FLOATABLE WASTES
AND THE REGION'S BEACHES:

ANSWERS TO SOME
COMMON QUESTIONS

Developed by
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PREFACE

The summers of 1987 and 1988 have left many lingering questions in the minds of our region's citizens about the state of our waters and beaches. This booklet is an attempt to answer some of the most frequently asked questions about floatable wastes and beach wash ups. We have printed these questions and answers in a handy, pocket-size booklet to be read by anyone interested.

The questions come from many sources. Some were solicited from people we did not know; some were solicited from friends and relatives. Some came from the dozens of phone calls and personal inquiries many of us have received since last summer. These questions were then brought to a meeting of people familiar with the problems related to floatables, who developed the answers together. The first draft was then distributed to all the original contributors plus several additional people who were not at the meeting. The comments and additions from first draft readers were then incorporated into the final draft.

The assistance of all contributors, listed on the following page, is greatly appreciated.

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1. DEFINITIONS AND GENERAL INFORMATION

Typical assortment of floating garbage and trash

WHAT ARE "FLOATABLES"?

"Floatables" are buoyant waterborne waste materials and debris. Typical floatables include materials such as wood, plastic items, sewage-related debris, tarballs, fishing gear, garbage and trash.

WHAT IS THE COMPOSITION OF FLOATABLES ... HOW MUCH IS SEWAGE-RELATED MATERIAL AND HOW MUCH IS GARBAGE AND TRASH?

Wood (drift wood, dunnage, wood from deteriorating piers and ships) constitutes the greatest percentage of floatable waste both by weight and volume. Garbage and trash represent the next greatest percentage of the floatable load. Sewage-related wastes (grease balls, tampon applicators, condom rings, diaper liners) are of lesser weight and volume but, because they are particularly aesthetically displeasing, they are highly noticeable.

Plastics, especially bags and polystyrene cups, represent a growing percentage of the total municipal solid waste stream and floatable wastes. Medically related waste in 1988 accounted for less than 1% of the total floatable load by count, as well as by weight and volume.

WHAT DOES THE PRESENCE OF FLOATABLES IMPLY ABOUT POLLUTANTS THAT CAN'T BE SEEN IN THE WATER?

In general, at ocean beaches, there is no correlation between floatable wastes and particulate or dissolved pollutants. Floatables can be present in the absence of other pollutants or may be absent when other pollutant levels are very high.

If sewage treatment is bypassed (as a result of stormwater run-off causing the treatment plants to overflow) or the plant has a breakdown, it can be expected that there will be a correlation (high levels of coliform bacteria as well as floatables). This co-occurrence is most likely in coastal areas nearest the overflowing treatment plants. However, in open coastal waters, given the dilution capacity of marine systems and the die-off rates of pathogens, water quality is generally good even when a wash up resulting from

sewage treatment plant bypassing occurs.

Water quality measurements are taken frequently in bathing waters to assure that public health standards are maintained. In the 1976 wash up, in most of the 1988 wash ups on Long Island, and historically, bathing water quality in the region has remained very good.

WHAT DOES IT MEAN WHEN A BEACH IS CLOSED?

Beaches may be closed to swimming or to both sunbathing and swimming when pollutants or objects that might present any potential health hazard to beachgoers are discovered in the water or on the beach. Beaches may also be closed for maintenance.

WHAT ARE MEDICAL WASTES?

Medical wastes are generally understood to be those wastes derived from patient care and, in particular, those that have been in contact with body fluids or which consist of high concentrations of organisms that cause human disease.

Medical wastes include such items as needles, syringes, scalpels andother sharp objects (called "sharps"); bandages; material discarded at the time of surgery or the delivery of a baby; cultures from medical labs; human organs and tissues; bulk blood and blood products; waste from rooms of patients; I.V. bags; tubing; and medical catheters. Hospitals generate most of these wastes -- 85-90% by weight according to two recent surveys. The remainder is generated in many thousands of doctor, dentist, and veterinary offices; medical clinics; surgery centers; and at home. The items used in all of these places are similar to those used in hospitals.

It is important to recognize that only a small fraction of these wastes is considered "infectious wastes" by most definitions, which vary from municipality to municipality and from state to state.

HOW DO HOSPITALS DISPOSE OF THEIR WASTE?

Hospital wastes are categorized as follows:

1. Low-level radioactive waste
2. Hazardous chemicals
3. Infectious waste
4. Non-infectious patient care waste
5. Remainder (similar to municipal solid waste, e.g., food service and office wastes).

Wastes in the first two categories are controlled and disposed of in accordance with the Nuclear Regulatory Commission and the U.S. Environmental Protection Agency (USEPA) and do not enter general waste streams.

Most of the attention by the media on beach wastes has involved infectious and non-infectious patient care wastes. Infectious waste, which may be defined differently by different state and county agencies, is put into red bags and designated as infectious medical waste. The only exceptions are sharps (needles, syringes and scalpels, and other items capable of causing punctures), which are supposed to be disposed of in non-penetrable containers.

Red bags and non-penetrable containers are most commonly disposed of by incineration. Incineration can either occur at the hospital's own facilities (most common) or at facilities off-site. For off-site incineration, this waste is hauled by specially regulated haulers.

Non-infectious waste is normally put in bags (not red) and treated like normal household waste. Most medical waste is not capable of transmitting diseases during the course of disposal.

IF I THROW GARBAGE FROM MY BOAT AT SEA, WILL IT BE CARRIED OUT TO SEA OR BACK TO LOCAL BEACHES?

There is a high probability that if you throw floatable debris into the ocean, it will find its way back to one of our local beaches because of the prevailing nearshore winds and currents. This is especially true in the summer. If it does not wash up on a local beach, it may wash up on another beach, perhaps as far away as Europe.

It is illegal to throw whole garbage into the water from boats within 12 miles of shore; it is illegal to discharge chopped garbage into the water within three miles of shore; and plastic disposal is prohibited at sea, no matter how far offshore.

CAN FLOATABLES BE REMOVED FROM THE WASTE STREAM? AT WHAT COST?

Floatables in sewage are routinely removed at sewage-treatment plants at reasonable cost. However, removing floatables from combined sewer overflows (CSOs) and from storm sewers before their points of discharge involves a multi-million dollar commitment on the part of New York City and other local municipalities faced with similar problems. New York City's Department of Environmental Protection has initiated just such a project, though the magnitude of the problem makes it a long-term effort. There are approximately 500 CSOs in the greater New York-New Jersey metropolitan area.

The most cost-effective means of eliminating the majority of debris from storm sewers (and, therefore, from CSOs) is by reducing litter through people improving their waste disposal habits. Improved street cleaning is the next most cost-effective way of eliminating floatables from storm sewers.

