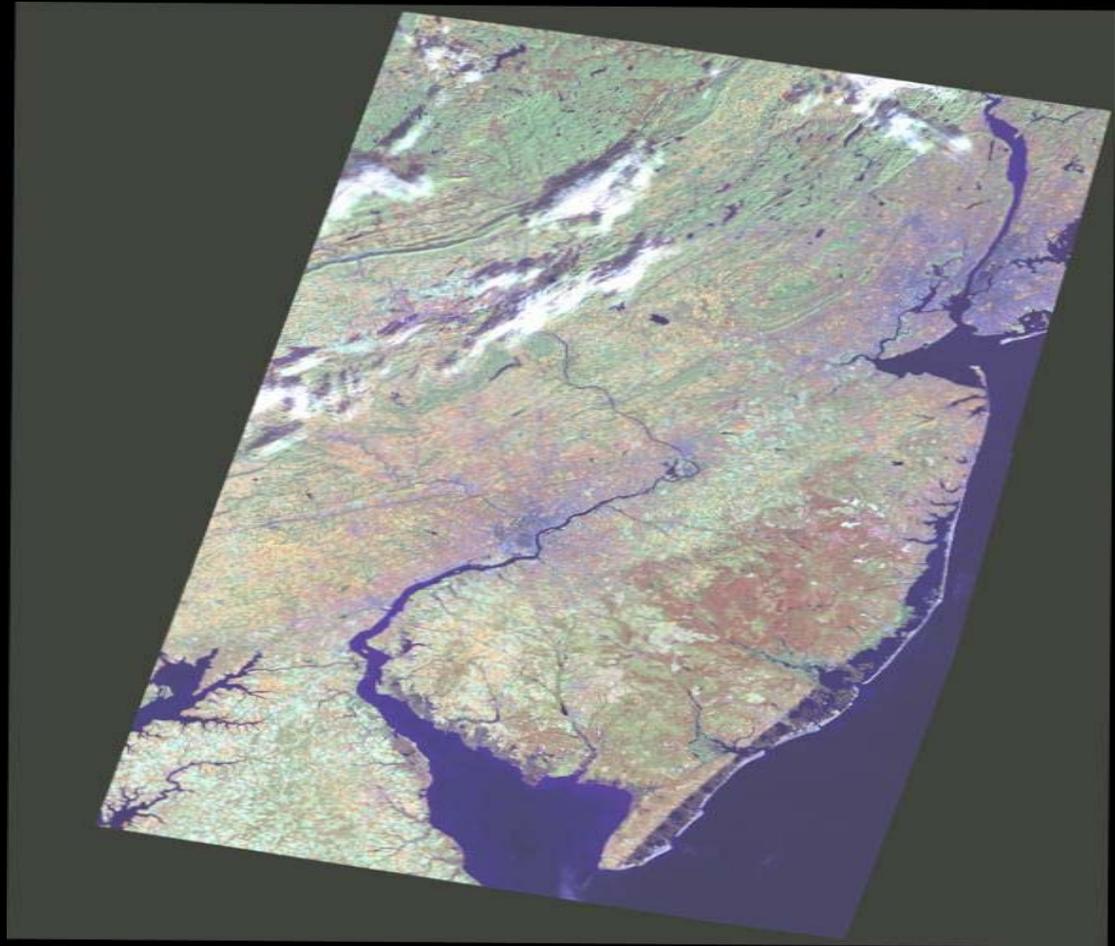


New Jersey Department of Environmental Protection
Division of Watershed Management
Office of Watershed Education, Estuaries & Monitoring

Cooperative Coastal Monitoring Program



Presented by: Virginia Loftin

NJ Water Monitoring Council Meeting, January 31, 2007

Cooperative Program Between:

NJ Department of Environmental Protection

NJ Department of Health and Senior Services

County Health Departments

Monmouth County HD

Ocean County HD

Atlantic County HD

Cape May County HD

Middlesex County HD

Local Health Departments

Middletown HD

Northeast Monmouth Regional Health Commission

Long Branch HD

Long Beach Township HD

Atlantic City HD

Cooperative Coastal Monitoring Program

- Program began in 1974
- Program revised and State Sanitary Code adopted in 1986
- Responded to public health concerns
- Provided data required for general and site-specific water quality analyses

Activities include:

- Weekly monitoring of bathing beaches for enterococcus bacteria
- Aerial surveillance of coast
- Regular inspections at coastal sewage treatment plants
- Public notification of beach conditions

Complimentary Programs:

