BEACH SWEEPS

27th Annual
2012 Report

Clean Ocean Action (COA) is a coalition of 135 organizations working to improve and protect the waters of the New Jersey and New York coasts, also known as the "NY/NJ Bight."

Participating Municipalities & Parks: Aberdeen, Allenhurst, Asbury Park, Atlantic City, Atlantic Highlands, Avalon, Avon-By-The- Sea, Barnegat, Bay Head, Beachwood, Belmar, Berkeley, Bradley Beach, Brick, Brigantine, Cape May, Deal, Del Haven, Egg Harbor Township, Forsythe Wildlife Refuge, Gateway National Park at Sandy Hook, Glen Ridge, Highlands, Island Beach State Park, Keansburg, Keyport, Lakewood, Lavallette, Loch Arbor, Long Branch, Longport, Mantoloking, Margate, Middlesex County Park System, Middletown, Monmouth Beach, Monmouth County Park System, Normandy Beach, North Wildwood, Ocean City, Ocean Gate, Ocean Grove, Ortley Beach, Point Pleasant, Point Pleasant Beach, Red Bank, Sea Bright, Sea Girt, Sea Isle City, Seaside Heights, Seaside Park, South Amboy, Spring Lake, Stone Harbor, Strathmere, Toms River, Union Beach, Ventnor, Wildwood, Wildwood Crest.

In 1985, 75 volunteers gathered at Sandy Hook for the first Beach Sweeps with hopes to rid the beaches of unsightly and harmful debris. Twenty-six years later, the Beach Sweeps program has expanded to having 72 locations along New Jersey's coastline, as well as inland rivers, lakes, bayshores, and streams. Each year the Beach Sweeps program expands to new locations and brings together thousands of volunteers. Importantly, the Beach Sweeps are held in the Spring and Fall (when the beaches are not being cleaned by local municipalities) resulting in a true snapshot of pollution problems.

Jersey Pride – The success of the Beach Sweeps program illustrates the public's support for a clean ocean as well as the power of citizen action. Ultimately, COA hopes to see naturally clean beaches where "clean-up" events are no longer needed. As you will learn from this report, the "citizen science" data generated is essential for the fulfillment of this goal.

Marine Debris is people-generated litter in a waterway. Approximately 80% of marine debris comes from land-based sources through runoff. Marine debris can also come from illegal at-sea dumping, lost and discarded fishing gear, beach goers leaving behind garbage, landfills, shipping, and combined sewer overflows. See page 5.

Citizen Scientists – Every Beach Sweeper becomes a "citizen scientist" as they record each piece of debris collected on our Beach Sweeps datacards. The data collection turns a one-day event into a legacy of information that can be used to identify sources of pollution and monitor trends. This research helps us find solutions to keep beaches clean and healthy, create federal, state, and local programs to reduce litter in the environment, and protect the public and the environment.

Superstorm Sandy – On October 29th, 2012, Superstorm Sandy made landfall in Atlantic City at approximately 8:00 pm —just 9 days after the Fall Beach Sweeps. According to data, 2012 Fall Beach Sweepers removed 147,800 pieces of debris from New Jersey's beaches on October 20th. Unfortunately, many of our dedicated Beach Captains were affected by Superstorm Sandy and were not able to return the volunteer collected data from the Fall Beach Sweeps. The numbers reflected in this report, especially from the fall, should be considered conservative. Our apologies to groups that were inadvertently left out of this report.

Local Data <—> Global Network – Every October, COA submits the citizen-collected data on debris collected during the Fall Beach Sweeps to The Ocean Conservancy to be included in their International Coastal Cleanup (ICC) Report. The ICC is an annual, global, event held in over 100 countries and territories bordering every major body of water on Earth. COA's data and advocacy are part of this international database on marine debris and global campaigns against ocean pollution.

