares its data collected during the International Coastal Cleanup with scientists and decision-makers.

In 2013, Ocean Conservancy expanded its scientific influence by working to conclude the analysis of the independent Scientific Working Group on Marine Debris at the National Center for Ecological Analysis and Synthesis (NCEAS). Established by Ocean Conservancy in 2011, this group of international experts has been collaborating to provide new insights into the scale, scope and impacts of

marine plastics. The final NCEAS results – a dozen papers to be published in the peer-reviewed scientific literature – are expected to be released later this year. They will be used to guide future work and inform recommendations to policymakers and industry.

Ocean Conservancy also hosted the third meeting of the Trash Free Seas Alliance®, a collaborative effort among industry, academic and conservation leaders who share the common goal of a healthy ocean free of trash. We will further our work with the Alliance in the coming years, knowing that science – combined with industry commitment – can lead the way to lasting solutions.



Trash Free Seas Alliance® meeting in Sausalito, California

## Trash Free Seas Alliance® Proposes Solutions

Last fall, members of the Trash Free Seas Alliance gathered in Sausalito, Calif., to chart a course for possible interventions aimed at tackling debris at the source. During the meeting, scientists, industry and conservation leaders discussed the implications of the latest insights from the scientific community.

Bolstered by these findings, and under Ocean Conservancy's direction, the Alliance identified three project proposals designed to get to the bottom of how trash enters the marine environment. By evaluating specific products like beverage bottle caps and specific geographic locations

with demonstrated trash problems, the Alliance is poised to advance new knowledge and concrete action to stem the tide of ocean pollution.

While these projects are still in the development phase, we look forward to reporting more about their progress in future reports.



## NCEAS Scientists Shed Light on Plastic Pollution

Growing up, neither Dr. Chelsea Rochman nor Dr. Kara Lavender Law thought they would pursue careers in marine science. Rochman took a stab at acting. Law displayed more of an aptitude toward math. But once they took marine biology and oceanography courses in college, they never looked back.

“The study of plastic debris continues to fascinate me,” says Rochman. “Its presence in the ocean is a big concern for me.”

Today, both are lead scientists of the Ocean Conservancy-facilitated Scientific Working Group on Marine Debris at the National Center for Ecological Analysis and Synthesis (NCEAS) at the University of California, Santa Barbara. They’re striving to better understand the impact of marine debris on ocean health.



Dr. Kara Lavender Law (left) and Dr. Chelsea Rochman (right)

Rochman is a postdoctoral scholar at the University of California, Davis. Her work focuses on the chemical composition of plastics as they enter the water, as well as the adverse effects they have on fish health. Using her findings, she’s working with the U.S. Environmental Protection Agency to develop stronger regulations on waste-dumping. She also hopes her research will lead to the manufacture of less-hazardous products.

Law is the principal investigator of the NCEAS Working Group and a

research professor at Sea Education Association who studies how ocean currents create “garbage patches” of floating plastic. She believes that better insights into the accumulation of this debris will help address larger resource management issues – such as how to better handle waste on land – that are critical to the ocean’s sustainability.

“Once we have answers to these fundamental questions, it becomes easier to create efficient mitigation strategies,” Law said.

## 6 DEGREES OF SEPARATION

### How does trash travel?



# Organizing Data

Using Ocean Conservancy's data form, International Coastal Cleanup volunteers are empowered to record the trash they collect along with the material composition of the items. The resulting Ocean Trash Index provides an invaluable location-by-location and item-by-item snapshot of what is polluting our beaches and waterways.

Ocean Conservancy uses the data for its education and outreach efforts, as well as to identify debris hot spots and inform policy solutions to the marine debris problem.

## Ocean Conservancy Unveils New Data Form

Is that a plastic bottle cap or a metal one? The difference is important.

A new data form released by Ocean Conservancy in 2013 helps volunteers record not just what objects they find but also their material composition.

Going forward, this new information will be instrumental in helping determine the effects that specific materials are having on ocean habitats. By understanding the items collected in greater detail, scientists and ocean advocates will be able to identify the best remedies and advocate for solutions that will lead to a healthier ocean.

"The ability to pinpoint the types and amounts of material on beaches and in the ocean – not just the kinds of products – makes the data more informative when supporting marine debris policy," said Nicholas Mallos, Ocean Conservancy's conservation biologist and marine debris specialist.