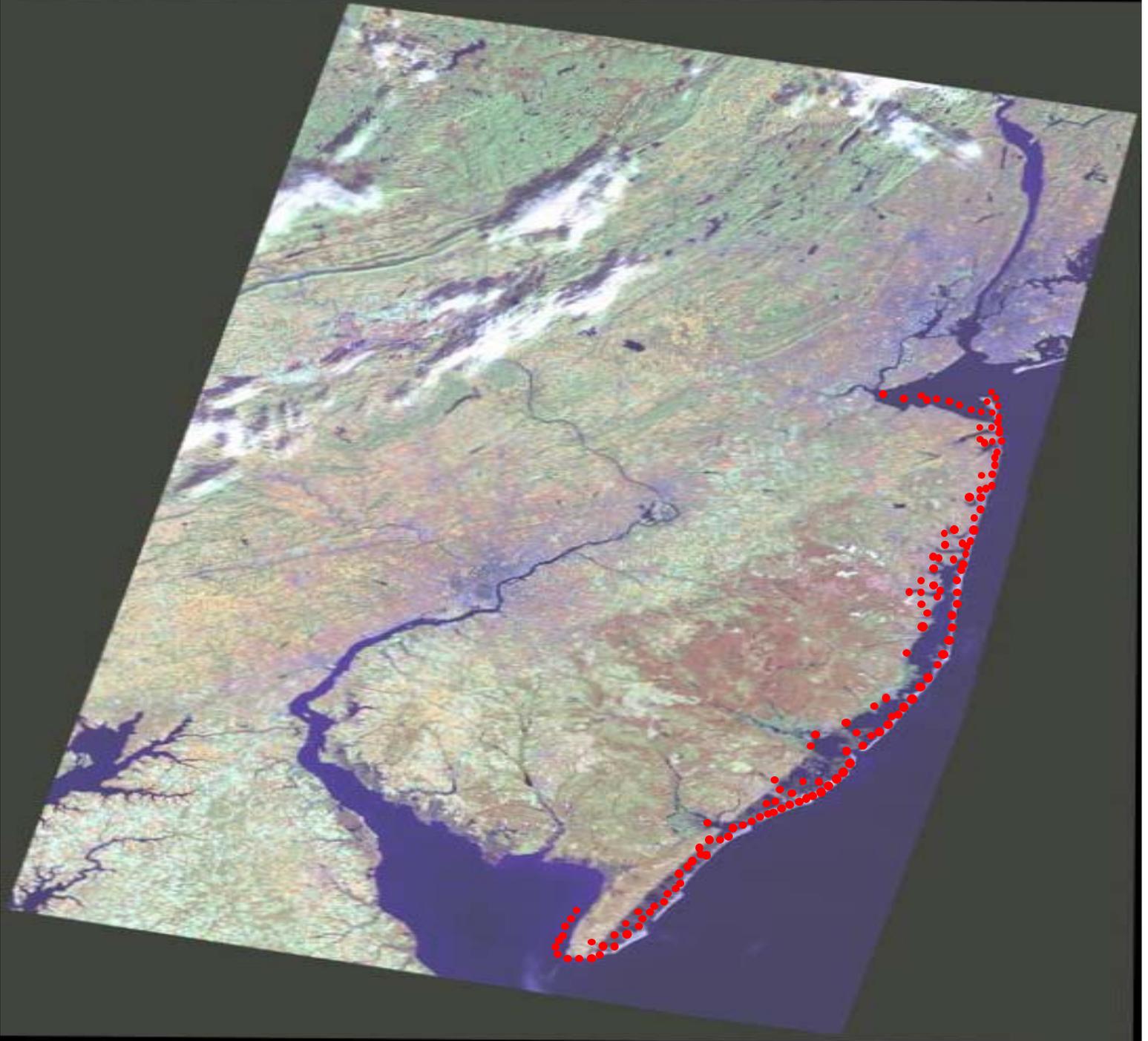
Clean Shores Program, Adopt A Beach Program

186 Ocean stations

Most ocean monitoring stations are associated with potential pollution sources

139 Bay Stations

All bay beaches are monitored

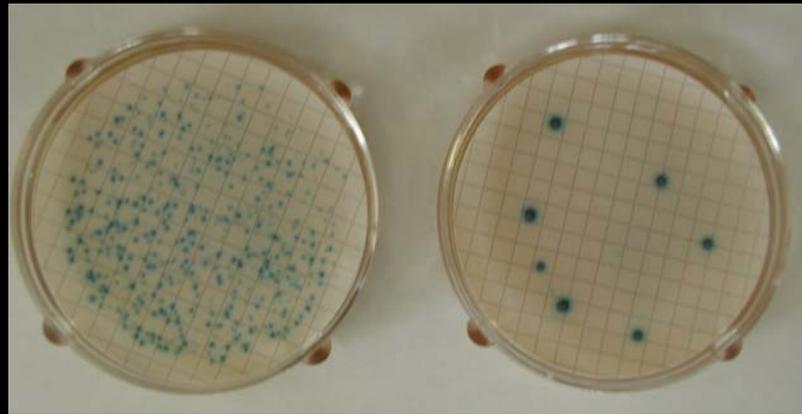


- County and local health departments collect and analyze approximately 5700 water quality samples each summer season
- Beach closings are mandatory for sewage overflows and other pollution events with potential to affect public health
- Monitoring conducted after all pollution events



Current testing method:

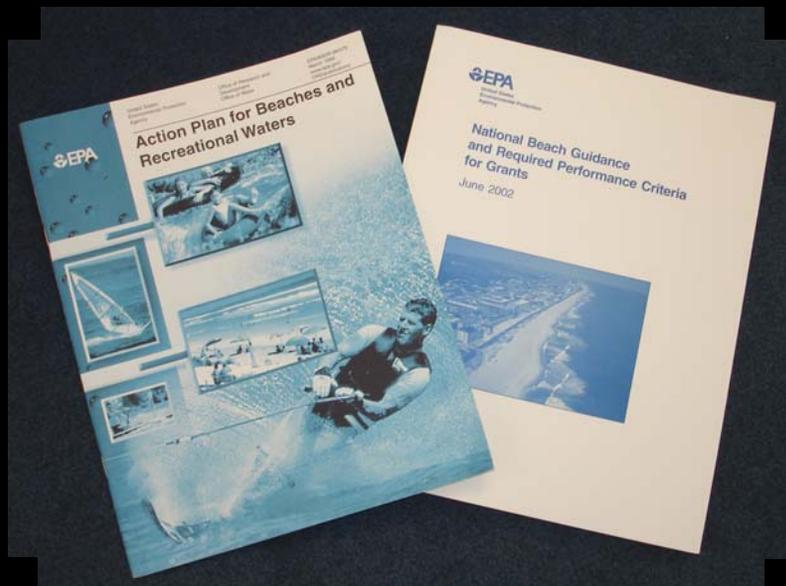
EPA Method 1600: Enterococci in water by membrane filtration – results in 24 hours



Future methods?