Special Thanks to COA's Ocean Wavemakers

2012 BEACH CAPTAINS: Adrianna Zito-Livingston, Alex Shanley, Alice Rirodan, Allen Shultz, Anita Zalom, Ann Abate, Ann Gradman, Annette Lombardo, April Hamblin, Barbara Granda, Bill & Cookie Cleary, Bill Rosenblatt, Bill Shultz, Bob Thibault, Bonnie, Josh, and John Peterson, Branden Lenahan, Brian DiStefano, Bryan Zinski, Carol Jansen, Carol Spratford, Carole Hart, Ceili Moser, Charlotte Moyer, Chet Boyers, Cheyenne Cohen, Chris Francy, Christina & Mark Palmieri, Colleen McGrath, Damon Noe, Dan McLaughlin, Daniel Lockward, Danni Logue, David Allison, Deborah & Kyle Gonis, Demaris McManus, Denise Bruschi, Derek Riddle, Diane Prendimano, Elizabeth McCormack, Elsa Van Cleve, Emily Long, Eric Shubiger, Fran and Peter Donnelly, Frank Huza, Franz Adler, Gabrielle Longo, Grace Peck, Gretchen Whitman, Holly Morgan, Jacquie Moser, Jared Tate, Jayne Moormann, Jeff Martin, Jeffrey Thomas King, Jennifer Hess, Jennifer Pati, Jesse Beutell, Jessica & Kyle Mumford, Jill McGrath, Jim Walsh, JJ Weiss, Joanne Pena, Joe Mairo, Joe Reynolds, Joe, Kari, and Astri Martin, John Durasky, John Weber, John Wnek, Joseph M. Bond, Juliet Taylor, Kathleen & Leo Gascienica, Ken Cooper, Kevin Connelly, Krissy Halkes, Laura Bagwell, Laura Domanski, Laurie Howey, Leah Savia, Lindsey Van Zile, Lisa Cordova, Lloyd Lomelino, Mandy Wheeler, Margot Ferricola, Marianne Grant, Marilyn Schlossbach, Marissa Magura, Mark Allen, Mark Woldseth, Matt Schmidt, Maureen Sczpanski, Mayor Paul Kennedy, Michael J. Mancini, Mike Palmisano, Mike Torpey, Moses Katkowski, Nancy Tooker, Neilan Smith, P. J. Polinski, Patricia Doyle, Ralph and Tara Carloni, Rebecca Kane, Rick Miller, Rob Van De Pette, Robyn Griffith, Ron Dente, Rosemary Ryan, Sandy Perchetti, Scott Meyler, Serena Sedlacek, Shelley Haas Kirk, Stephen Zuckerman, Steve Spaltro, Steve Szulecki, Sue Siegwarth Hayes, Tammy Schweir, Ted Jermansen, Tyler Ahlf, Tyler Bawden, Tyler Thompson, Zoe McDonnell.

A Family of Beach Captains: The Jermanesens & The Martins

Middle: Local volunteers at Sea Girt

Left: Girl Scout Troop participates in Ocean County

GOVERNMENT AGENCIES & ENVIRONMENTAL COMMISSIONS: Aberdeen Environmental and Shade Tree Advisory Board, AmeriCorps NJ Watershed Ambassador Program, Beachwood EC, Glen Ridge EC, Keansburg EC, Keyport EC, Lakewood EC, Lavallette Town Council, Longport Town Council, Manasquan EC, Margate Adopt a Beach, Monmouth Beach Patrol, Monmouth Beach EC, Monmouth County Environmental Council, National Park Service, Naval Weapon Station Earle, Ocean City EC, Ocean City Town Council, Red Bank EC, Sea Isle City EC, Seaside Park Borough Council & Administration, Spring Lake EC, Stone Harbor Police Department, Union Beach Town Council, US Coast Guard, US Fish & Wildlife.

FAITH BASED GROUPS: Church of Christ, Holy Family, Holy Family Church, Holy Redeemer, Holy Trinity Lutheran Church, Inglesia Ni Christo, St. Aloysius Church, St. James, St. Catherine's Church, St. Clement's Church, St. Denis, St. Mary's, Temple Shalom, Waterspirit.

Local family participates at Midway Beach in South Seaside Park.

BUSINESSES: Action Room Gym, Adventure Aquarium, AMEC, Anthropologie, Atlantic City Electric, Aveda, Bank of America, BD, BNY Mellon Corp, Bongo Café, Booz Allen Hamilton, Cape Bank, Cassies Calendar, Comcast, Defined Logic, Environmental Resources Management, ERA Central Realty Group, First Bank of Sea Isle City, Full Circle DoJang, Il Shim, INC Giving, JP Morgan Chase, Kastner Family Taekwondo, Kohls, Labrador Lounge, MBIA, Merrill Lynch, Monmouth County Association of Realtors, Montecalvo, New Jersey Natural Gas, NJ American Water Company, NJ Resources, Old Navy, Pedals 'n' Paddles, Pershing- Brym, Ricoh, Serpico's Pizza, Shoprite, South Jersey Industries, South Monmouth Board of Realtors, Summa Love Surf Camp, Sundaes Ice Cream, The Wetland Institute, Timberland, United Teletech Financial, US Bank, Viridian Power and Energy, Wayside Technology Group.

Left: Kean University volunteers pictured at Union Beach

Right: New Jersey Beach Buggy Association Participates at Island Beach State Park

Bayshore Recycling representatives gather at Sandy Hook

South Jersey Industry volunteers at the Seaside Grant Ave. site.