## TOP 10 ITEMS COLLECTED



1

**Cigarette Butts**  
**2,043,470**



6

**Grocery Bags (Plastic)**  
**441,493**



2

**Food Wrappers (Candy, chips, etc.)**  
**1,685,422**



7

**Beverage Bottles (Glass)**  
**394,796**



3

**Beverage Bottles (Plastic)**  
**940,170**



8

**Other Plastic Bags**  
**389,088**



4

**Bottle Caps (Plastic)**  
**847,972**



9

**Paper Bags**  
**368,746**



5

**Straws, Stirrers**  
**555,007**



10

**Beverage Cans**  
**339,170**



**VOLUNTEERS**  
**648,015**

**POUNDS OF TRASH**  
**12,329,332**



**MILES**  
**12,914**



## BY THE NUMBERS

TOTAL GLOBAL TRASH VOLUME  
Enough trash to fill the  
**U.S. Capitol Rotunda**  
**2.5 times**



**2.5**  
**TIMES**



TOTAL GLOBAL TRASH WEIGHT

Equivalent to the weight of  
**823 male African elephants**

TOTAL GLOBAL ITEMS  
More than enough  
**fireworks** for  
the entire United States to celebrate  
**Independence Day**

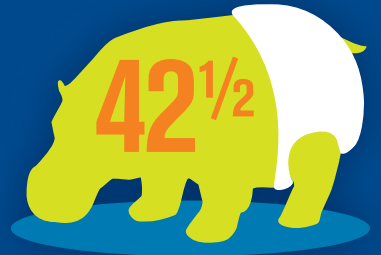


TOTAL GLOBAL ITEMS  
Enough fishing line  
to go up and over  
**Mount Everest**  
**5 times**



**5**  
**TIMES**

## BY LOCATION



PHILIPPINES

The weight of **diapers** found is equivalent to that of **42 and 1/2 hippos**.



UNITED STATES

Enough **forks, spoons** and **knives** to host dinner for every student at UCLA

JAMAICA

Enough **disposable cigarette lighters** were found to light **8,397,500 campfires**.








## TINY TRASH MATTERS TOO

Tiny Trash (less than 2.5cm)

- 1 Plastic Pieces: **1,034,667**
- 2 Foam Pieces: **852,525**
- 3 Glass Pieces: **394,787**











**TOTAL TINY ITEMS COLLECTED: 2,281,979**

## People/Pounds/Miles






| COUNTRY                |  |  |  |  |  |
|------------------------|---|---|---|---|---|
|                        | PEOPLE  | POUNDS  | MILES   | TOTAL ITEMS COLLECTED   | TOTAL ITEMS PER PERSON  |
| ARGENTINA              | 302   | 8,018   | 1.8   | 6,849   | 22.7  |
| AUSTRALIA              | 54  | 242   | 0.1   | 470   | 8.7   |
| AZERBAIJAN             | 356   | 6,600   | 0.8   | –   | –   |
| BAHAMAS                | 689   | 4,366   | 27.0  | 16,739  | 24.3  |
| BANGLADESH             | 1,452   | 2,311   | 159.7   | 53,662  | 37.0  |
| BARBADOS               | 177   | 681   | 0.6   | 4,245   | 24.0  |
| BELIZE                 | 1,607   | 9,279   | 27.3  | 66,451  | 41.4  |
| BERMUDA                | 454   | 7,961   | 12.0  | 35,602  | 78.4  |
| BONAIRE                | 113   | 1,261   | 0.1   | 2,866   | 25.4  |
| BRAZIL                 | 5,441   | 70,036  | 86.2  | 75,555  | 13.9  |
| BRITISH VIRGIN ISLANDS | 196   | 2,674   | 8.0   | 9,230   | 47.1  |