- qPCR – quantitative polymerase chain reaction – results in 2 hours
- Predictive modeling

EPA Beaches Environmental Assessment and Coastal Health (BEACH) Act based on New Jersey's Cooperative Coastal Monitoring Program



Provides grant \$ for monitoring water quality and public notification of beach conditions

October 10, 2000



Monitoring begins in mid-May and runs through early September. Samples are collected weekly on Mondays.

Standard is 104 enterococci bacteria per 100 mL of sample



Sources of bacteria include:

Stormwater outfalls on beach









Stream discharge to ocean



Coastal Lake Discharges

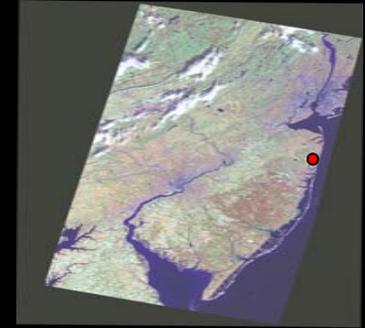


Deal Lake, Loch Arbour

Sylvan Lake, Avon



Monmouth County Health Department Rain Provisional Policy (2002)



Wreck Pond, Spring Lake



...and unusual events

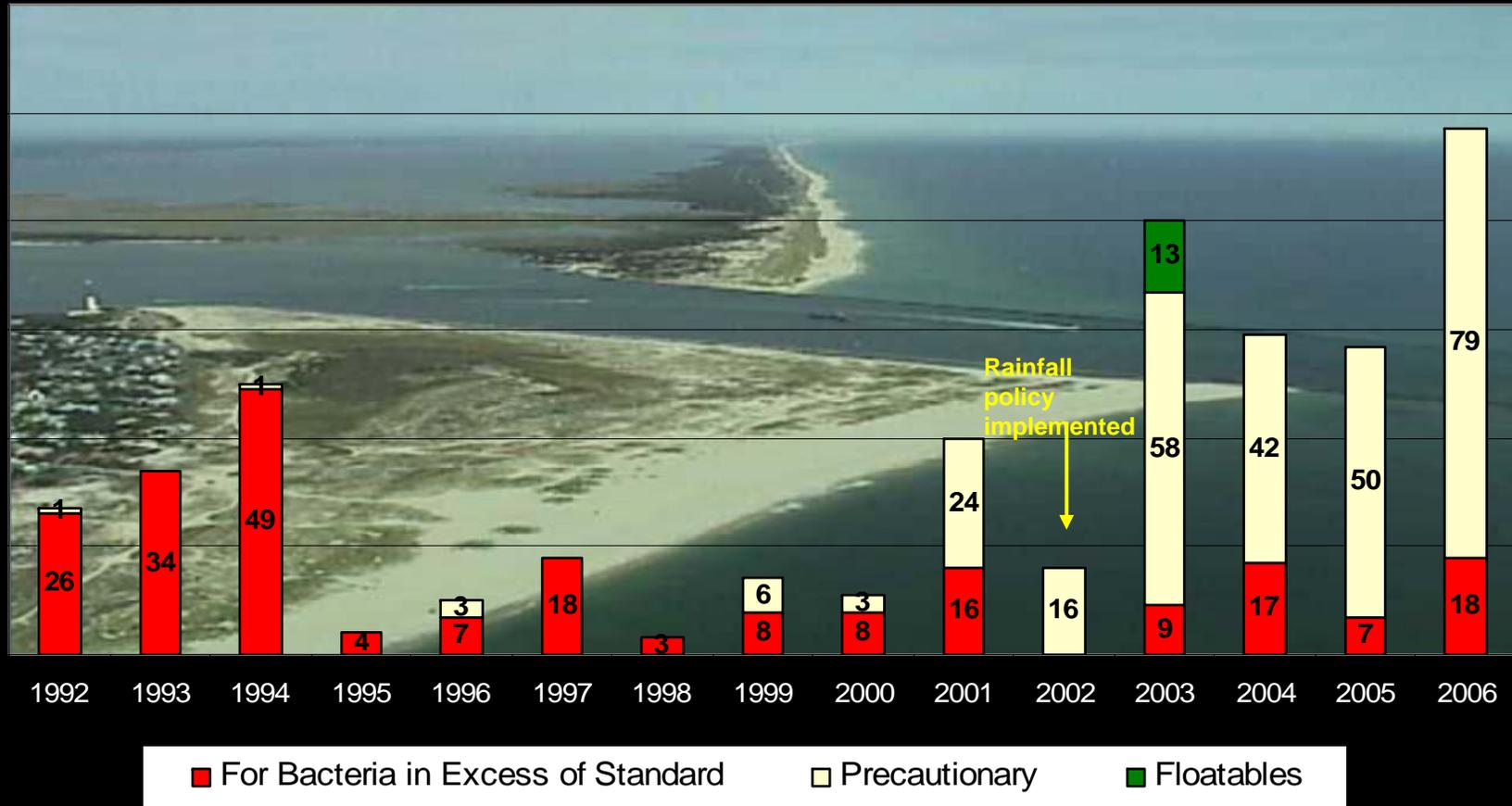


Coastal Sewage Treatment Plant Inspections



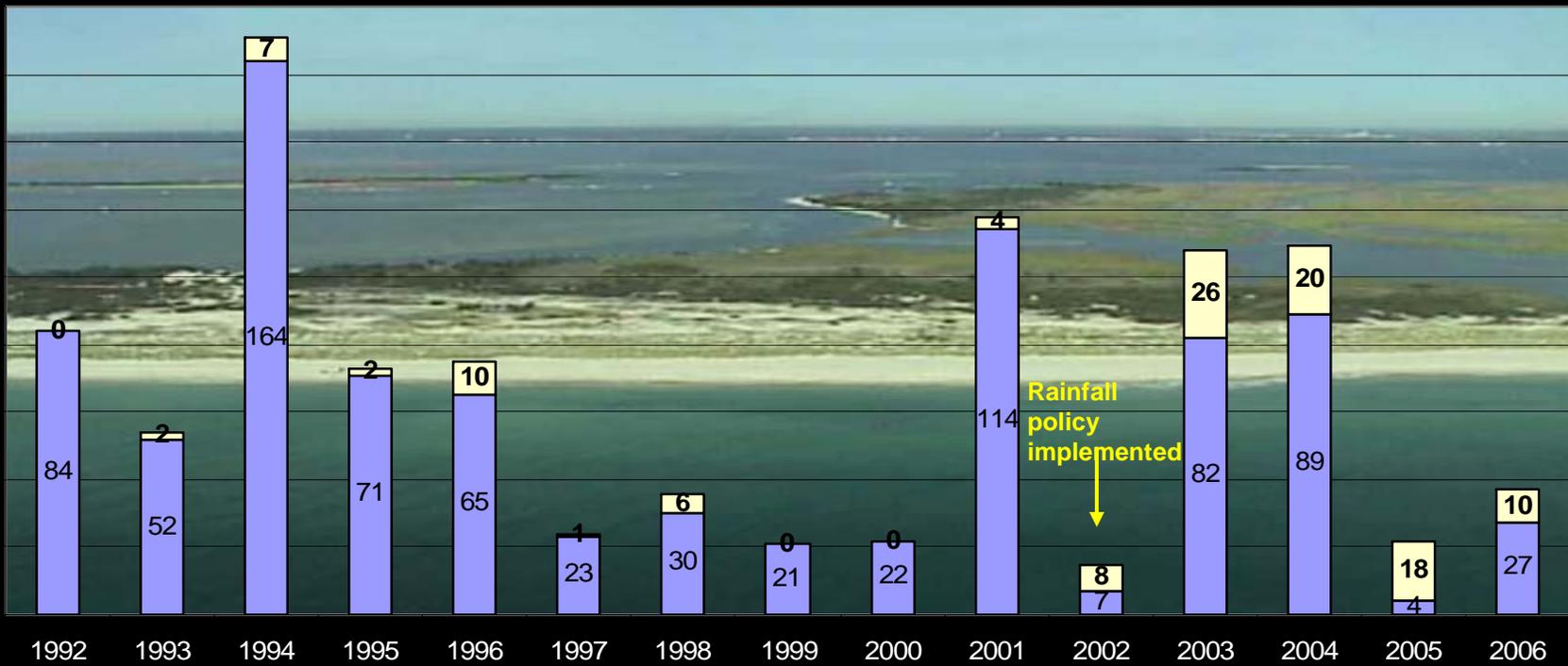
DEP inspects 17 coastal STPs and monitors discharges to coastal waters