HIGH SCHOOLS: Atlantic City, Cape May Technical, Christian Brothers, Colts Neck, Communications, Egg Harbor Twp., Freehold Township, Hamilton West, Henry Hudson Regional, High Tech, Holy Spirit, JP Stevens, Keyport, Kittatinny Regional, Lewis School of Princeton, Lower Cape May Regional, Mainland, Manalapan, Manasquan, Marine Academy of Science and Technology, Marine Academy of Technology and Environmental Science, Matawan Regional, Mater Dei, Middle Twp., Middletown North, Monsignor Donovan, Oakcrest, Ocean City, Ocean Twp., Old Bridge, Peddie, Point Pleasant , Point Pleasant Beach, Raritan, Red Bank Catholic, Rumson-Fair Haven Regional, Rutgers Prep, Sayreville War Memorial, Somerset County Vo-tech, South Amboy, St. Augustine Prep, St. James, Toms River East, Toms River North, Trenton Catholic Academy, Trinity Academy, Union Catholic, Wall, Wildwood, Winslow Twp.

ELEMENTARY SCHOOLS: Bradley Beach, Drum Point, Holy Cross, Lavallette, Long Branch, Monmouth Beach, Ocean Avenue, Pine Beach, Samrell Upper, St. Joseph, St. Mary's, St. Rose, St. Stanislaus Kostka, Stone Harbor.

COLLEGES & UNIVERSITIES: Atlantic Cape Community College, Brookdale Community College, Kean University, Middlesex County College, Monmouth University , Ramapo College, Raritan Valley Community College, Rider University, Rowan University , Rutgers University, Stevens Institute, Stockton College, University of Delaware

MIDDLE SCHOOLS: Belhaven, Deal, Hazlet, Indian Hill, Long Branch, Maple Place, Monmouth Beach, Oak Hill Academy, Ocean City Intermediate, Ridge and Valley Charter, St Josephs, Ventnor, Veterans' Memorial, Village, William R. Satz, Woodrow Wilson.

Cub Scout Packs: 22, 23, 29, 36, 46, 47, 66, 81, 82, 131, 331; **Boy Scout Troops:** 91, 76, 141, 143, 145, 59, 331, 126; **Daisy Troops:** 78, 286, 741, 1111; **Brownies:** 719, 80474; **Girl Scout Troops:** 6, 113, 159, 171, 220, 227, 243, 257, 264, 269, 307, 324, 331, 347, 374, 375, 394, 502, 507, 538, 544, 579, 613, 646, 689, 737, 799, 810, 860, 901, 1554, 80763.

CIVIC GROUPS & ORGANIZATIONS: Adopt A Beach, Allentown Future Farmers of America, Allentown Leo Club, American Littoral Society, Atlantic City Surf Club, Atlantic Highlands Leo Club, Bayshore Regional Watershed Council, Big Brother Big Sister, Bus for Progress, Cerebral Palsy Association of Middlesex County, Clean Your Community-Edison, Citizens Right to Access Beaches, Democratic Club of Beachwood, Eco Maniacs 4-H Club, Friends of Island Beach State Park, Green Party of Monmouth County, Ideal Beach Community Association, Jersey Cares, Lavallette Registered Republican Club, Midway Beach Condominium Association, NAPP 4-H Club, Nature Center of Cape May, NJ Beach Buggy Association, NJ Clean Communities Council, NJ Windsurfing and Watersports Association, Noah's Ark Pet Pals 4-H, Ocean City Community Association, Ocean City Masonic Lodge, People to People, Philadelphia Outrigger Canoe Club, Pine Beach Green Team, Raritan River Keeper, Raritan Bay Paddling Club, Red Bank Humanists, Sea Isle City North End Improvement Association, Sea Shepherd Society of Philadelphia, Seaside Park Republican Club, Sierra Club, Surfers Environmental Alliance, Surfrider Foundation- South Jersey Chapter, Surfrider- Jersey Shore Chapter, Townsend Inlet Yacht Club, WaterWatch, We are the Bayshore, Wetlands Institute, Women's Club of Spring Lake, Women's Community Club of Cape May

Plastics

PLASTICS are synthetic, long-lasting materials derived from petroleum (crude oil). They have transformed our world. Single use disposable plastics symbolize a society of convenience that unfortunately comes with a cost – to the environment. As debris, plastics impact recreation, transportation, water quality, and wildlife. It is also ugly – littered beaches can cause economic harm to coastal communities. Plastics do not biodegrade – they photodegrade, breaking down into smaller and smaller pieces and in the process release toxic chemicals into the sea, such as Bisphenol A (BPA) and styrene trimer (a liquid hydrocarbon). Plastics also attract other toxic pollutants (PCBs, DDT, petroleum based chemicals) which are then absorbed by the marine life that accidentally eat plastic pieces. Tragically, marine life ingest these toxic-tainted plastics as food mistaking bags or pieces as prey. Plastics can also entangle marine life causing death by strangulation or drowning.