| BRUNEI                 | 1,410   | 3,106   | 3.6   | 17,571  | 12.5  |
| CAMBODIA               | 315   | 604   | 3.9   | 5,525   | 17.5  |
| CANADA                 | 29,509  | 199,557   | 1,514.3   | 960,689   | 32.6  |
| CHANNEL ISLANDS        | 284   | 203   | 69.7  | 11,886  | 41.9  |
| CHILE                  | 7,396   | 144,091   | 54.4  | 270,981   | 36.6  |
| CHINA                  | 4,590   | 9,824   | 22.1  | 42,420  | 9.2   |
| COLOMBIA               | 3,114   | 70,596  | 5.0   | –   | –   |
| COSTA RICA             | 820   | 20,461  | 17.2  | 115,115   | 140.4   |
| CROATIA                | 59  | 306   | 0.1   | 4,696   | 79.6  |
| CURAÇAO                | 12  | 11  | 0.1   | 139   | 11.6  |
| DOMINICA               | 200   | 1,500   | 6.0   | –   | –   |
| DOMINICAN REPUBLIC     | 13,505  | 146,318   | 46.1  | 423,396   | 31.4  |
| ECUADOR                | 15,934  | 113,328   | 176.2   | 505,197   | 31.7  |
| EGYPT                  | 72  | 368   | 0.1   | 458   | 6.4   |
| EL SALVADOR            | 9   | 200   | 0.1   | 253   | 28.1  |
| ENGLAND                | 2,635   | 11,945  | 413.3   | 107,752   | 40.9  |
| FRENCH POLYNESIA       | 10  | 200   | 0.1   | 149   | 14.9  |
| GERMANY                | 321   | 1,344   | 3.6   | 24,169  | 75.3  |
| GHANA                  | 93  | 15,926  | 0.7   | 27,421  | 294.8   |
| GIBRALTAR              | 18  | 1,763   | 0.1   | 802   | 44.6  |
| GREECE                 | 2,453   | 15,521  | 34.5  | 175,656   | 71.6  |
| GRENADA                | 41  | 571   | 0.4   | 1,115   | 27.2  |
| GUAM                   | 609   | 1,573   | 2.0   | 7,993   | 13.1  |
| HONDURAS               | 10  | 75  | 0.1   | 2,192   | 219.2   |
| HONG KONG              | 42,579  | 3,649,958   | 175.0   | 322,590   | 7.6   |
| INDIA                  | 11,700  | 233,648   | 174.5   | 300,899   | 25.7  |
| INDONESIA              | 360   | 1,447   | 0.9   | 12,761  | 35.4  |
| IRELAND                | 402   | 7,558   | 29.0  | 5,511   | 13.7  |
| ITALY                  | 51  | 352   | 0.2   | 117   | 2.3   |
| JAMAICA                | 6,437   | 64,111  | 59.4  | 421,399   | 65.5  |
| JAPAN                  | 4,846   | 65,315  | 14.9  | 100,645   | 20.8  |
| KENYA                  | 238   | 5,705   | 6.2   | 30,309  | 127.3   |
| KUWAIT                 | 8   | 44  | 0.1   | 93  | 11.6  |
| MALAYSIA               | 1,463   | 8,142   | 4.0   | 27,005  | 18.5  |
| MALDIVES               | 35  | 106   | 0.3   | 665   | 19.0  |
| MALTA                  | 27  | 1,475   | 0.1   | 280   | 10.4  |