Ocean Beach Closings 1992 - 2006



Bay Beach Closings

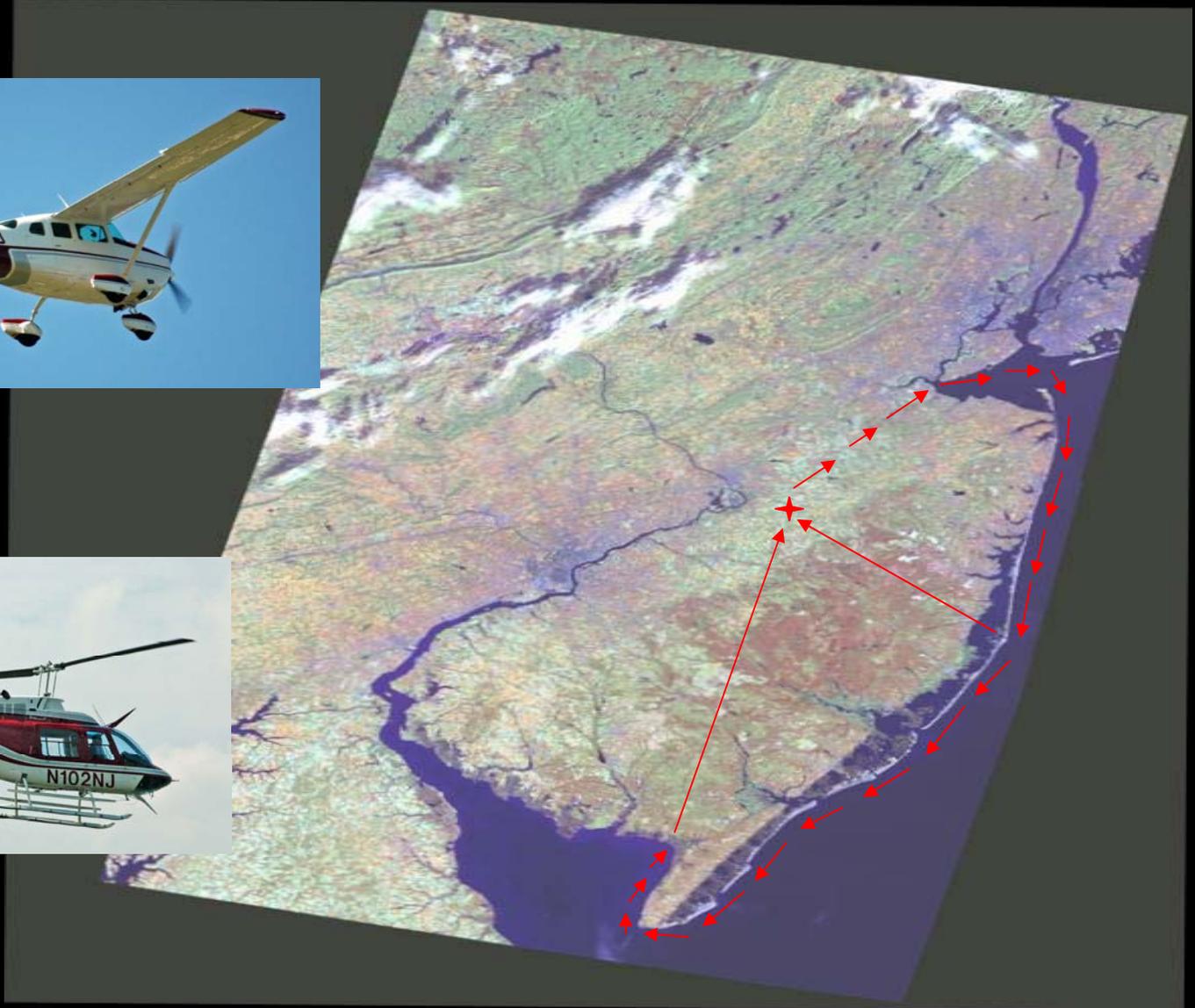
1992 - 2006



■ for bacteria in excess of standard

■ precautionary

Aerial Surveillance