WHAT ARE BIODEGRADABLE PLASTICS?

All plastics are degradable, given enough time. That is, they are subject to environmental degradation by such environmental processes as sunlight, rain, and living organisms. Modern technology is being used to make enhanced degradable plastics, that is, those in which additives in the plastic accelerate the degradation process.

There are two types of enhanced degradable plastics: (1) biodegradable and (2) photodegradable. Biodegradable plastics can be defined as those that disintegrate under environmental conditions, where the primary mechanism of degradation is through the action of microorganisms such as bacteria and algae. The process is the same for photodegradable plastics, but the mechanism is different -- the primary mechanism of degradation is from sunlight.

WHAT ARE THE END PRODUCTS OF BIODEGRADATION AND PHOTODEGRADATION? ARE THESE END PRODUCTS POTENTIALLY MORE OF AN ENVIRONMENTAL PROBLEM THAN FLOATABLES?

Currently available biodegradable plastics commonly contain varying proportions of corn starch. This corn starch is utilized as a carbon source for microorganisms yielding a weakened plastic film full of holes that ultimately is physically broken down into increasingly smaller plastic particles by abrasion. If the plastic particles are in a marine environment, they will continue to float until they are either ingested by marine organisms or undergo further long-term microbial degradation.

Photodegradable plastics contain chemicals that cause the plastics to gradually become brittle in sunlight, thus making the plastic easier to break down physically.

The environmental effects of these small plastic particles remaining after degradation are largely unknown. However, predicted effects might include obstruction of digestive systems

of small organisms. The benefit of plastics degrading more rapidly, however, is that the probability is decreased for entanglement of and ingestion by larger marine organisms such as birds, mammals and turtles.

2. SOURCES AND MECHANISMS OF WASH UPS

New York City street litter

WHERE DO FLOATABLES COME FROM? IS GARBAGE BEING ILLEGALLY DUMPED, AND IF SO, WHO PATROLS?

Some of the garbage that washes up on our beaches is deliberately dumped, but most is inadvertently lost in municipal garbage handling. That is, when garbage is transferred from trucks to barges and from barges to the Fresh Kills landfill (New York City's only landfill, which is on Staten Island), some garbage escapes into the Hudson-Raritan Estuary and is carried into the New York Bight. Once there, winds and currents may carry it to our beaches. Steps have been taken to monitor and control these breakdowns in municipal garbage transfer.

Other trash that washes up on our beaches begins as street litter in New York City and other municipalities. That street litter, if left uncollected, can be washed into storm sewers and make its way to harbor and ocean waters. In many parts of the New York metropolitan area, street litter is washed into combined storm sewer outfalls (CSOs) where it is mixed with wastes from domestic sewers. During moderate rains these

combined wastes often enter harbor waters without any skimming or treatment. The magnitude of this problem is such that it requires extensive and expensive remediation.

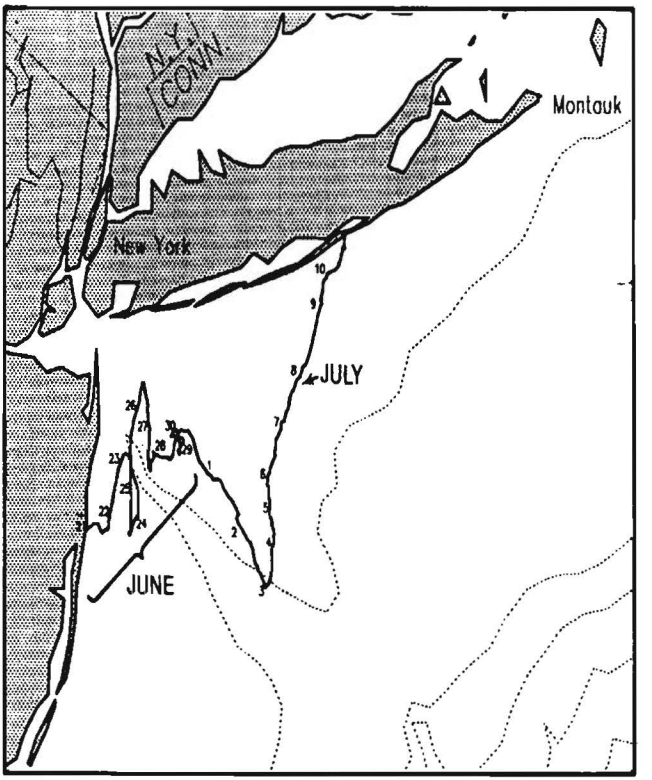
A certain amount of trash is discarded by boaters and left on the beaches by beachgoers. Once on the beach, trash is likely to become water-borne because of waves and tides. If uncollected, it can be redeposited on the beach and refloated again and again.

Steps are being taken to educate the beach-going and boating public about the importance of stowing their trash. Parks and beach personnel will monitor recreational areas for debris, and clean-ups will occur on a regular basis.

Park officials and beach operators patrol beaches, bay constables patrol marinas, and local police patrol the streets. There are fines for littering, but because this region is so populous, it is very difficult to enforce littering laws. Ultimately, people must patrol their own actions.

IS GARBAGE DUMPED AT SEA?

There is no legal dumping of garbage in the ocean by any U.S. municipality. In fact, this has been illegal in our area since 1934 when New York City was sued in the Supreme Court by New Jersey for disposing of garbage at sea. The only intentional dumping of garbage in the ocean is from recreational and commercial boats and ships, and there are strict limitations on how and where this can be dumped.



Hindcast of transport of floatable material assuming a stranding on Smith Point, Long Island 10 July 1988. Any floatable materials north of this line, would be blown onto Long Island beaches.

IF MOST OF THE FLOATABLES COME FROM NEW YORK HARBOR, HOW DO THEY GET TO LONG ISLAND BEACHES?

The winds and surface wind-driven currents transport floatables out of the Harbor and into the New York Bight (the waters over the continental shelf, east of New Jersey and south of Long Island). If the winds blow persistently from a south-southwesterly direction, such as happened in 1988, floatables in the New York Bight waters can be carried to our south shore beaches. If the winds blow persistently from an easterly direction, such as happened in 1987, floatables in the Bight can be carried to northern New Jersey shores. Similar mechanisms carry floatables into Long Island Sound and onto north shore beaches.

WHAT IS OCEAN DUMPING? DO FLOATABLE WASTES HAVE ANYTHING TO DO WITH OCEAN DUMPING? WITH SEWAGE SLUDGE DISPOSED AT SEA? WITH DREDGING ACTIVITIES?

Ocean dumping refers to the officially sanctioned disposal of sewage sludge at the 106 mile site (a site approximately 100 nautical miles southeast of the entrance to New York Harbor) and dredged material (at a site about six nautical miles off the northern New Jersey coast). Ocean dumping of sewage sludge is scheduled to stop in this region in the early 1990s.