# Top 10 Items Collected











|  1 |  2 |  3 |  4 |  5 |  6 |  7 |  8 |  9 |  10 |
|--|---|---|---|---|---|---|---|---|--|
| CIGARETTE BUTTS  | FOOD WRAPPERS (CANDY, CHIPS)  | BEVERAGE BOTTLES (PLASTIC)  | BOTTLE CAPS (PLASTIC)   | STRAWS, STIRRERS  | GROCERY BAGS (PLASTIC)  | BEVERAGE BOTTLES (GLASS)  | OTHER PLASTIC BAGS  | PAPER BAGS  | BEVERAGE CANS  |
| 1,716  | 373   | 675   | 1,220   | 115   | 357   | 131   | 104   | 162   | 70   |
| 6  | 66  | 19  | 24  | 12  | 20  | 111   | 8   | -   | 20   |
| -  | -   | -   | -   | -   | -   | -   | -   | -   | -  |
| 341  | 706   | 1,498   | 1,327   | 681   | 267   | 1,309   | 536   | 240   | 675  |
| 17,812   | 18,415  | 662   | 1,044   | 3,360   | 535   | 259   | 291   | 506   | 582  |
| -  | 278   | 698   | 575   | 23  | 193   | 81  | 174   | 6   | 5  |
| 1,785  | 5,530   | 7,260   | 5,988   | 2,405   | 2,493   | 2,485   | 4,693   | 1,051   | 1,511  |
| 4,329  | 832   | 1,472   | 2,975   | 305   | 237   | 4,230   | 552   | 167   | 631  |
| 788  | 36  | 17  | 36  | 31  | -   | 83  | 4   | 3   | 68   |
| 10,930   | 3,796   | 6,524   | 5,907   | 6,258   | 6,008   | 2,147   | 1,608   | 447   | 1,929  |
| 304  | 338   | 1,512   | 321   | 377   | 248   | 1,076   | 172   | 110   | 1,150  |
| 3,561  | 1,399   | 2,812   | 1,370   | 621   | 700   | 282   | 670   | 323   | 341  |
| -  | 1,095   | 441   | 671   | 1,107   | 605   | 31  | 20  | -   | 133  |
| 311,052  | 82,179  | 33,743  | 32,841.00   | 23,586  | 18,268  | 14,401  | 22,297  | 9,936   | 26,723   |
| 392  | 1,330   | 177.0   | 1,081.00  | -   | 148   | 29.00   | 125   | 4   | 110  |
| 37,280   | 14,845  | 7,587   | 9,319   | 2,691   | 6,683   | 5,127   | 5,712   | 2,425   | 5,099  |
| 9,036  | 1,535   | 2,471   | 583   | 348   | 1,259   | 687   | 5,913   | 2,689   | 1,322  |
| -  | -   | -   | -   | -   | -   | -   | -   | -   | -  |
| 462  | 646   | 69,404  | 17,546  | 10,800  | 112   | 4,984   | 214   | 19  | 3,505  |
| 2,478  | 156   | 34  | 139   | -   | 133   | 55  | 119   | 58  | 36   |
| -  | -   | 5   | -   | -   | 2   | 7   | -   | -   | 3  |
| -  | -   | -   | -   | -   | -   | -   | -   | -   | -  |
| 6,727  | 13,097  | 42,338  | 79,457  | 4,852   | 35,825  | 30,446  | 29,728  | 9,019   | 472  |
| 43,114   | 31,757  | 23,741  | 23,583  | 21,325  | 16,457  | 16,460  | 13,273  | 8,392   | 5,382  |
| 1  | 3   | 64  | 29  | 1   | 24  | 53  | 10  | -   | 9  |
| 10   | 9   | 47  | 41  | 14  | 5   | 18  | 4   | -   | 11   |
| 5,972  | 7,030   | 4,396   | 5,236   | -   | 1,632   | 846   | 1,310   | 426   | 3,405  |
| -  | -   | 50  | -   | -   | -   | 33  | -   | -   | 37   |
| 16,914   | 616   | 57  | 704   | 105   | 62  | 223   | 104   | 641   | 48   |
| 54   | 1,078   | 1,941   | 1,162   | 1,412   | 7,491   | 26  | 6,740   | 870   | 812  |
| -  | 25  | 107   | 14  | -   | 20  | 156   | 22  | -   | 190  |
| 64,473   | 3,479   | 6,373   | 8,398   | 7,364   | 2,083   | 1,535   | 1,845   | 1,285   | 3,652  |
| 68   | 178   | 82  | 75  | 42  | 73  | 31  | 38  | 20  | 58   |
| 881  | 120   | 1,250   | -   | -   | 684   | 1,206   | -   | -   | 2,543  |
| -  | 800   | 55  | 10  | 15  | 7   | -   | 5   | -   | 29   |
| 11,781   | 19,223  | 14,695  | 17,021  | 14,642  | 9,852   | 4,207   | 13,211  | 1,820   | 3,043  |
| 20,061   | 28,553  | 22,241  | 18,960  | 14,335  | 15,536  | 14,897  | 18,242  | 11,597  | 7,382  |
| 5,864  | 1,105   | 928   | 369   | 694   | 355   | 135   | 791   | 68  | 60   |
| 420  | 483   | 401   | 363   | 238   | 208   | 285   | 114   | 68  | 501  |
| -  | -   | 7   | 1   | -   | 13  | 46  | 1   | -   | 15   |
| 2,235  | 15,774  | 115,318   | 44,723  | 8,418   | 14,300  | 16,449  | 22,013  | 4,353   | 8,334  |
| 9,953  | 5,121   | 6,732   | 5,142   | 1,419   | 2,845   | 3,118   | 2,293   | 375   | 3,407  |
| -  | 394   | 300   | 2,221   | 294   | 1,270   | 106   | 6,290   | -   | 44   |
| -  | -   | 9   | 3   | -   | -   | 2   | 13  | -   | -  |
| 1,363  | 1,690   | 3,169   | 1,066   | 1,523   | 950   | 739   | 1,403   | 223   | 417  |
| 176  | 63  | 48  | 22  | 7   | 5   | 11  | 13  | 8   | 17   |
| -  | 24  | 36  | 64  | 21  | -   | 11  | 5   | -   | -  |