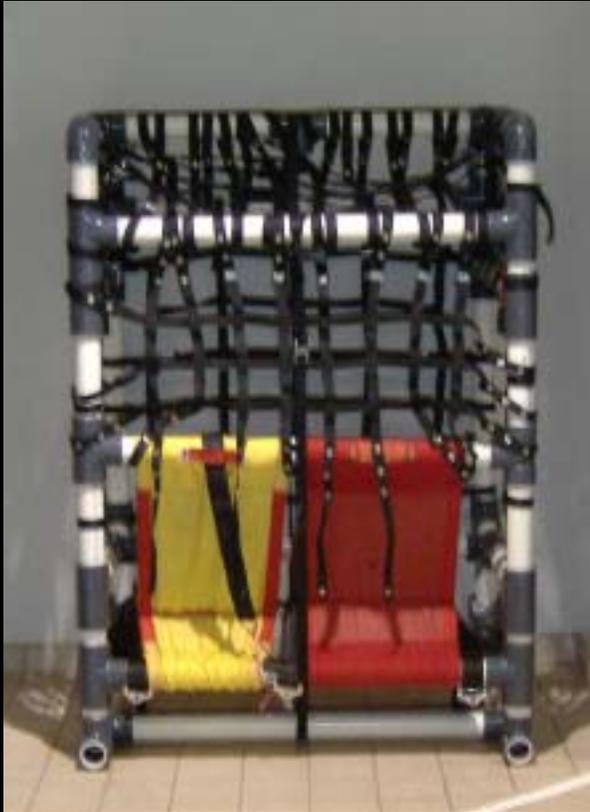
DEP Flight Crew





EPA Water Ditching and Survival Training







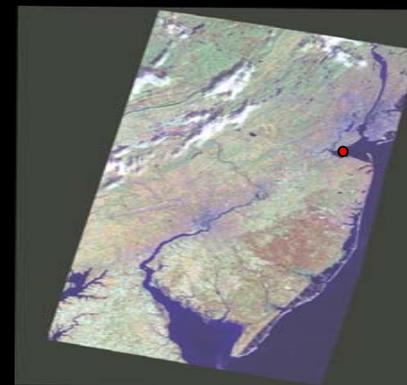


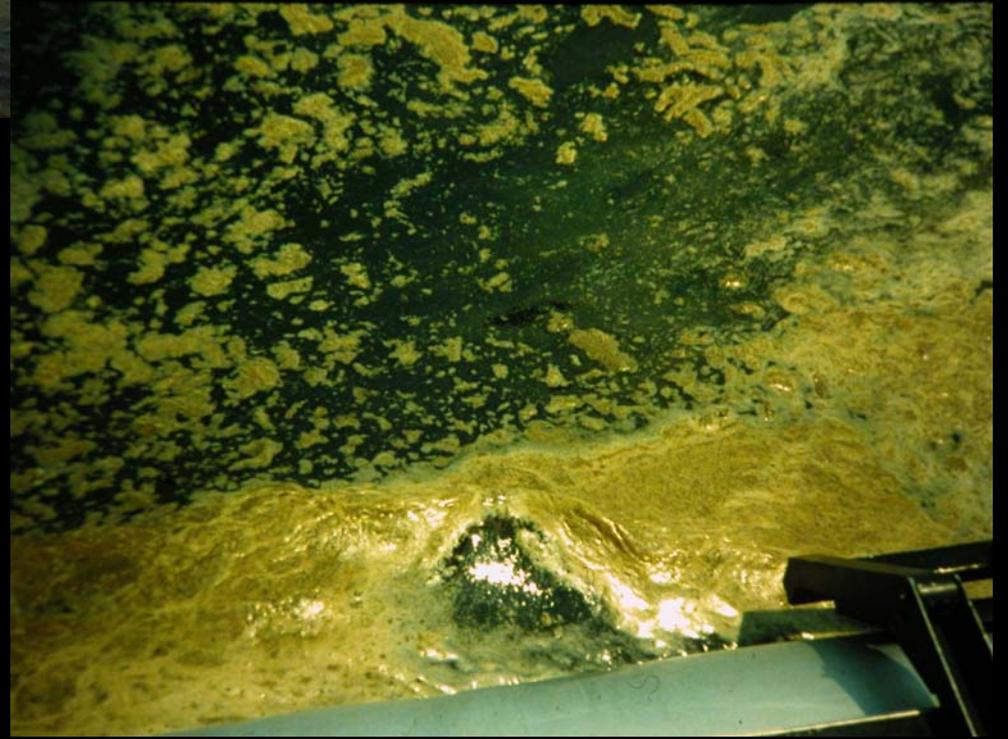
What we're
looking for...