Sewage sludge is mainly water (95%) and the solid organic particles (5%) that sink to the bottom of settling tanks during sewage treatment. Floatables have been screened out during the process. Few, if any, remain in the sludge.

Dredging activities remove sediment from harbors mainly to keep navigation channels open. The dredged material, which is mostly sand and mud, is dumped at sea, used for beach replenishment or disposed of upland, and contains little or no floatable material, although it may contain other contaminants.

DO FLOATABLES COME FROM SHIPS, AND IF SO, HOW FAR OUT ARE THEY ALLOWED TO DUMP?

Some floatables are added to the region's coastal waters from ships and recreational boats. New York City receives about 6,000 commercial ships per year. The new Marine Plastic Pollution Research Control Act of 1987, which complements Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL), went into effect in 1988. This Act prohibits the dumping of plastics anywhere in the world ocean. According to this Annex, commercial ships are not allowed to discard garbage into the ocean within 12 nautical miles of shore.

The U.S. Coast Guard estimates garbage and trash generated by recreational boaters at about 1.5 lbs. per person per boating day. The New York-New Jersey coastal region has an estimated 290,000 recreational boats. Based on data from New Jersey, there may be as many as 15,000 people using pleasure craft in coastal waters each day during the summer months. These boaters generate about 22,500 lbs. of garbage and trash each day, some portion of which is thrown overboard.

ARE WE GOING TO HAVE BEACHES CLOSED AGAIN THIS SUMMER AS A RESULT OF WASTE WASH UPS?

It is possible that floatables will wash up on beaches this and subsequent summers as long as people generate waste. Unfortunately, summertime climatology -- the often persistent southerly winds -- favors the wash up of floatable waste on Long Island's south-shore beaches. However, actions are being taken to reduce the likelihood of floatables washing up on our beaches by trying to better control the major sources of floatables emanating from New York Harbor.

If floatables do wash up on our beaches, most, if not all, public beaches have the capability to quickly remove them. Quick, effective clean up will minimize the need to close these beaches.

The New York Times/Vic DeLucia

Beach Officials Work to Avoid Closings Like Last Year's

A tractor pulling a rake through the sand in Long Beach, L.I., which suffered a 20 percent attendance drop last year after medical waste and other garbage washed up. Beach officials from Long Island to the New Jersey Shore are striving to clean up and hoping for an end to the waste problem. Page B1.

WHY DID SO MUCH WASTE, ESPECIALLY MEDICAL WASTE, SUDDENLY APPEAR ON THE BEACHES LAST SUMMER? WHAT CHANGED?

Wash ups of floatables on beaches are neither a recent, nor a regional, phenomenon. This has been happening all over the world on a regular basis for decades.

The very large wash ups of 1987 (on New Jersey beaches) and 1988 (on New York beaches) are rare occurrences. Prior to this, the last major wash up on Long Island beaches occurred in 1976. A wash up of the extent witnessed in 1988 was extraordinary in that it depended on three factors to precipitate it:

1. a long dry spell, in which litter accumulates on streets and roads, in storm drains, CSOs and in back bays and harbors;

2. a period of heavy rainfall following the dry spell to wash the litter out into coastal waters; and

3. a period of persistent south-southwesterly winds to blow the floatables onto New York ocean beaches (or easterly winds to blow the floatables onto New Jersey beaches).

The breakdown of some sewage treatment plants in late June 1988 was also probably an important factor.

The amount of floatable waste is increasing gradually over time because more people are generating more waste, and more plastic disposable items are included in that waste every year. As population size increases, so does the total waste generated. Disposable medical wastes are also increasing, but still represent a small fraction of the total waste.

Medical wastes represented less than 1% of the total waste washed up in 1988. Despite this small percentage, the public was alarmed by the wash up because such a large quantity of all types of floatable materials had not been seen on beaches in 12 years. Public fear of AIDS also contributed to the alarm. In fact, small amounts of medical waste have been stranded on beaches close to the New York-New Jersey Harbor (e.g., Staten Island) for many years.

Red bag (infectious) medical waste is not known to have been found on Long Island's beaches until recently, and while this represents an even smaller amount of the total waste (a

fraction of the 1% medical waste is infectious), any amount of this type of waste is unacceptable.

What has increased dramatically in the past few years is the cost to dispose of red bag medical waste, a fact which may have prompted some small medical facilities (not hospitals) in the metropolitan area to illegally dispose of this material. Drug addiction and the fear of AIDS has also increased dramatically in the past few years.

HOW DO MEDICAL WASTES GET INTO THE WATER?

First, hospitals do not dispose of waste in the water. The floatable drug paraphernalia and medical wastes that washed ashore were introduced into the marine environment by combined sewer overflows, malfunction of sewage treatment plants, storm sewers, and spills that occur when transferring municipal solid waste from trucks to barges and from barges to the Fresh Kills landfill. Some illegal dumping may have occurred as a consequence of waste haulers dumping materials into sewers, vacant lots and elsewhere to avoid the high cost of disposal. However, this is thought to be a relatively small part of the total amount of medical waste that washed ashore.

The majority of the medical waste found was syringes of the type used by diabetics and drug users (there are over 100,000 diabetics and many more drug addicts in the metropolitan area). Some diabetics and drug users flush their syringes down the toilet, where they are carried into the sewer system and may slip through the treatment process because of bypassing during storms or

treatment plant breakdowns. Drug users are also thought to have disposed of much material in the streets and gutters which are then flushed into CSOs and storm sewers.

3. STATUS OF

LONG ISLAND BEACHES

HOW MUCH FLOATABLE WASTE IS STRANDED ON BEACHES AND IN WETLANDS AND BACK BAYS, WAITING TO BE REFLOATED?

There are large amounts of potentially refloatable material in temporary storage along our region's shorelines, in wetlands and back bays. In general, the amount of floatable waste decreases with distance from New York Harbor, to the east along Long Island and to the south along New Jersey. In the summer of 1987, 1.5 tons of debris were collected along two miles of New York beaches, and 40 tons of debris were collected along 100 miles of New Jersey beaches. Of course, it would be far better to eliminate the primary sources of floatables rather than to have to worry about this material refloating or having to clean the beaches.

ARE LONG ISLAND'S BEACHES "DIRTIER" THAN BEACHES IN OTHER AREAS?

Long Island's ocean beaches are cleaner than many beaches in the southeastern and Gulf Coast states. In Gulf Coast states like Texas, ocean currents, population density, and the offshore oil industry all contribute to beach pollution. The North Equatorial Current swings into the Gulf of Mexico carrying some floatables from great distances and the prevailing winds favor transport of these along with other wastes toward the Texas beaches. On Florida's east coast beaches, floatable pollution reflects high population densities and the large numbers of recreational beachgoers and boaters, commercial boating and the drift from the North Equatorial Current converging with the Gulf Loop Current to form the Gulf Stream. Florida's beaches are also commonly polluted by tar.