## People/Pounds/Miles






| COUNTRY                          |  |  |  |  |  |
|----------------------------------|---|---|---|---|---|
|                                  | PEOPLE  | POUNDS  | MILES   | TOTAL ITEMS COLLECTED   | TOTAL ITEMS PER PERSON  |
| MEXICO                           | 11,781  | 115,125   | 77.7  | 336,046   | 28.5  |
| MOZAMBIQUE                       | 56  | 1,752   | 0.5   | 8,787   | 156.9   |
| NAMIBIA                          | 300   | 6,432   | 44.7  | 5,502   | 18.3  |
| NETHERLANDS                      | 12  | 1   | 0.1   | 15  | 1.3   |
| NEW ZEALAND                      | 88  | 715   | 0.5   | 2,695   | 30.6  |
| NICARAGUA                        | 2,329   | 40,985  | 26.9  | 79,183  | 34.0  |
| NIGERIA                          | 168   | 1,020   | 11.8  | 3,516   | 20.9  |
| NORTHERN IRELAND                 | 115   | 437   | 9.7   | 4,920   | 42.8  |
| NORTHERN MARIANA ISLANDS         | 1,588   | 10,483  | 82.4  | 88,088  | 55.5  |
| NORWAY                           | 18  | 377   | 0.1   | 300   | 16.7  |
| OMAN                             | 11  | 110   | 0.9   | 596   | 54.2  |
| PANAMA                           | 113   | 2,190   | 1.5   | 9,974   | 88.3  |
| PARAGUAY                         | 195   | 3,829   | 2.7   | 8,206   | 42.1  |
| PERU                             | 16,461  | 719,379   | 101.7   | 293,693   | 17.8  |
| PHILIPPINES                      | 182,644   | 1,615,089   | 247.8   | 2,390,047   | 13.1  |
| PORTUGAL                         | 2   | 6   | 0.2   | 1   | 0.5   |
| PUERTO RICO                      | 11,326  | 173,875   | 285.7   | 549,744   | 48.5  |
| QATAR                            | 48  | 319   | 12.5  | 877   | 18.3  |
| REPUBLIC OF KOREA                | 7,012   | 709,585   | 38.0  | 104,647   | 14.9  |
| SABA, NETHERLANDS                | 114   | 1,740   | 1.2   | 8,411   | 73.8  |
| SAINT KITTS AND NEVIS            | 530   | 6,728   | 12.9  | 27,607  | 52.1  |
| SAINT LUCIA                      | 21  | 1,000   | 3.0   | 1,496   | 71.2  |
| SAINT VINCENT AND THE GRENADINES | 245   | 2,900   | 4.2   | 5,944   | 24.3  |
| SAUDI ARABIA                     | 451   | 20,962  | 4.9   | 2,918   | 6.5   |
| SCOTLAND                         | 828   | 6,572   | 62.9  | 34,456  | 41.6  |
| SINGAPORE                        | 3,473   | 31,869  | 5.7   | 152,007   | 43.8  |
| SINT MAARTEN, DUTCH WEST INDIES  | 626   | 6,892   | 2.0   | 14,393  | 23.0  |
| SLOVENIA                         | 120   | 595   | 5.5   | 5,366   | 44.7  |
| SOUTH AFRICA                     | 4,011   | 33,294  | 54.6  | 94,642  | 23.6  |
| SPAIN                            | 1,761   | 19,927  | 18.1  | 116,370   | 66.1  |
| SRI LANKA                        | 1,064   | 7,128   | 6.3   | 44,241  | 41.6  |
| SWEDEN                           | 854   | 12,810  | 34.9  | 6,876   | 8.1   |
| SWITZERLAND                      | 101   | 1,751   | 0.5   | 2,031   | 20.1  |
| TAIWAN                           | 7,589   | 31,437  | 18.9  | 151,867   | 20.0  |
| THAILAND                         | 3,248   | 27,110  | 9.8   | 43,545  | 13.4  |
| TRINIDAD AND TOBAGO              | 380   | 3,427   | 3.0   | 18,586  | 48.9  |
| TURKEY                           | 287   | 4,232   | 0.5   | 10,075  | 35.1  |
| U.S. VIRGIN ISLANDS              | 943   | 7,787   | 19.4  | 43,086  | 45.7  |
| UKRAINE                          | 100   | 24,000  | 0.8   | 14,687  | 146.9   |
| UNITED ARAB EMIRATES             | 443   | 1,146   | 5.5   | 6,994   | 15.8  |
| UNITED STATES                    | 209,012   | 3,309,312   | 8,322.2   | 4,422,940   | 21.2  |
| URUGUAY                          | 728   | 7,714   | 8.1   | 28,909  | 39.7  |
| VANUATU                          | 23  | 886   | 0.1   | 583   | 25.3  |
| VENEZUELA                        | 14,119  | 443,781   | 154.1   | 293,509   | 20.8  |
| WALES                            | 271   | 1,915   | 44.8  | 14,482  | 53.4  |
| <b>TOTALS</b>                    | <b>648,015</b>  | <b>12,329,332</b>   | <b>12,914.3</b>   | <b>13,652,376</b>   | <b>21.1</b>   |