Middlesex County Utilities Authority

Raritan Bay outfall
~95-150 mgd







What we usually see...







Web-Based Reporting

Introduced in Summer 2004

Completely paperless system –

PDAs distributed to all county field samplers

Field data is downloaded at lab at time of sample drop-off



Web-Based Reporting

NJ Beach Monitoring Solution
Laboratory Reports

Default Entry 6/11/2004 11:00

Save	Location (Station#)	Date Sampled	Date Analyzed	Time Analyzed
<input type="checkbox"/>	Gary Lake Street Beach (LakeStr2)	6/9/2004	6/11/2004	11:00
		Results	Comments	
		E coli: 2	None Detected	
<input checked="" type="checkbox"/>	Gary Lake Street Beach (LakeStr2)	6/10/2004	6/11/2004	11:00
		Results	Comments	
		E coli: 350	- Select -	
<input type="checkbox"/>	Gary Marquette Park Beach (Marquet1)	6/9/2004	6/11/2004	11:00
		Results	Comments	

- Lab managers enter sample results directly on to web page
- System recommends action for agency officials (e.g. closures)
- Posting determinations are immediately available on NJDEP and Earth 911 websites
- Citizens, lifeguards, media, resorts, other stakeholders receive immediate email alerts of closures/advisories via “opt-in”
- Results are immediately available for EPA BEACH Data Flow.

Web-Based Reporting

NJ Beach Monitoring Solution
Health-Based Risk Determination

Location (Station#)	Date Sampled	Analyzed by	Date / Time Analyzed	Analysis Parameter	Results	Comments	Close	Reason
Gary Lake Street Beach (LakeStr2)	6/10/2004	CP	6/11/2004 11:00:00 AM	E coli	350		<input checked="" type="checkbox"/>	Bacteria levels in monitoring excee
Gary Marquette Park Beach (Marquet1)	6/10/2004	CP	6/11/2004 11:15:00 AM	E coli	<2	None Detected	<input type="checkbox"/>	- Select -

[NJ BMS Main Page](#)

- **State-of-the-art technology reduces workload and streamlines data management at all levels of government**
- **Government-to-Government and Government-to-Public information exchange through one seamless network**

www.njbeaches.org

The screenshot shows a Mozilla Firefox browser window displaying the NJDEP website. The browser's address bar shows the URL <http://njbeaches.org/>. The website's header includes navigation links for [njhome](#), [my new jersey](#), [people](#), [business](#), [government](#), and [departments](#). The main content area features the NJDEP logo and the title "NJBEACHES.ORG". Below this, a section titled "New Jersey Ocean Beach Information" provides updates. The "TODAY'S UPDATES" section, dated Thursday, August 17, 2006, states that all ocean and bay beaches are open and that the coastal surveillance flight from Raritan Bay to Cape May Point was successful. It also provides the phone number 1-800-648-SAND for more information. An image of a beach with a yellow and green umbrella and two chairs is shown. The "About the Program" section explains that the New Jersey Department of Environmental Protection administers the Cooperative Coastal Monitoring Program. The "Ocean Monitoring Results" section offers a dropdown menu to select a county (Cape May, Atlantic, Ocean, Monmouth) for detailed results. The browser's taskbar at the bottom shows several open applications, including Novell GroupWis..., CCMP Presentati..., and Microsoft Photo..., along with the system clock showing 1:12 PM.

NJDEP - NJBEACHES.ORG - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

[http://njbeaches.org/](#) Go

Customize Links Free Hotmail Windows Media Windows

[njhome](#) | [my new jersey](#) | [people](#) | [business](#) | [government](#) | [departments](#)

newjersey njden department of environmental protection

NJBEACHES.ORG

New Jersey Ocean Beach Information

[njdep home](#)

This site provides information related to New Jersey's ocean beach water quality and public access locations.

TODAY'S UPDATES

Today is Thursday, August 17, 2006.

All ocean and bay beaches are open.

Today's coastal surveillance flight was performed from Raritan Bay south to Cape May Point. Beach and water conditions are good.

This information can also be accessed by calling:

1-800-648-SAND

This web page is updated each weekday afternoon after flight reports are filed and water quality results are received from the labs. This page will be updated on weekends as needed to reflect changing conditions.

About the Program

The **New Jersey Department of Environmental Protection** administers the **Cooperative Coastal Monitoring Program** with the New Jersey Department of Health and Senior Services and local environmental health agencies. Recreational beach water quality monitoring is performed routinely on Mondays and throughout the week as necessary at 186 ocean monitoring stations.

[View Cooperative Coastal Monitoring Program information.](#)

Ocean Monitoring Results

Select a county below to view detailed results .

- ▶ Cape May
- ▶ Atlantic
- ▶ Ocean
- ▶ Monmouth

Done

Start Novell GroupWis... CCMP Presentati... Microsoft Photo ... NJDEP - NJBEAC... Desktop 1:12 PM

1-800-648-SAND

NJDEP - NJBEACHES.ORG - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.state.nj.us/dep/beaches/mc.html

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njhome | my new jersey | people | business | government | departments

newjersey njdep department of environmental protection

NJBEACHES.ORG

New Jersey Ocean Beach Information

[nj beaches](#) | [njdep home](#)

Monmouth County Ocean Monitoring Results

- ▶ [May 15, 2006](#) ▶ [June 19, 2006](#) ▶ [July 24, 2006](#) ▶ [August 28, 2006](#)
- ▶ [May 22, 2006](#) ▶ [June 26, 2006](#) ▶ [July 31, 2006](#) ▶ [September 5, 2006](#)
- ▶ [May 30, 2006](#) ▶ [July 3, 2006](#) ▶ [August 7, 2006](#)
- ▶ [June 5, 2006](#) ▶ [July 10, 2006](#) ▶ [August 14, 2006](#)
- ▶ [June 12, 2006](#) ▶ [July 17, 2006](#) ▶ [August 21, 2006](#)