Natural beach debris

HOW SERIOUS AN ENVIRONMENTAL PROBLEM ARE FLOATABLES IN OUR REGION ?

The most serious problem caused by floatables is an aesthetic one. Waste floating in the water or stranded on our beaches is repugnant and leads people to the conclusion that our marine environment is dirty and unsafe. Many will choose to stay away from the beaches and will reject seafood caught in these waters, even though the actual threat to public health is exceedingly small.

Floatable wastes pose some danger to marine organisms -- some animals may eat plastic products mistaking them for natural foods, and the plastic can lodge in their digestive tracts, sometimes resulting in death. Examples are turtles ingesting plastic bags which may resemble jellyfish, and fish and birds ingesting plastic pellets. Birds and other animals can become ensnared in plastic bands, six pack rings and fishing line, resulting in mutiliation or death.

HOW DOES THE PRESENT CONDITION OF OUR REGIONAL BEACHES COMPARE WITH THEIR CONDITION 5 YEARS AGO? WITH CONDITIONS 10 YEARS AGO?

The amount of stranded floatables varies from year to year, depending upon meteorological conditions. For example, Long Island beaches received more floatables in 1988 than in previous years, mainly because wind conditions and direction favored the deposit of floatables on these shores.

The amount of floatables in coastal waters and available for stranding has not increased substantially from one year to the next, but the precentage of plastics in these floatables has increased over time. The percentage of plastics in litter left by beach goers has also increased.

Historically, the public has complained of litter and floatables on the beaches. Documentation of floatable debris on area beaches goes back to the 19th century. More recently there was a major wash up of floatable debris on Long Island beaches in June 1976.

The amount of sewage-related floatables has

decreased since 1976 because the volume of raw sewage released to New York Harbor is now about 100 times less. More non-degradable materials have, however, been introduced into the market place, much of which eventually reaches marine waters.

What made 1987 and 1988 different relative to prior years was the concern about medical waste and the perceived threat of AIDS infection. This heightened sensitivity made people more conscious of floatables and may have magnified their perceived abundance. However, it is also likely that the numbers of syringes and other medically related debris increased as a consequence of increased home health care and illegal drug use. It is also likely that the rising costs of medical waste disposal and difficulty that small medical waste generators have had recently in disposing of such waste prompted some illegal dumping. The key to avoiding these incidents, particularly with regard to small waste generators, is to make it easier and less costly to properly dispose of medical waste, not more difficult and more costly.

A selection of summer, 1988 press reports

DID THE MEDIA ACCURATELY REPORT THE BEACH INCIDENTS OF THE SUMMER OF 1988?

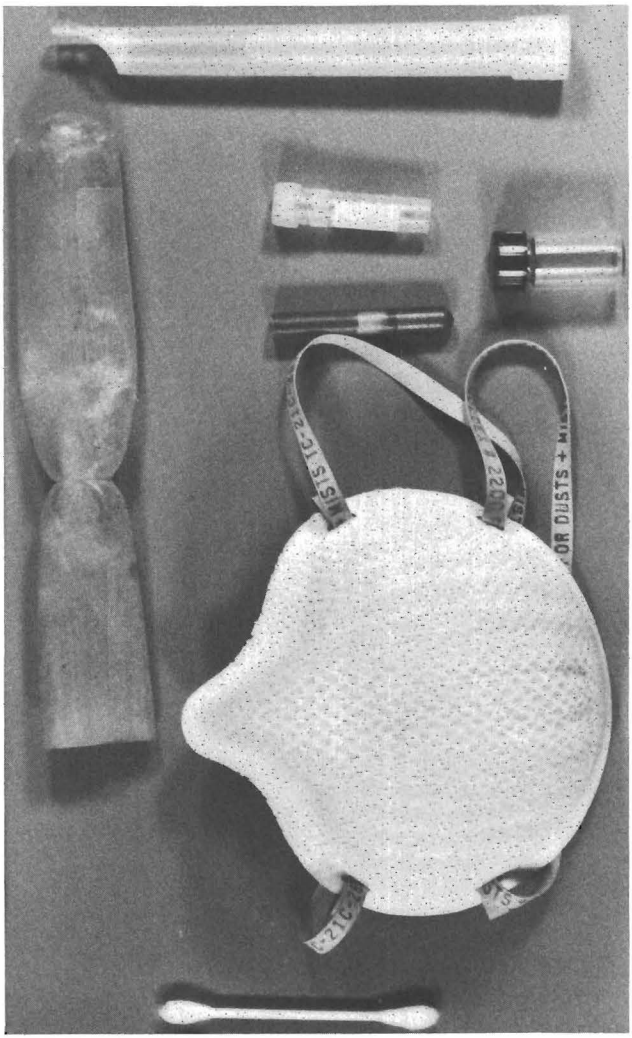
Some news reports failed to give accurate or complete information about 1988 beach conditions. For example, newspaper and radio reports indicated that Long Island beaches were closed but often failed to specify which beaches were closed, which remained open and how long closed beaches remained closed. In fact, most Long Island beaches remained open during the entire summer of 1988. Media reports also often failed to specify how long the affected beaches would be closed. Virtually no media attention was given to the reopening of the beaches.

In some cases the media failed to report the problem accurately in that they did not characterize the floatable waste correctly. There was a particular problem with headlines. Often the headline of a story gave a completely different picture from that offered by the story

itself. These reports and headlines scared people away from the beaches.

On the other hand, media attention was beneficial in that it forced government to act to address the problem. For example, a multi-agency federal, state and municipal floatables action plan, to remove floatables at their sources and quickly from beaches, is a consequence of last summer's media attention.

4. PUBLIC HEALTH AND SAFETY



Non-medical waste. Tube-like item at left is a popsicle container.

Reprinted with permission of the New York State Department of Health

HOW MUCH MEDICAL WASTE WAS REMOVED FROM THE REGION'S BEACHES IN 1988?

The total amount of medical waste removed from all the region's (NY, NJ, CT) beaches over the entire summer was less than 1% of the total debris that washed up.

The media reports of "medical waste" included household rubber gloves, plastic cigar holders, spent firecracker parts, etc. As a result, the public believed that the amount of "medical" waste collected was much higher than it actually was.

Medical waste

Reprinted with permission of the New York State Department of Health

ARE HOSPITALS THROWING MEDICAL WASTE INTO THE WATER?