# Top 10 Items Collected

|  1 |  2 |  3 |  4 |  5 |  6 |  7 |  8 |  9 |  10 |
|--|---|---|---|---|---|---|---|---|--|
| CIGARETTE BUTTS  | FOOD WRAPPERS (CANDY, CHIPS)  | BEVERAGE BOTTLES (PLASTIC)  | BOTTLE CAPS (PLASTIC)   | STRAWS, STIRRERS  | GROCERY BAGS (PLASTIC)  | BEVERAGE BOTTLES (GLASS)  | OTHER PLASTIC BAGS  | PAPER BAGS  | BEVERAGE CANS  |
| 59,679   | 13,518  | 27,450  | 35,447  | 11,574  | 10,668  | 11,288  | 10,833  | 3,845   | 4,039  |
| 17   | 156   | 544   | 911   | 28  | 112   | 1,275   | 268   | 98  | 1,398  |
| 308  | 396   | 399   | 316   | 204   | 209   | 410   | 184   | 229   | 237  |
| 2  | -   | 1   | 1   | -   | 1   | -   | 2   | -   | 2  |
| 24   | 5   | 23  | 7   | 8   | 18  | 6   | 33  | -   | 11   |
| 4,023  | 4,520   | 8,816   | 5,760   | 2,605   | 7,979   | 1,098   | 2,590   | 1,092   | 474  |
| 53   | 429   | 298   | 154   | 216   | 258   | 74  | 135   | 50  | 105  |
| 309  | 400   | 211   | 129   | -   | 126   | 27  | 112   | 26  | 111  |
| 4,216  | 4,085   | 34,275  | 2,109   | 983   | 1,262   | 2,755   | 1,833   | 728   | 7,422  |
| -  | 3   | 20  | 1   | 4   | -   | 10  | 4   | -   | 3  |
| 68   | 23  | 79  | 24  | 12  | 24  | 9   | 11  | 14  | 33   |
| 32   | 382   | 1,791   | 603   | 186   | 459   | 319   | 463   | 155   | 195  |
| 339  | 702   | 927   | 357   | 193   | 825   | 691   | 807   | 365   | 313  |
| 8,826  | -   | 19,443  | -   | 8,994   | 20,202  | 12,154  | 11,959  | 11,333  | 6,183  |
| 81,416   | 983,719   | 29,410  | 93,355  | 183,153   | 80,177  | 34,985  | 58,229  | 232,069   | 13,119   |
| -  | -   | -   | -   | -   | -   | -   | -   | -   | -  |
| 90,663   | 18,030  | 47,850  | 25,748  | 26,162  | 10,009  | 31,474  | 11,880  | 6,245   | 18,840   |
| 51   | 38  | 119   | 14  | 1   | 84  | 24  | 63  | 10  | 98   |
| 22,129   | 5,617   | 6,124   | 2,099   | 3,363   | 8,830   | 4,263   | -   | -   | 5,388  |
| 470  | 71  | 1,264   | 1,019   | 63  | 65  | 153   | 100   | 17  | 217  |
| 358  | 906   | 5,812   | 3,429   | 426   | 724   | 779   | 388   | 109   | 564  |
| -  | 10  | 627   | 15  | -   | 2   | 75  | 2   | -   | 389  |
| 158  | 361   | 807   | 291   | 140   | 7   | 1,418   | 153   | 141   | 461  |
| 259  | 96  | 127   | 127   | 58  | 126   | 99  | 156   | 63  | 211  |
| 852  | 2,972   | 1,954   | 1,716   | -   | 609   | 168   | 545   | 161   | 715  |
| 19,391   | 8,207   | 13,356  | 5,111   | 7,100   | 6,005   | 1,827   | 7,800   | 694   | 1,325  |
| 1,273  | 371   | 1,143   | 534   | 645   | 518   | 1,918   | 617   | 297   | 990  |
| 1,857  | 408   | 272   | 493   | 504   | 92  | 60  | 141   | 13  | 188  |
| 2,073  | 8,738   | 9,606   | 10,552  | 6,203   | 811   | 1,259   | 3,495   | 113   | 741  |
| 22,995   | 2,614   | 4,276   | 6,780   | 16,661  | 3,795   | 1,541   | 2,551   | 1,046   | 2,295  |
| 2,561  | 5,547   | 1,486   | 4,677   | 2,653   | 3,210   | 1,074   | 1,719   | 4,190   | 932  |
| 2,989  | 323   | 367   | 442   | -   | 253   | 128   | 228   | 259   | 201  |
| 311  | 6   | 248   | 5   | 1   | 2   | 650   | -   | -   | 673  |
| 4,380  | 1,583   | 8,229   | 10,113  | 8,946   | 25,175  | 7,918   | 36  | 6   | 737  |
| 3,996  | 1,723   | 1,990   | 2,901   | 2,075   | 1,277   | 2,247   | 6,583   | 1,320   | 2,280  |
| 333  | 1,461   | 4,008   | 2,012   | 197   | 208   | 1,393   | 595   | 138   | 360  |
| 6,313  | 112   | 233   | 586   | 173   | 210   | 142   | 34  | 34  | 210  |
| 1,773  | 2,430   | 3,406   | 3,673   | 1,848   | 1,126   | 3,381   | 951   | 591   | 2,541  |
| 1,875  | 1,543   | 1,488   | 877   | 115   | 210   | 1,850   | 45  | 12  | 1,070  |
| 1,168  | 360   | 615   | 433   | 190   | 266   | 425   | 239   | 224   | 487  |
| 1,086,788  | 338,105   | 241,140   | 303,344   | 132,130   | 92,413  | 110,544   | 88,125  | 34,724  | 162,475  |
| 1,487  | 1,274   | 2,215   | 2,795   | 1,521   | 1,610   | 463   | 2,307   | 340   | 250  |
| -  | 29  | 22  | 2   | 2   | 4   | 131   | 25  | -   | 168  |
| 14,786   | 9,180   | 75,254  | 26,781  | 6,229   | 13,392  | 25,691  | 12,013  | 10,666  | 16,552   |
| 530  | 792   | 1,049   | 598   | -   | 175   | 46  | 154   | 18  | 386  |
| 2,043,470  | 1,685,422   | 940,170   | 847,972   | 555,007   | 441,493   | 394,796   | 389,088   | 368,746   | 339,170  |