[Click here to view data from previous years](#)

[contact dep](#) | [privacy notice](#) | [legal statement](#) 

New Jersey Ocean Beach Information

[monmouth county](#) | [njbeaches](#) | [njdep home](#)

Monmouth County Ocean Monitoring Results for the Week of June 26, 2006

Date	Station	Municipality	Location	Entero	
6/26/2006	CCMPMC1041	Allenhurst	Cedar	10	R
6/26/2006	CCMPMC1024	Asbury Park	3rd	< 10	R
6/26/2006	CCMPMC1065	Asbury Park	7th	< 10	R
6/26/2006	CCMPMC1050	Asbury Park	Asbury	10	R
6/26/2006	CCMPMC1027	Avon	Sylvania	< 10	R
6/26/2006	CCMPMC1056	Belmar	12th	10	R
6/26/2006	CCMPMC1075	Belmar	20th	< 10	R
6/26/2006	CCMPMC1074	Belmar	7th	< 10	R
6/26/2006	CCMPMC0031	Belmar	L Street	< 10	R
6/26/2006	CCMPMC0030	Belmar	Rt 71 Bridge	< 10	E
6/26/2006	CCMPMC1054	Bradley Beach	Evergreen South	< 10	R
6/26/2006	CCMPMC1053	Bradley Beach	Ocean Park	10	R
6/26/2006	CCMPMC1022	Deal	Deal Casino	< 10	R
6/26/2006	CCMPMC1021	Elberon	Elberon Bathing Club	50	R
6/26/2006	CCMPMC1043	Loch Arbour	Village Beach Club	< 10	R
6/26/2006	CCMPMC1018	Long Branch	Atlantic Avenue	< 10	E
6/26/2006	CCMPMC1019	Long Branch	Joline	< 10	R
6/26/2006	CCMPMC1039	Long Branch	Laird	10	R
6/26/2006	CCMPMC1073	Long Branch	Lake Takanassee Beach Club	20	E

1-877-WARN DEP

CCMP staff on call 24/7 from early May through late September for all pollution events and reports in tidal waters

DEP staff respond to
pollution reports









Clean Shores



Project was initiated in 1989 in response to medical waste and garbage related beach closings in 87- 88

Cooperative effort between:

NJDEP

Department of Corrections

Local Governments

Sources of Floatable Debris





16th Street Park

City of Bayonne 1991



City of Elizabeth

Before

After





From 1989 to 2006:

**Over 115 million pounds of floatables removed.
1900 miles of shoreline cleaned and re-cleaned.**

Equivalent to:

**The area of a football field
(including end zones)
6 stories high**



**The ocean shoreline of NJ
15 times over**



Disposal

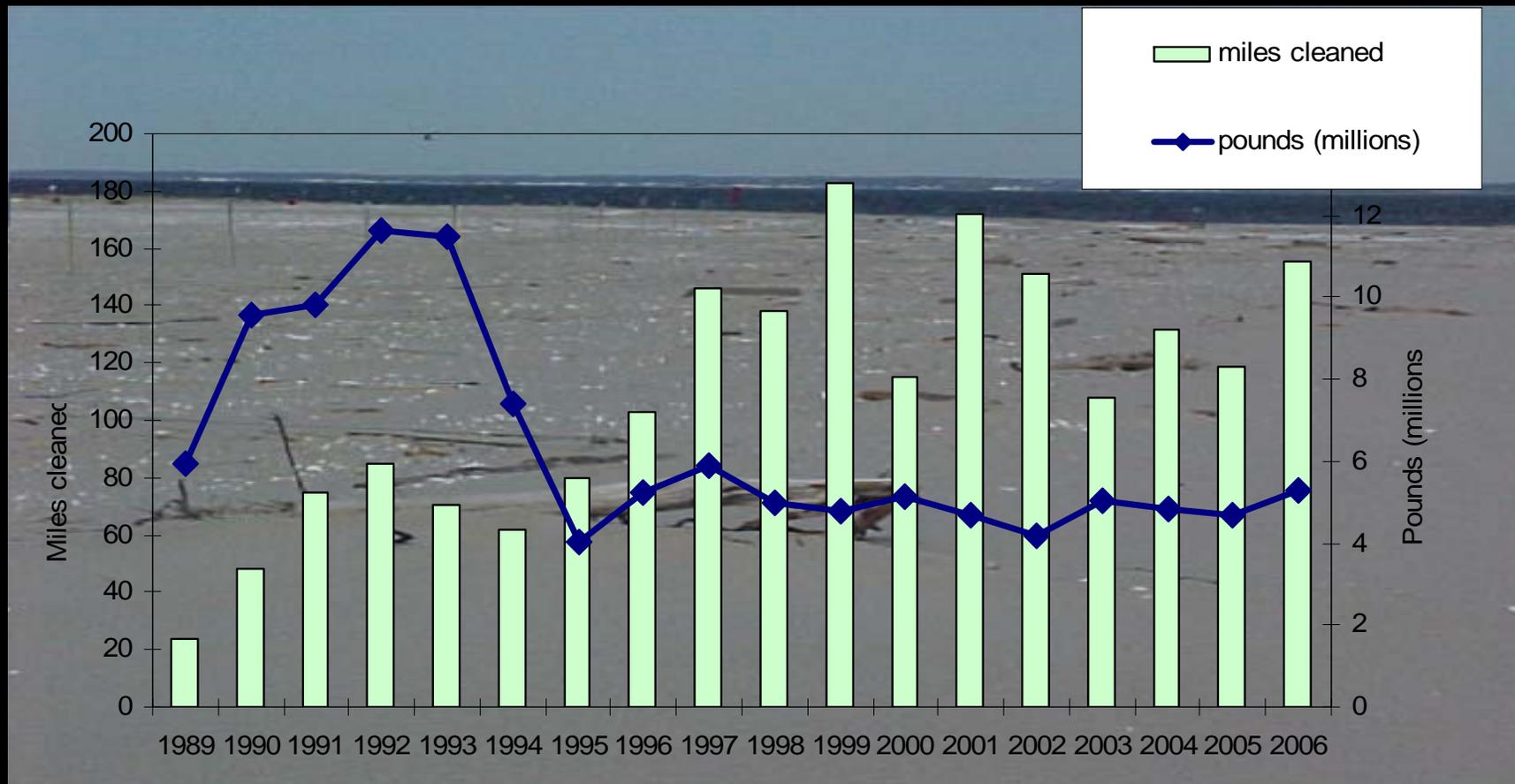
Tree parts and beverage
containers are recycled.