Single use disposable plastics symbolize a society of convenience that unfortunately comes with a cost - to the environment.

Left: Ingestion: When wildlife accidentally mistakes debris for food.

Below: Entanglement: When wildlife becomes entangled in marine debris.

Plastic Resin Pellets or Nurdles

WHAT IS A NURDLE?

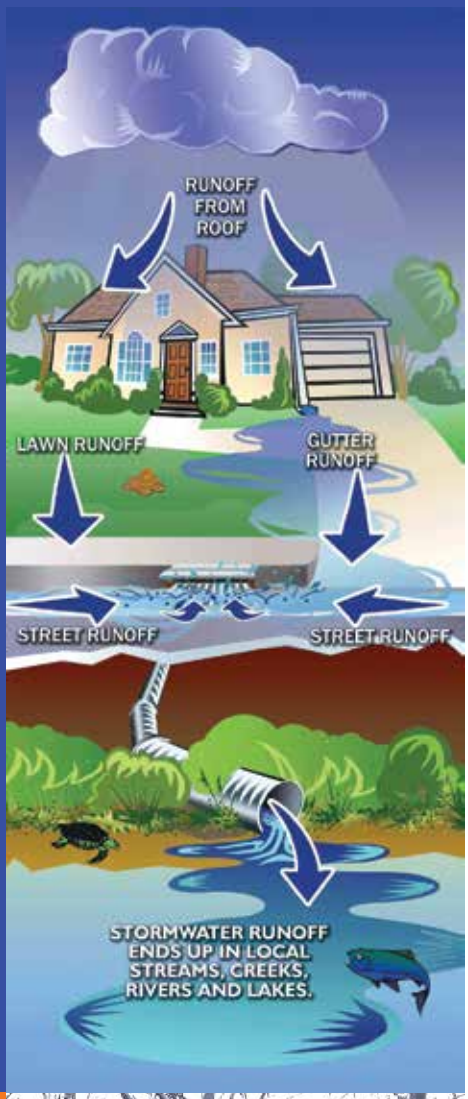
Pre-production plastics are often referred to as "nurdles" or "plastic resin pellets". During plastic production, these plastic pieces are melted down and formed into new shapes. It is estimated that over 250 billion pounds of nurdles are manufactured and shipped globally each year. These small plastic beads are generally discharged into the environment while being unloaded from boats during shipping. Spilled nurdles and other small pieces of plastic are commonly eaten by fish, birds, and other marine life that mistake them for food. This plastic is not able to be broken down by the body, it displaces food in the animals' stomach, and can lead to starvation.

SPOTLIGHT ON LOCAL RESEARCH. Since fall of 2007, Dr. Jay Kelly has been bringing his Environmental Science students from Raritan Valley Community College to participate in the semi-annual Beach Sweeps at Sandy Hook. Before cleaning the beach, the students conduct their own half-hour mini-study on plastic resin pellets ("nurdles"), the raw materials that are molded into the myriad of plastic products that are used by consumers today. Dr. Kelly's interest in the subject began when he read about plastic resin pellets in an Orion Magazine article, "Polymers Are Forever" (2007), and saw related clips in the "Altered Oceans" documentary by the L.A. Times in the same year. According to these sources, plastic resin pellets and other microdebris were accumulating on beaches around the world and amounted to as much as 20% of the beach surface in some places. Curious as to whether these resin pellets were accumulating in New Jersey, he visited Sandy Hook with a small number of students and quickly located them on the shoreline. In two hours they counted more than 2,500 pellets in a single square meter of the beach.

Since then Dr. Kelly and his students have been documenting the occurrence of nurdles around New Jersey, finding accumulation points of plastic marine debris and tracking down the inland sources of plastic resin pellets. Using aerial photographs, storm drain maps and field surveys, they have been able to trace the source locations of plastics manufacturers, train depots, and other facilities where these pre-production plastics are washed into our waterways. Working with collaborators in Japan, they also tested the nurdles for persistent organic pollutants and found the New Jersey pellets to have high levels of PCBs, DDT and other contaminants compared to other parts of the world. Check out www.pelletwatch.org to see the data and learn more about plastic resin pellets.

NON-POINT SOURCE POLLUTION

STORMWATER



What is Non-Point Source Pollution?