Hospitals do not throw medical waste into the water. There are many other sources of medical waste including drug addicts, diabetics, home health care services, small clinics, laboratories and offices of doctors, dentists and veterinarians. Most medical waste generators dispose of their waste responsibly. However, these wastes, like all wastes, may accidentally be introduced into coastal waters during the disposal, transport, off-loading, and landfilling processes.

Some of these medical wastes might be attributed to drug users and diabetic insulin users. Needles may have been used on the beach or on nearby pleasure boats by drug users, by diabetics or by these same people in their homes and discarded into the toilet or into the trash.

In the past, some hospital-originated medical waste slated for legal disposal was discarded illegally by carters trying to increase profits. While representing a small fraction of total hospital waste, the illegally-dumped amounts were sometimes relatively large. The new Medical Waste Tracking Act shouldl reduce such

IS IT SAFE TO GO TO THE BEACH ON LONG ISLAND ... TO SWIM IN OUR COASTAL WATERS?

It is most assuredly! Ocean beaches and most Long Island Sound beaches (those exposed to currents) are safe in part because of the cleansing action of ocean currents. Water quality is monitored by the health departments. The few instances of major floatable materials washing ashore have been more of a cosmetic and aesthetic problem than a health concern. Even the dramatic and widely publicized "red bag" or medical waste crisis of 1988, which devastated the tourist economy, did not constitute a health problem.

Bathing beaches in the bays, harbors and Long Island Sound, which are less effectively flushed or subject to periodic sewage contamination, do sometimes have water quality problems affecting swimming and other water contact activities. When there are water quality problems on any beach, the beaches are closed until safe standards are again achieved. Generally speaking, water quality as measured by standard public health procedures is not affected by the presence of floatables.

IS IT MORE RISKY TO MY HEALTH TO SWIM IN THE OCEAN THAN IN A LOCAL SWIMMING POOL?

No, not if you swim at certified ocean beaches. These beaches are well monitored for water quality, which has remained very good over the years.

DO FLOATABLES AFFECT THE QUALITY OF SEAFOOD CAUGHT IN LOCAL WATERS?

Floatable wastes have essentially a zero probability of contaminating fish or shellfish in the region's waters. There is no known method for transmission of disease or contaminants to marine organisms from floatable wastes, and there is generally no relationship between the wash ups of floatables and degraded water quality that might affect shellfish closure areas. However, state advisories concerning seafood should always be followed.

ARE THERE POLLUTANTS OR OTHER FACTORS THAT MAKE SEAFOOD IN OUR AREA UNSAFE TO EAT?

Although seafood can be contaminated by a variety of chemicals (e.g., PCBs and cadmium) or pathogenic organisms in the case of shellfish, which could cause a public health hazard to consumers, most seafood from our local marine waters is perfectly safe to eat.

The safety of seafood products is monitored and regulated by the New York State Departments of Health (NYSDOH) and Environmental Conservation (NYSDEC). In fact, only three species of fish (blue fish, striped bass, and the American eel) have NYSDOH and NYSDEC restrictions limiting the quantities which should be eaten to a half pound per day. The NYSDOH has also recommended that the public not eat raw or partially cooked shellfish.

These agencies can provide you with information on the proper care, handling, storage and cooking of fresh seafood. It can be assumed that fresh local seafood obtained from a legitimate distributor and cooked properly, is safe to eat.

WHY ARE BEACHES CLOSED?

Beaches are closed to ensure public health and safety. The closing of a beach itself does not necessarily mean that there is an actual and immediate threat to the public's health and safety. It might only mean that there is a situation which needs to be evaluated to assess the threat to public health and safety -- a precautionary measure.

For example, a beach may be temporarily closed if a large number of beer bottles are in the surf zone. These pose a physical hazard to swimmers. The beach would be reopened once the beach operator is convinced that all the bottles have been removed.

Beaches may be closed to swimming if there is an unusual occurrence of tar balls and grease balls which may indicate the presence of sewage or if coliform bacteria counts exceed permissible levels.

WHAT SHOULD A PERSON DO IF HE OR SHE SPOTS SEWAGE-RELATED FLOATABLE WASTES? WHO SHOULD BE CONTACTED?

If a person spots sewage-related floatable debris either in the water or stranded on the beach, he/she should avoid contact if possible and notify the beach operator or nearest lifeguard immediately. Should the debris be spotted in an area that is not under the supervision of a beach operator, the local health department should be contacted. (See "Resources" section at end of booklet for regional phone numbers.)

WHAT DO I DO IF I COME IN CONTACT WITH MEDICAL WASTE WHILE AT THE BEACH?

There is no reason to be concerned if you simply touched the waste accidentally without puncturing the skin or accidentally ingesting any of the contents of a vial or syringe. According to the NYS Department of Health guidelines, the procedure to be followed in the event of accidental puncture by medical debris on a beach is as follows: first, the person should notify the beach operator or lifeguard about what happened; next the person should wash the puncture area with soap and water as soon as possible. The injured person should also consult a physician for possible follow-up care as a precaution, although the likelihood of infection is very remote.

HOW LONG DOES THE AIDS VIRUS SURVIVE IN SEAWATER?

This information is not known definitely, but it is known that once the AIDS infected fluids leave the human body, the number of virus particles decreases very rapidly -- to as little as 1/1000th of the original number -- within two to six hours. There would be even fewer particles if the fluid is diluted with seawater. In addition, the lower temperatures of the sea water and the effects of sunlight would likely further reduce the viability of the virus.

CAN I GET AIDS AT THE BEACH FROM EXPOSURE TO MEDICAL WASTE?

A needle and syringe with blood on it or in it, found on the beach, even if it comes from an AIDS patient, has almost no chance of transmitting AIDS. The reason that no one is able to say that there is absolutely no chance to get infected, is that, in medicine, it is extremely difficult to prove that something cannot happen.

AIDS is a group of symptoms caused by infection with a particular virus called Human Immunodeficiency Virus (HIV). HIV is not a hardy virus and survives poorly outside the human body. Even in the human bloodstream, the number of virus particles per cc (5 cc = 1 teaspoon) is very low. This accounts for the fact that even a healthcare worker who is stuck with a needle freshly removed from an AIDS patient has less than a 1 in 200 chance of being infected.

Once the infected blood leaves the body, the number of virus particles falls off very rapidly -- to as little as 1/1000th of the original amount within two to six hours. In addition, in many instances, there will be significant dilution from exposure to

seawater. Although it is possible for a virus to survive 10-14 days in sealed containers, such as bags and vials, the decrease in the number of particles in the first few hours outside the human body is such that infectiousness is extremely low.

WHAT DISEASES CAN I GET SWIMMING IN AREAS WHERE COLIFORM COUNTS ARE HIGH?