## People/Pounds/Miles

| COUNTRY        |  |  |  |  |  |
|----------------|---|---|---|---|---|
|                | PEOPLE  | POUNDS  | MILES   | TOTAL ITEMS COLLECTED   | TOTAL ITEMS PER PERSON  |
| ALABAMA        | 3,757   | 38,265  | 274.7   | 134,523   | 35.8  |
| ALASKA         | 393   | 702   | 0.3   | 13,508  | 34.4  |
| ARIZONA        | 150   | 1,196   | 0.6   | 2,905   | 19.4  |
| ARKANSAS       | 82  | 932   | 105.4   | 4,229   | 51.6  |
| CALIFORNIA     | 71,676  | 953,712   | 2274.3  | 759,325   | 10.6  |
| COLORADO       | 24  | 760   | 4.0   | 2,214   | 92.3  |
| CONNECTICUT    | 1,135   | 6,995   | 31.6  | 58,617  | 51.6  |
| DELAWARE       | 1,927   | 8,009   | 62.5  | 66,247  | 34.4  |
| FLORIDA        | 24,924  | 322,623   | 1213.3  | 813,236   | 32.6  |
| GEORGIA        | 21,814  | 283,934   | 575.4   | 135,260   | 6.2   |
| HAWAII         | 2,339   | 15,186  | 59.2  | 188,204   | 80.5  |
| IDAHO          | 120   | 295   | –   | 2,744   | 22.9  |
| ILLINOIS       | 2,117   | 6,803   | 28.2  | 79,854  | 37.7  |
| INDIANA        | 749   | 1,551   | 10.9  | 27,327  | 36.5  |
| KANSAS         | 40  | 800   | 3.4   | 2,974   | 74.4  |
| KENTUCKY       | 6   | 1,575   | 1.5   | 1,368   | 228.0   |
| LOUISIANA      | 103   | 4,669   | 3.0   | 10,169  | 98.7  |
| MAINE          | 1,321   | 4,519   | 76.2  | 47,523  | 36.0  |
| MARYLAND       | 1,363   | 29,760  | 28.6  | 103,881   | 76.2  |
| MASSACHUSETTS  | 2,660   | 56,877  | 129.1   | 150,176   | 56.5  |
| MICHIGAN       | 2,293   | 4,407   | 124.2   | 86,756  | 37.8  |
| MINNESOTA      | 308   | 2,934   | 27.2  | 11,930  | 38.7  |
| MISSISSIPPI    | 1,771   | 32,796  | 92.8  | 58,041  | 32.8  |
| MISSOURI       | 66  | 340   | 3.5   | 1,323   | 20.0  |
| NEBRASKA       | 452   | 4,616   | 49.5  | 20,849  | 46.1  |
| NEVADA         | 27  | 300   | 1.5   | 4,347   | 161.0   |
| NEW HAMPSHIRE  | 1,011   | 2,126   | 20.8  | 43,539  | 43.1  |
| NEW JERSEY     | 3,478   | 44,588  | 112.6   | 195,947   | 56.3  |
| NEW MEXICO     | 14  | 300   | 0.2   | 234   | 16.7  |
| NEW YORK       | 5,983   | 57,681  | 174.3   | 277,830   | 46.4  |
| NORTH CAROLINA | 17,728  | 378,122   | 1524.8  | 153,310   | 8.6   |
| OHIO           | 1,344   | 19,022  | 65.5  | 68,405  | 50.9  |
| OREGON         | 1,384   | 17,617  | 126.9   | 7,545   | 5.5   |
| PENNSYLVANIA   | 9,745   | 423,826   | 378.3   | 48,722  | 5.0   |
| RHODE ISLAND   | 1,188   | 11,921  | 68.4  | 87,477  | 73.6  |
| SOUTH CAROLINA | 3,555   | 19,386  | 153.8   | 153,017   | 43.0  |
| SOUTH DAKOTA   | 35  | 525   | 4.0   | 846   | 24.2  |
| TENNESSEE      | 54  | 159   | 7.3   | 3,945   | 73.1  |
| TEXAS          | 12,412  | 205,953   | 150.2   | 368,003   | 29.6  |
| UTAH           | 130   | 1,174   | 15.5  | 3,757   | 28.9  |
| VERMONT        | 9   | 60  | 0.4   | 659   | 73.2  |
| VIRGINIA       | 7,617   | 328,238   | 244.1   | 156,934   | 20.6  |
| WASHINGTON     | 717   | 12,707  | 75.3  | 39,886  | 55.6  |
| WISCONSIN      | 991   | 1,352   | 17.6  | 25,354  | 25.6  |
| <b>TOTAL</b>   | <b>209,012</b>  | <b>3,309,312</b>  | <b>8,322.2</b>  | <b>4,422,940</b>  | <b>21.2</b>   |