Nonpoint source pollution (NPSP), a.k.a. "people pollution", comes from many sources. When rain or melted snow travels over the ground through a watershed, the runoff picks up and moves pollution as it flows into a waterway and ultimately into the ocean as shown in the depiction to the left. Runoff moves pollution, such as trash, fertilizers, pesticides, soil, and animal waste. This polluted runoff is referred to as "stormwater". NPSP can be harmful - negatively affecting the beauty and health of waterways, human health, drinking water, wildlife and habitats, recreation, and the economy. The photo on below left shows a storm drain with debris washed in from a NJ neighborhood.

NJ ranks 4th nationally in nonpoint source pollution control needs ($1.8 billion) - USEPA

What is Stormwater Infrastructure?

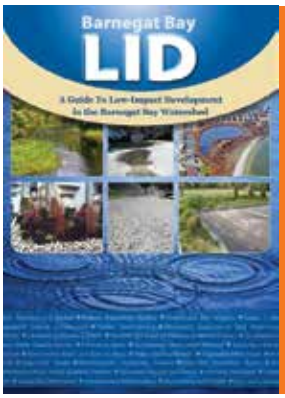
Stormwater infrastructure is the network of piping, systems and facilities that manages runoff from areas such as paved surfaces and roofs. It includes gutters, swales, basins, curbs, street catch basins, pipes, and outfalls. Traditionally, these have been designed to move water away as fast as possible. Combined with increased impervious surfaces, these systems tend to prevent water from going into the ground and have increased NPSP and downstream erosion and flooding. Stormwater doesn't go to treatment facilities, it flows directly to waterways.

NJ ranks 1st nationally in stormwater management needs ($15.6 billion) by a wide margin - USEPA

What are Combined Sewer Overflows?

Combined sewer overflows (CSOs) are found in older city areas where sewer and stormwater systems were combined decades ago. When it rains more than a tenth to a quarter of an inch in the New York City region, CSOs release raw sewage and stormwater directly into waterways. NYC has about 460 of these CSOs releasing over 27 billion gallons per year, and NJ has 254 outfalls primarily in the Hudson and Delaware River regions releasing 23 billions gallons per year.

New Jersey ranks 2nd nationally in combined sewer overflow (CSO) correction needs ($9.3 billion) - USEPA



Barnegat Bay Low Impact Development Guide, is an excellent resource for green infrastructure

What is Green Infrastructure?

Green Infrastructure is a network that uses soil-water-plant systems and/or capture devices to intercept stormwater, infiltrate a portion of it into the ground, evaporate a portion of it into the air, and/or release a portion of it slowly back into the sewer system. It includes green roofs, rain gardens, tree box filters, vegetated infiltration basins, as well as rain barrels and cisterns. By slowing and infiltrating water, we can reduce the amount of trash and pollution that ends-up on our beaches and in our waters. What are the Solutions? • Eliminate CSOs, Reduce impervious surfaces, Infiltrate and harvest rain • Invest in green and repair sewage infrastructure • Protect and restore natural areas and river/stream/bay buffers • Enforce litter laws, stormwater rules and permits • Improve trash management - keep a lid on cans and dumpsters • Reduce, reuse and recycle - especially packaging • Support cleanups and environmental stewardship to keep clean!

What are the Solutions?

- **Eliminate CSOs, Reduce impervious surfaces, Infiltrate and harvest rain**
- **Invest in green and repair sewage infrastructure**
- **Protect and restore natural areas and river/stream/bay buffers**
- **Enforce litter laws, stormwater rules and permits**
- **Improve trash management–keep a lid on cans and dumpsters**
- **Reduce, reuse and recycle–especially packaging**
- **Support cleanups and environmental stewardship to keep clean!**