Because coliform bacteria counts in seawater are presumed to -- but do not necessarily -- reflect the presence of raw sewage, the diseases that can be acquired when coliform counts are high are from organisms that may be found in human fecal matter. Mostly, these are bacteria, viruses, and parasites that can cause diarrhea.

The diseases are usually mild and go away by themselves, but for the very young, the very old, or those who already have other chronic illnesses, serious side effects can occur. That is why coliform counts are constantly monitored and beaches closed when coliform counts are high. Generally, our ocean beaches have excellent water quality year round.

ARE MEDICAL WASTES THAT WASH UP ON OUR BEACHES DANGEROUS TO BATHERS?

It is highly unlikely that these wastes would be dangerous to bathers. The perception of danger, however, was engendered during 1988 by the presence of syringes, which were identified in the public mind as being potentially AIDS-related. In reality, most of these syringes probably were used by diabetic patients, other home care patients and drug users, only a small percentage of whom are infected with the AIDS virus. Of course, during wash ups of medical wastes, governmental agencies will take a conservative approach, assume that the waste is potentially hazardous and will take all necessary precautions.

WHAT ABOUT OTHER INFECTIONS FROM NEEDLES AND SYRINGES ON BEACHES?

The only other significant risks from needles and syringes are the Hepatitis viruses (B and non-A/non-B), and the risk of these infections from needle puncture is extremely low.

These viruses are transmitted in the same way as HIV, that is, by needle puncture as well as by blood transfusion, from mother to fetus in the uterus, and by sexual activity. In regard to needle puncture, less than 1/2 of 1% of people in the U.S. have blood that is infectious for Hepatitis B. The health care worker that gets punctured by a needle or scalpel containing blood from such a person has about a 20-25% chance of getting infected. But almost all who do get infected (greater than 90%) recover. A small percentage (less than 10%) develop a chronic infection, and of these, less than half have some long-term consequence of this infection. Thus, given the small number of people who are infectious with Hepatitis B, the modest frequency of infection even after a fresh needle puncture, and the small likelihood of chronic illness from an infection, the

overall risk from needle puncture injury for these infections is extremely low.

If a cut or needle stick occurs, there is, as with any cut or puncture, the possibility of getting tetanus or a bacterial infection of the skin with "strep" or "staph". Because of this, careful cleansing of the wound and consultation with a doctor about tetanus immunization or antibiotic is advisable, especially if inflammation occurs.

HOW CAN I FIND OUT WHICH BEACHES ARE CLOSED, WHY THEY ARE CLOSED, AND FOR HOW LONG?

During the summer of 1989, New York State beachgoers can call 800-CALL NYS at any time to receive information on beach closures and the reasons for these closures. In New Jersey call 609-648-SAND. Beachgoers can also call the beach they plan to attend.

5. EFFECTS ON TOURISM

TO WHAT EXTENT DID FLOATABLES AFFECT BEACH ATTENDANCE ON LONG ISLAND IN 1989?

Floatables on the beaches and associated public perception cut beach attendance drastically. According to the New York State Office of Parks, Recreation and Historic Preservation, annual attendance at state park beaches on Long Island dipped from 17.5 million in 1987 to only 12.1 million in 1988. This was the lowest turnout in 20 years. It was even lower than the 12.8 million visitors recorded during the summer of 1984, which was characterized by 12 weekends of rain.

CAN FLOATABLES CAUSE SIGNIFICANT DAMAGE TO THE LONG ISLAND ECONOMY?

Yes. Floatable wash ups can seriously impact Long Island's tourism industry. The immediate effect would be experienced at beach-related tourist facilities such as beachfront hotels, motels, restaurants, and recreational facilities. However, the ultimate economic impact would be much broader. Fish caught in local waters would be rejected by consumers on Long Island and in the New York Metropolitan Region. This would affect both the fishing and restaurant industries. Other tourist-related industries would also experience revenue losses. These include taxi companies, bus charter transportation, ferries, sightseeing and excursion boats, air transportation, travel agents and tour operators, boat dealers and suppliers, recreational vehicle dealers and commercial sports facilities, among others.

The total economic loss could be significant because tourist-related payrolls on Long Island totalled $1.19 billion in 1987. This includes $494.7 million in payrolls by restaurants and other food service businesses, and $64.4 million in payrolls by hotels, motels and tourist courts.

TO WHAT EXTENT CAN THE FLOATABLES PROBLEM AFFECT BUSINESS TRAVEL TO LONG ISLAND?

Long Island has only recently become a major competitor for business conventions. Whereas Long Island's lodging industry was once dominated by modestly-priced tourist hotels and motels, it has now added new luxury hotels and conference centers oriented to the business traveler. In 1988, four new hotels with a total of 852 rooms opened on Long Island. However, the weakness in leisure travel, a direct result of the floatables scare, is likely to spill over into the market for business travel.

Long Island's attractiveness as a convention site is partly based on the proximity of its beaches. Thus, repeated floatables episodes could lead to a spate of underutilized hotel rooms.

6. SOME SOLUTIONS TO ALLEVIATE THE PROBLEMS

WHAT'S BEING DONE TO ALLEVIATE THE FLOATABLES PROBLEM?

The U.S. Environmental Protection Agency has established an inter-agency task force to reduce floatables that enter the environment and to provide for their removal from the Hudson-Raritan Estuary. The activities already initiated include the following:

* Helicopter surveillance is routinely carried out to locate floatable slicks and report them.

* Nets now cover garbage barges to reduce the amount of garbage that may spill into the marine environment during transport.

* Skimmer boats are being used to pick up floatables that "escape" at the Fresh Kills landfill on Staten Island.

* Floating booms are now used at Fresh Kills landfill and at transfer stations to contain any material that may be spilled into the water.

* The Army Corps of Engineers is regularly collecting floatable wastes in the Hudson-Raritan Estuary.

Other steps also being undertaken by New York State and New York City are:

* Beach operators are required to clean

beaches daily.

* Special beach cleaning equipment has been purchased by the New York State Office of Parks, Recreation and Historic Preservation and will be available for Long Island beach cleanups.

* Beach operators are being taught to identify and handle medical waste.

* Beach operators and the State Office of Parks and Recreation are working on an information network to notify each other of pollution events.