# Top 10 Items Collected

|  1 |  2 |  3 |  4 |  5 |  6 |  7 |  8 |  9 |  10 |
|--|---|---|---|---|---|---|---|---|--|
| CIGARETTE BUTTS  | FOOD WRAPPERS (CANDY, CHIPS)  | BEVERAGE BOTTLES (PLASTIC)  | BOTTLE CAPS (PLASTIC)   | STRAWS, STIRRERS  | GROCERY BAGS (PLASTIC)  | BEVERAGE BOTTLES (GLASS)  | OTHER PLASTIC BAGS  | PAPER BAGS  | BEVERAGE CANS  |
| 29,679   | 13,020  | 7,755   | 7,876   | 7,709   | 2,787   | 3,672   | 1,943   | 823   | 7,443  |
| 646  | 442   | 321   | 177   | 50  | 20  | 254   | 105   | 146   | 658  |
| 184  | 96  | 309   | 52  | 28  | 151   | 190   | 115   | 30  | 530  |
| 573  | 257   | 151   | 166   | 20  | 83  | 95  | 51  | 8   | 276  |
| 208,028  | 78,183  | 17,182  | 37,963  | 18,290  | 13,086  | 15,429  | 14,103  | 7,577   | 13,137   |
| 246  | 156   | 91  | 36  | 14  | 35  | 80  | 58  | 14  | 357  |
| 17,562   | 5,774   | 2,179   | 2,611   | 1,921   | 826   | 1,217   | 1,416   | 440   | 1,414  |
| 22,530   | 4,782   | 3,407   | 4,914   | 2,385   | 897   | 1,417   | 1,310   | 455   | 2,205  |
| 199,063  | 57,894  | 44,239  | 60,246  | 26,708  | 16,099  | 24,820  | 15,836  | 5,764   | 27,735   |
| 22,333   | 7,302   | 33,693  | 1,923   | 1,223   | 1,944   | 5,983   | 1,754   | 536   | 28,290   |
| 42,767   | 9,926   | 2,913   | 9,463   | 2,795   | 1,783   | 2,292   | 2,371   | 1,021   | 1,844  |
| 801  | 297   | 125   | 43  | 47  | 97  | 51  | 132   | 68  | 110  |
| 32,254   | 4,697   | 2,679   | 6,148   | 3,555   | 1,910   | 4,395   | 1,719   | 1,260   | 2,639  |
| 8,192  | 1,801   | 1,097   | 2,457   | 1,520   | 1,279   | 803   | 1,150   | 419   | 899  |
| 335  | 315   | 339   | 37  | 123   | 188   | 33  | 214   | 32  | 186  |
| 26   | 40  | 188   | 37  | 9   | 11  | 118   | 28  | 2   | 65   |
| 173  | 471   | 2,149   | 736   | 135   | 209   | 290   | 257   | 119   | 839  |
| 13,359   | 2,165   | 1,810   | 1,090   | 582   | 479   | 766   | 1,023   | 266   | 863  |
| 12,083   | 6,796   | 9,636   | 4,029   | 1,503   | 2,606   | 2,550   | 1,851   | 352   | 2,760  |
| 40,699   | 12,235  | 6,310   | 10,687  | 5,141   | 2,236   | 1,995   | 3,852   | 1,228   | 3,570  |
| 36,917   | 8,638   | 1,936   | 4,556   | 3,290   | 1,863   | 1,303   | 1,684   | 1,267   | 1,003  |
| 6,027  | 1,030   | 350   | 350   | 228   | 294   | 291   | 259   | 224   | 612  |
| 21,266   | 5,081   | 2,594   | 2,305   | 1,413   | 836   | 1,636   | 1,100   | 465   | 2,203  |
| 143  | 71  | 306   | 39  | 30  | 61  | 11  | 20  | 1   | 252  |
| 2,721  | 1,756   | 1,199   | 641   | 257   | 711   | 1,001   | 617   | 200   | 2,509  |
| 1,218  | -   | 306   | 797   | 121   | 48  | 474   | 44  | 34  | 507  |
| 23,529   | 1,861   | 505   | 716   | 370   | 143   | 177   | 416   | 334   | 581  |
| 26,192   | 15,503  | 10,805  | 25,075  | 10,099  | 3,963   | 4,203   | 3,963   | 757   | 6,414  |
| -  | 23  | 26  | 8   | -   | 9   | 36  | -   | -   | 32   |
| 42,071   | 20,697  | 15,356  | 24,225  | 12,592  | 7,971   | 6,643   | 8,010   | 3,308   | 7,669  |
| 60,680   | 11,541  | 7,617   | 6,375   | 3,330   | 3,439   | 5,739   | 2,286   | 1,013   | 5,597  |
| 6,336  | 7,536   | 4,887   | 3,093   | 1,599   | 1,927   | 2,410   | 1,943   | 620   | 5,043  |
| 979  | 310   | 289   | 294   | 102   | 103   | 172   | 99  | 16  | 227  |
| 17,344   | 4,062   | 3,259   | 2,018   | 1,087   | 939   | 1,394   | 499   | 150   | 1,978  |
| 26,603   | 6,866   | 3,742   | 5,196   | 3,770   | 1,356   | 1,928   | 2,051   | 575   | 2,400  |
| 81,089   | 9,907   | 6,445   | 5,361   | 3,221   | 1,736   | 2,755   | 1,819   | 530   | 4,901  |
| 250  | 20  | 105   | 15  | -   | 4   | 22  | -   | -   | 200  |
| 963  | 265   | 710   | 130   | 57  | 81  | 425   | 72  | 79  | 335  |
| 34,235   | 15,458  | 26,020  | 62,641  | 11,107  | 6,872   | 4,861   | 6,783   | 2,849   | 9,497  |
| 646  | 799   | 173   | 118   | 74  | 311   | 98  | 52  | 283   | 167  |
| 28   | 198   | 60  | 19  | 11  | 8   | 22  | 38  | 7   | 35   |
| 24,619   | 15,050  | 15,937  | 5,999   | 3,988   | 12,159  | 7,215   | 5,986   | 1,022   | 12,430   |
| 10,703   | 2,772   | 975   | 1,156   | 592   | 366   | 821   | 665   | 174   | 1,384  |
| 10,696   | 2,012   | 965   | 1,526   | 1,034   | 487   | 457   | 431   | 256   | 679  |
| 1,086,788  | 338,105   | 241,140   | 303,344   | 132,130   | 92,413  | 110,544   | 88,125  | 34,724  | 162,475  |



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