BEACH SWEEPS

2012 DATA

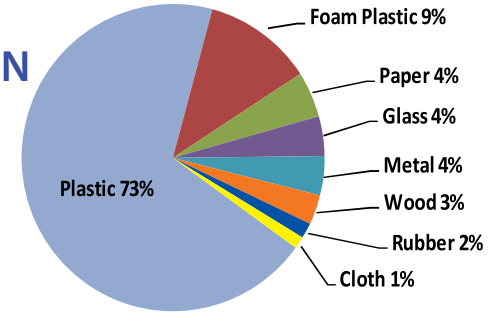
	Items	Spring Total	Fall Total	2012 Totals	% of Total
Plastic	Plastic Food, Candy Wrappers/Bags	19993	13169	33162	9.43%
	Store/Shopping Bags	4688	1897	6585	1.87%
	Trash Bags	1817	740	2557	0.73%
	Other Bags	2574	1423	3997	1.14%
	Beverages/Soda Bottles	6101	3614	9715	2.76%
	Bleach/Cleaner Bottles	290	199	489	0.14%
	Other Bottles	1290	710	2000	0.57%
	Buckets/Crates/Bins	371	128	499	0.14%
	Cap/Lids	21435	16914	38349	10.90%
	Cap Rings	2835	1780	4615	1.31%
	Cigarette Filters	19875	29487	49362	14.03%
	Cigarette Lighters	692	359	1051	0.30%
	Cigarette Packaging	946	524	1470	0.42%
	Cigar Tips	3755	4866	8621	2.45%
	Fishing Bait Bags/Containers	286	245	531	0.15%
	Fishing Line	820	484	1304	0.37%
	Fishing Lures,Floats	242	271	513	0.15%
	Fishing Nets - Small	172	115	287	0.08%
	Fishing Nets - Large	46	20	66	0.02%
	Cups	2389	1298	3687	1.05%
	Diapers	111	81	192	0.05%
	Fork, Knives, Spoons	2560	2182	4742	1.35%
	Light Sticks	458	303	761	0.22%
	Plastic Pieces	24746	19031	43777	12.44%
	Pens	847	527	1374	0.39%
	Ribbon/Tape (no balloon)	1181	654	1835	0.52%
	Rope	1194	510	1704	0.48%
	6-Pack Holders	196	77	273	0.08%
	Sheeting Tarps	88	36	124	0.04%
	Shotgun Shells	931	244	1175	0.33%
	Strapping Bands	470	286	756	0.21%
	Straws/Stirrers	12309	9999	22308	6.34%
	Syringes	99	59	158	0.04%
	Tampon Applicators	1927	1175	3102	0.88%
	Toys	1061	1221	2282	0.65%
	Vegtable Mesh Sacks	169	37	206	0.06%
	Other Plastics	2144	1597	3741	1.06%
Foam Plastic	Building Materials	1213	269	1482	0.42%
	Buoys/Floats	286	98	384	0.11%
	Fast Food Containers	638	325	963	0.27%
	Cups	1448	1065	2513	0.71%
	Packaging Materials	1982	398	2380	0.68%
	Foam Pieces	15909	6185	22094	6.28%
	Plates	516	181	697	0.20%
	Other Foam Plastic	1776	1173	2949	0.84%

	Items	Spring Total	Fall Total	2012 Totals	% of Total
Glass	Beverage Bottles	2795	1222	4017	1.14%
	Food Jars	318	163	481	0.14%
	Lights: Bulbs	46	21	67	0.02%
	Lights: Fluorescent Tubes	47	24	71	0.02%
	Glass Pieces	5126	3029	8155	2.32%
	Other Glass	228	175	403	0.11%
Rubber	Balloons - Mylar/Plastic	566	286	852	0.24%
	With String/Ribbon	398	189	587	0.17%
	Balloons - Rubber	374	529	903	0.26%
	With String/Ribbon	238	260	498	0.14%
	Condoms/Rubber Bands	384	360	744	0.21%
	Gloves	276	235	511	0.15%
	Tires: Part	328	202	530	0.15%
	Tires: Whole	114	113	227	0.06%
	Other Rubber	629	326	955	0.27%
Metal	Appliances	10	13	23	0.01%
	Batteries: Car	26	3	29	0.01%
	Batteries: Other	74	44	118	0.03%
	Bottles Caps	1929	1588	3517	1.00%
	Aerosol Cans	153	82	235	0.07%
	Beverages Cans	2666	1310	3976	1.13%
	Other Cans	184	54	238	0.07%
	Car Parts	71	28	99	0.03%
	Crab/Fish Traps	29	9	38	0.01%
	55 Gallon Drums: Old	9	0	9	0.00%
	55 Gallon Drums: New	1	0	1	0.00%
	Fishing: Hooks	58	23	81	0.02%
	Fishing: Sinkers	18	16	34	0.01%
	Foil	720	542	1262	0.36%
	Nails	497	142	639	0.18%
	Pieces	432	247	679	0.19%
	Pull/Pop Tabs	160	83	243	0.07%
	Wire	738	232	970	0.28%
	Other Metal	594	290	884	0.25%
Paper	Paper Bags	782	314	1096	0.31%
	Cardboard	1039	536	1575	0.45%
	Cartons/Boxes	330	151	481	0.14%
	Cups	1128	640	1768	0.50%
	Newspaper/Magazines	897	316	1213	0.34%
	Paper Pieces	4387	2657	7044	2.00%
	Plates	371	155	526	0.15%
	Other Paper	903	652	1555	0.44%
Wood	Crab/Lobster Traps	59	18	77	0.02%
	Crates/Baskets	46	10	56	0.02%
	Ice Cream Sticks/Spoons	279	275	554	0.16%
	Lumber Pieces	4687	2026	6713	1.91%
	Pallets	151	72	223	0.06%
	Other Wood	1155	530	1685	0.48%
Cloth	Blankets/Sheets/Towels	251	169	420	0.12%
	Clothing	571	283	854	0.24%
	Shoes/Sandals	314	205	519	0.15%
	String (No Balloon)	866	437	1303	0.37%
	Other Cloth	653	558	1211	0.34%
	2011 Totals	203981	147800	351781	100.0%