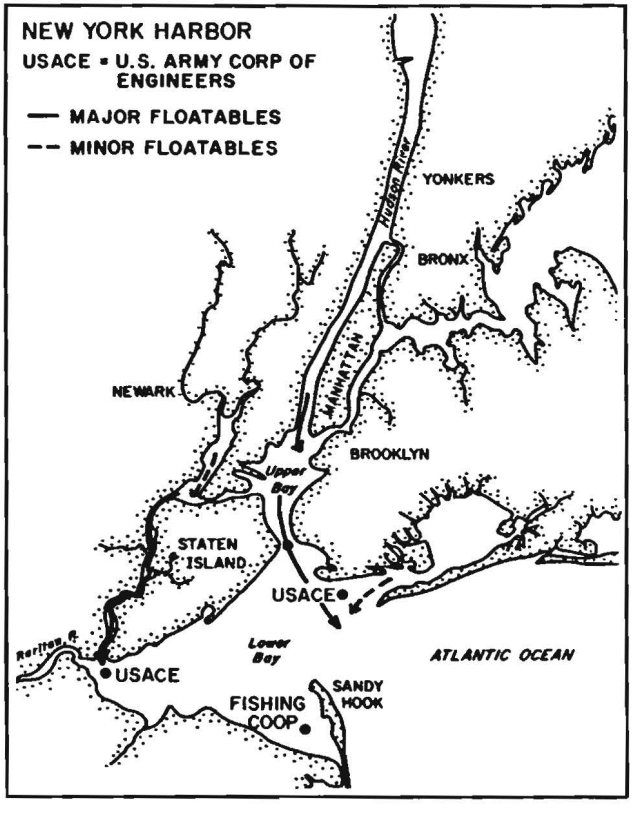
* New York State Department of Environmental Conservation (NYSDEC) has set up an inter-agency floatables information network.

* Stricter penalties for illegal dumpers have been enacted.

* Two million dollars in state funds have been set aside for enforcement of new laws pertaining to marine dumping.

* The NYSDEC and New York Sea Grant Institute have a number of educational efforts to educate boaters and the general public on the importance of preventing waste from entering our waterways.

* CSO abatement is in the planning stages.



Potential floatable cleanup sites in New York Harbor. (Redrawn with permission from USEPA, Region II.)

Although efforts are ongoing, there is no guarantee that the floatables problem will end. CSO abatement and upgrading sewage treatment plants are expensive and not likely to be completed within the near future. These are major contributors to the problem, but not the only contributors. Until we, as individuals, take greater responsibility for our own activities, litter and all its concomitant problems will be with us.

WHY CAN'T SOMETHING BE DONE AT THE SEWER OUTFALLS TO CONTAIN FLOATABLES?

Efforts are being made at a number of NYC sewage treatment plants to install screens and booms to collect floatables. At storm sewers and combined sewer overflows (CSOs), however, the volume and velocity of effluent is so great during storms that an effective screening system is difficult to maintain. Even if screens were effective, it would be difficult to clean them after storms. During low flow conditions, floatables are usually very effectively removed at properly operating sewage treatment plants. Some small communities, particularly in New Jersey, are purposely flushing their storm sewers prior to the beach season to eliminate floatables stranded in them.

The long-term plan for dealing with the CSO problem includes construction of holding tanks for the combined storm water and raw sewage effluent. These waters will then be treated by the sewage treatment plants during low flow conditions. Citizens' cooperation in keeping litter off the streets and beaches and in not flushing disposable plastic items down toilets is also important to reducing floatables.

WILL INCREASED RECYCLING DECREASE THE FLOATABLES PROBLEM IN YEARS TO COME?

Recycling will decrease the solid waste stream -- one source of floatables. But the population size is also rapidly increasing, especially near the coast, as is the volume of plastics being used. The volume of floatable wastes, therefore, will always be so large that even major programs of source reduction and recycling will not totally remove these materials from the waste stream. There are other compelling reasons to recycle -- environmental and economic -- and everything should be done to promote recycling at all levels.

HOW CAN I HELP ALLEVIATE THE FLOATABLES PROBLEM?

You can help by:

* Using proper waste receptacles to dispose of wastes.

* Insisting that marinas, beaches, and communities have sufficient receptacles and pick-ups to reduce litter on beaches, streets, etc.

* Not throwing floatable wastes such as tampon applicators and hypodermic needles into toilets.

* Urging our elected officials to provide operation and maintenance funds to agencies to minimize breakdowns of sewage treatment plants and to ensure rapid repair when there are breakdowns.

* Urging increased recycling.

* Reporting violations to the appropriate agencies.

WHY CAN'T SOMEONE EDUCATE THE PUBLIC AND GET THEM INVOLVED?

In the New York-New Jersey region, with its high population density, it is particularly important that the public develop a responsible attitude toward the disposal of wastes. It is a matter of caring -- an attitude that must be developed at an early age. Environmental studies should be an integral part of the school curriculum. The New York Sea Grant Institute and the New Jersey Marine Sciences Consortium have programs and information about the floatables problem. The Waste Management Institute, through the Continuing Education Division of the State University at Stony Brook, offers a certificate program in waste management.

Thus far, the news media have focused efforts on reporting beach closings due to floatables. In the future, it is hoped that the media can be used to educate the public concerning its responsibilities in disposing of solid wastes. Attitudes change slowly. The public must realize that it is in its own self-interest to control floatables and solid waste pollution.

HAS THERE BEEN ANY REDUCTION OF RAW SEWAGE ENTERING THE WATERS OF NEW YORK HARBOR?

Yes. Major improvements have been made in reducing the amount of raw sewage that enters the marine environment from New York City. In 1976, at the time of the previous major floatables episode, about 450 million gallons of raw sewage were discharged every day into New York Harbor and contiguous waters. In 1988 this number had been reduced to between 5 and 6 million gallons per day -- nearly a 100-fold reduction.

These reductions are impressive and important, but the discharge of raw sewage remains a serious problem following rainfall events because of the antiquated combined septic sewer-storm drain system in the metropolitan area.

New York City plans to invest over a billion dollars over the next decade to modify the CSO system to mitigate its adverse effects.

ARE THERE ANY CHEMICALS THAT COULD BE USED TO DISSOLVE FLOATABLES WITHOUT CAUSING ECOLOGICAL HARM?

No. It is not practical to consider using chemicals in the environment to destroy floatables.

COULD BOOMS BE USED TO CATCH FLOATABLES AS THEY DO WITH OIL SPILLS?

Booms are, for the most part, effectively controlling floatables at transfer stations where waste materials are loaded on barges for disposal at the Fresh Kills landfill and also at the landfill. Booms cannot be effectively used in open waters where wave action would override the booms – if, in fact, booms could even be placed given such conditions.

Booms might also reduce floatables to some degree at CSOs or storm sewers. However, the volume and velocity of the effluent may at times be so great that their effectiveness is likely to be limited. Keeping them clear may also be difficult.