Lumber and garbage is landfilled.



Miles and pounds 1989 to 2006



US Army Corp of Engineers



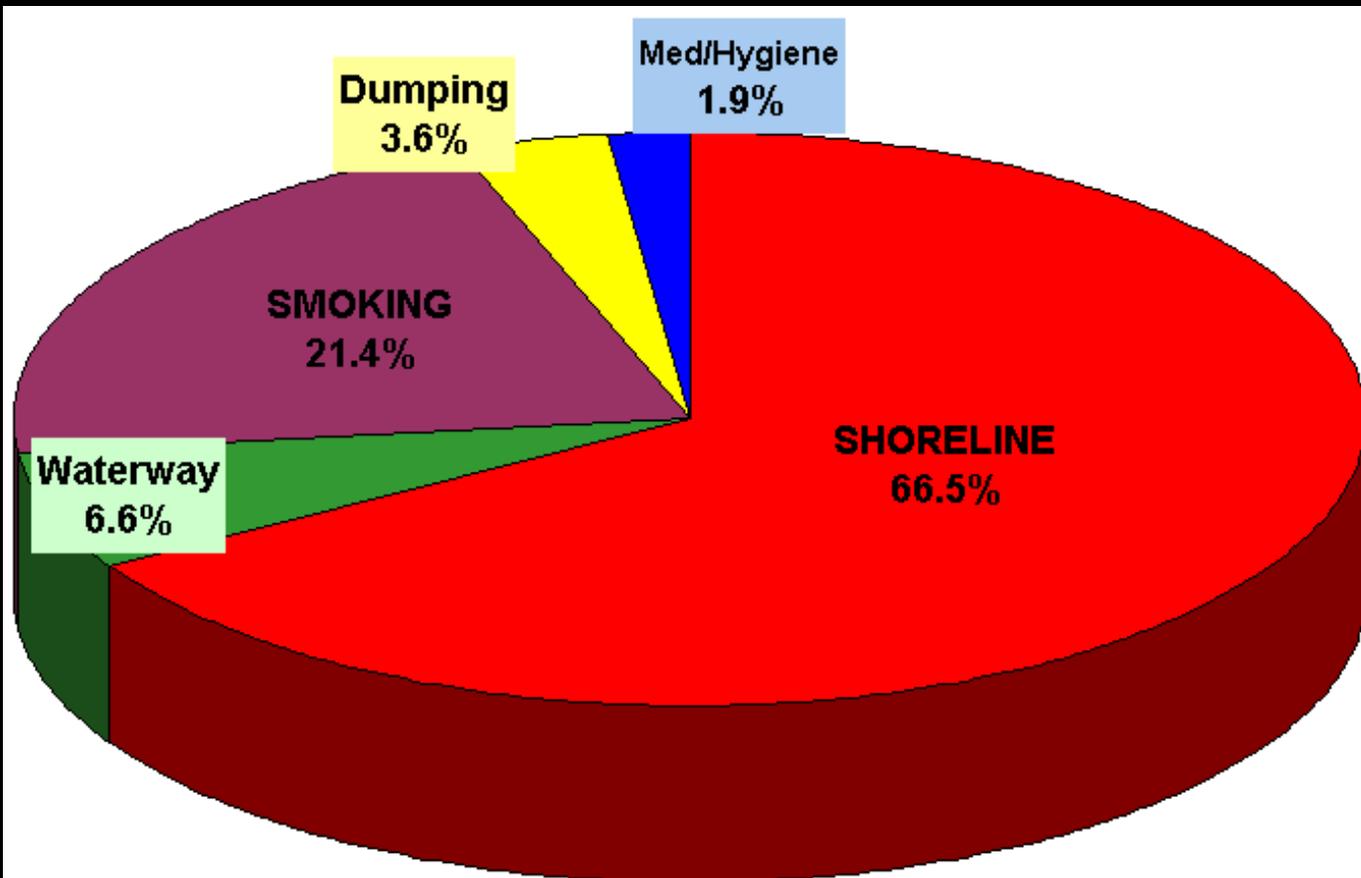


Adopt A Beach

2 beach cleanups each year

~ 1000 volunteers/cleanup





Adopt A Beach

2006 Debris Source Data

Funding Sources



Up to \$200K from the sale of the Shore Protection License Plate



~ 280K each year from annual EPA BEACH grants – 90% is passed through to counties

GOAL

Cooperative Coastal Monitoring

Clean Shores

and

Adopt A Beach:

Clean and healthy beaches!



New Jersey Department of Environmental Protection
Division of Watershed Management
Office of Watershed Education, Estuaries & Monitoring



www.njbeaches.org

1-800-648-SAND



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