2012 TRENDS: Superstorm Sandy, which hit 9 days after the fall sweeps, impacted our data card collection, so the reported numbers of items and volunteers overall are lower than what occurred. In 2012, plastic items again prevailed–with 9 of the top dirty dozen and 82 % of items collected. Cigarette filters (which contain plastic) were the most collected item – reversing a previous declining trend – with each volunteer collecting about 7 filters. Many more filters were found in the fall than the spring, which may be related to greater rainfall and/or increased smoking during the summer. Foam items and cigar tips did notably increase. The number of caps and bottles decreased based on an item per person basis. Many of the other items seem to be consistent with previous years given differences in volunteers numbers.

2012 Totals	Spring	Fall	Total	% of Total
Plastic	141,108	116,262	257,370	73.16%
Foam Plastic	23,768	9,694	33,462	9.51%
Paper	9,837	5,421	15,258	4.34%
Glass	8,560	4,634	13,194	3.75%
Metal	8,369	4,706	13,075	3.72%
Wood	6,377	2,931	9,308	2.65%
Rubber	3,307	2,500	5,807	1.65%
Cloth	2,655	1,652	4,307	1.22%
Pieces of Debris	**20,981**	**147,800**	**351,781**	**100.0%**
Volunteers	**4,362**	**2,564**	**6,926**	

PERCENT BREAKDOWN BY DEBRIS TYPE



NOTES FOR USING BEACH SWEEP DATA Clean Ocean Action's Annual Beach Sweep Reports (available at www.CleanOceanAction.org) can be used to study and understand marine debris in New Jersey. When analyzing Beach Sweep data it is important to note that the amount of debris collected depends on a variety of factors such as weather, tides, participants, and accuracy of data collection. Due to Superstorm Sandy, 21 data sets were lost and not included in this report. The numbers reflected in this report, especially from the fall, should be considered compromised.

2012 Dirty Dozen

The most commonly collected pieces of debris during Beach Sweeps

	Debris Item	2012	2011	2011 Rank	2010	2010 Rank	2009	2009 Rank
#1	Cigarette Filters	49,362	33,633	5	45,903	3	30,784	2
#2	Plastic Pieces	43,777	63,117	1	51,279	2	28,508	3
#3	Cap/Lids	38,349	58,612	2	61,895	1	33,551	1
#4	Plastic Food, Candy Wrappers/Bags	33,162	45,757	3	43,113	4	19,848	5
#5	Foam Pieces	22,094	21,834	6	22,099	6	16,713	6
#6	Beverages/Soda Bottles	9,715	17,981	7	18,212	7	11,056	7
#7	Cigar Tips	8,621	7,700	*	10,328	9	5,702	12
#8	Glass Pieces	8,155	8,993	8	7,723	12	4,375	*
#9	Paper Pieces	7,044	7,000	*	8,611	11	4,824	*
#10	Lumber Pieces	6,713	8,130	11	10,384	8	6,472	10
#11	Store/Shopping Bags	6,585	8,245	9	8,619	10	5,707	11
#12	Fork, Knives, Spoons	4,742	7,424	12	7,151	*	3,732	*
	Number of Volunteers	**6,926**	**7,575**		**8,372**		**5,556**	

*indicates no ranking

2012 Roster of the Ridiculous

2005 beach badge found in Island Beach State Park during the 2012 Spring Sweeps.

Wardrobe on the water: Earmuffs, Hiking boots, Leather Purse, Girdle, Flip Flops, Surgical boot, Bib, Pants, Underwear, and two Shoe Heels.

Beauty and the Beach: Hair Roller, Hairclip with Fake Hair, Tanning Goggles, Dental Floss, Hair Bows, Ear Plugs, Toothbrush, False Eyelash.

Grocery shopping at the Jersey Shore: Whole Lemons, Bottle of Wine, Shopping Cart, Fresh Watermelon, Pack of Gum, Bottle of Beer, an Orange, Fortune Cookie.

There's nothing like the real thing: Arm of a Doll, Stuffed Horse, Plastic Strawberry, Magic Wand, Plastic Bowling Ball, Plastic Pineapple, Tube of Theatrical Blood, Head of a Yoda Figurine, Plastic Policeman, Rubber Fish, Vampire teeth, Red Rose.

Just in case: Swiss Army Knife, Ant Trap, Knife, and a Boomerang.

On the Road: Brake Shoes, License Plate, and a Do Not Enter Sign.

Just for Fun: Drum, Golf Ball, Bell, Ping Pong Paddle.

A House on the Beach: Toilet Seat, Lawn Chairs, Wicker Sofa, Broom, Dinner Knife, Fence, Fully Decorated Christmas Tree, Christmas Lights, Christmas Tinsel, Fire Extinguisher, Pillow, Oven Mitt, Pot Holder, King Sized Bed Sheet, Roll of Toilet paper, Dust Pan, Stove Burner, Bag of 70 Straws, Dinner Plate, Baby Bottle, and a Grill.

Clean Ocean Action's
10 Tips for the Beach

BEACH SWEEPS

1. **Leave only footprints in the sand.**
Dispose of your waste properly–use trash and recycling receptacles or take it home (carry in, carry out). Use your beach pail at the end of the day to collect litter. Scoop the Poop! After enjoying the beach, organize family and friends for a cleanup, or join volunteers at COA's Spring and Fall Beach Sweeps (See tip #7).

2. **Reduce, Reuse, Recycle.**
Reduce your consumption of single- use disposable plastic such as bags, water bottles, straws, and utensils. Buy only reusable or recyclable products. Recycling reduces solid waste and saves resources. If your beach does not have recycling bins, take your items home for proper disposal and contact the town to suggest the need for these bins.

3. **Litter is lethal to marine life.**
Avoid bringing disposable plastics to the beach. Plastics do not biodegrade and can kill fish, birds, whales, seals, turtles, and other animals through entanglement and ingestion. If you see an animal entangled, injured, or in danger, contact a lifeguard, local health department, or wildlife refuge center.

4. **The beach is not an ashtray.**
Never leave cigarette filters in the sand. They do not biodegrade and are highly toxic to marine animals that mistake them for food.

5. **Hold the line and never let it go…**
Keep all fishing line for recycling and send to: Pure Fishing America, Attn: Recycling, 1900 18th St, Spirit Lake, IA 51360-1099. If not possible bring to your local tackle shop or marina, or cut into small pieces and put in a trash can.

6. **Report pollution.**
Report any unusual beach conditions (garbage slicks, brown or red tides, fish-kills) to the appropriate state and federal agencies. In New Jersey contact the Department of Environmental Protection by calling 1-877-WARN-DEP and contact COA. Take photos of the incident.

7. **Conduct local beach clean-ups.**
Visit the COA website www.cleanoceanaction.org or details on how to organize a beach clean-up or join other volunteers at COA's Annual Spring and Fall Beach Sweeps. Visit the website for current dates.

8. **Look, listen, and learn…**
Observe wildlife from a distance. Do not frighten or disturb beach critters. Beachcomb for shells, listen for birdcalls, and look for plants. Identify what you find with a field guide.

9. **Carpool, walk, bike, or use mass transit to the beach.**
Cars are a leading source of air and water pollution. Turn off your car if idling for more than 30 seconds; this will conserve fuel, save money and reduce pollution.

10. **Lead by example…**
Pass tips along to other beach-goers. Together, we are the solution to ocean pollution!

BEACH SWEEPS 2012 STATEWIDE SPONSORS

Comcast

atlantic city electric

verizon

Bank of America

AVEDA
THE ART AND SCIENCE OF PURE FLOWER AND PLANT ESSENCES

BEACH SWEEPS ADDITIONAL SPONSORSHIP

BD

RICOH

United Teletech Financial Federal Credit Union

ShopRite

SPECIAL THANKS TO:

Central Market, Dunkin Donuts, Gateway National Recreation Area Sandy Hook Unit, International House of Pancakes, Island Beach State Park, Jersey Printing, Labrador Lounge, Marine Academy of Technology and Environmental Science, Monmouth County Park System, Middlesex County Park System, NJ Community WaterWatch, NJ Clean Communities Council, Ocean Conservancy, Rain Forest Café, Rotary Club #7540, Sea Gulls' Nest, and all who help make our beaches cleaner.

For more information about sponsorship opportunities, reducing pollution, and to check out COA's past Annual Beach Sweep Reports, please contact Clean Ocean Action.

Clean Ocean Action | 18 Hartshorne Drive, Suite 2 | Highlands, NJ 07732
www.CleanOceanAction.org | (732) 872-0111

Printed on 100% post-consumer recycled paper