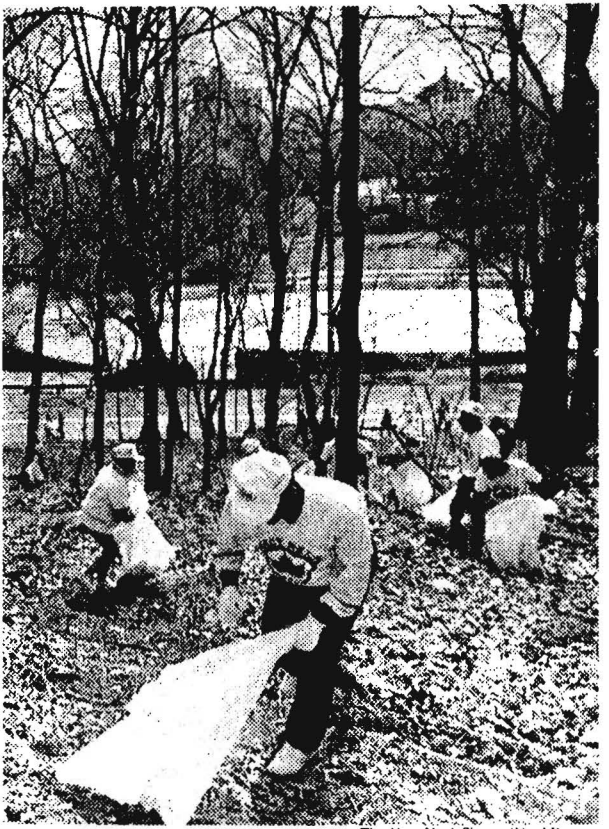
WILL THE FLOATABLE PROBLEM CONTINUE FOR YEARS TO COME, AND IF SO, CAN WE DECREASE THE EFFECTS?

The floatable problem will continue to be a problem for the foreseeable future. In the short term, various governmental agencies have a "Floatables Action Plan" to clean up these materials as they escape into New York Harbor at known sources, including CSO outfalls following major rainstorms. New York City is also trying to improve its solid waste handling practices at garbage transfer stations, while the garbage is in transit in area waterways, and while offloading at the Fresh Kills landfill on Staten Island.

Over the longer term, the City is trying to implement CSO control. More effort is needed to clean streets, to reduce sewage treatment plant breakdowns, and to change people's habits regarding disposal of wastes and use of nondegradable materials.

Economic mechanisms might be used to reward people and businesses for not polluting; e.g., businesses could contribute to a fund that would be used to reward beachgoers who turn in

THE NEW YORK TIMES, FRIDAY, APRIL 14, 1989



The New York Times/Neal Boenzi

In New Program, Drug Treatment and Park Cleanup Go Hand in Hand

Some of about 400 people who are undergoing treatment for drug abuse helping clean up some 40 acres of the North Woods in Central Park yesterday. The participants in Operation Sweep are from the Project Return and Samaritan Foundation rehabilitation programs. The New York City Parks Department furnished gloves and trash bags for the effort. The cleanup ended with a picnic at the Great Hill.

sacks of floatable trash.

If all the 20 million people who inhabit our coastal region begin to take greater responsibility for their habits with regard to littering, a major problem could be significantly reduced.

WILL CLOSING THE NEW YORK CITY LANDFILL REDUCE THE FLOATABLE PROBLEM?

New York City has only this one landfill left, the Fresh Kills landfill on Staten Island. It is the largest landfill in the world at over 4,000 acres and has a projected lifespan of only another 15 years. Garbage and trash are taken from New York City to the Fresh Kills landfill by trucks and by barge. During transfer to and from barges and during transit, some of the material gets loose and enters the marine environment.

Better handling techniques during transfer and transit to the Fresh Kills landfill should reduce the amount of floatable debris in the environment. Closing the landfill also should reduce the amount of floatable debris from this source, but the waste will have to go somewhere. Depending upon what option is selected following closure of the landfill in about 2005, the problem could either be reduced or multiplied.

Landfill operation

WHAT IS BEING DONE WITH THE FLOATABLES THAT ARE FOUND ON THE BEACH?

The non-medical wastes are cleaned up by beach personnel and then handled as normal solid waste. Medical wastes are separated and taken to designated disposal sites according to State Department of Health guidelines for disposal of medical wastes.

WHAT ARE THE PROPER WAYS TO DISPOSE OF HOUSEHOLD MEDICAL WASTE?

The type of medical waste that requires special disposal is sharps (needles and syringes), largely used by diabetics on insulin and kidney failure patients undergoing dialysis. In addition, there are patients receiving home intravenous antibiotics and other drug treatment delivered by home health care agencies.

It is wrong to dispose of needles and syringes down the toilet or into storm sewers. For those who are cared for by home health care organizations, it is reasonable for that organization to take responsibility for disposal. At present, we can try to assure that, by disposing of sharps in the containers recommended, residential waste handlers are protected from injury. For bulk liquids or bloody liquids, such as material derived from dialysis, disposal into the toilet is appropriate. Most other medical waste generated in the household can be disposed of in the normal fashion for garbage.

DO BIODEGRADABLE PLASTICS REALLY SOLVE THE PROBLEM OF FLOATABLES?

The replacement of some conventional plastic products with enhanced degradable plastics will not likely solve the floatables problem. Most plastic products cannot be replaced by photo-degradable or biodegradable plastic products or by paper products because some materials require long-term storage in durable containers.

Biodegradable plastics have a controlled lifetime, but may not deteriorate rapidly enough to avoid being introduced into coastal waters. However, since they have controlled lifetimes, they may help to alleviate problems associated with persistent floatable plastics such as the entanglement by and ingestion of plastic items by marine animals. Over the long term, enhanced degradable plastics may further deteriorate to where they may no longer be recognized as an aesthetically displeasing item.

Use of plastics in medicine has contributed to safer, more effectively run hospitals. Replacing these items with glass, for example, would add both to the cost of medical care and to the potential accidental transmission of disease.

CAN THE PLASTIC PRODUCTS THAT ULTIMATELY BECOME FLOATABLES BE REPLACED BY OTHER PRODUCTS?

Although some plastic products can be replaced by biodegradable products or by paper products, most of them cannot be. For example, plastic or polystyrene drinking cups used on beaches can be replaced by paper ones. On the other hand, plastics used in medically related activities have contributed to safer, more effectively run hospitals. Replacing plastics for medical use with glass, for example, would contribute both to the increased cost of medical care and to the potential accidental transmission of disease.

Thus, many of the plastics which ultimately end up as floatables cannot, in any simple way, be replaced by other products. However, the floatables problem is not only a result of the use of certain plastic products, but also a result of the improper disposal of wastes.

7. REGULATIONS AND GOVERNING AGENCIES

ARE BEACHES BEING MONITORED? ARE THEY BEING CLEANED UP AT REGULAR INTERVALS?

Public beaches are constantly monitored by beach operators and their staffs. These people follow strict guidelines established by the New York State, New York City and Suffolk, Nassau and Westchester County Departments of Health, and the New York State Office of Parks, Recreation and Historic Preservation. Most beaches are cleaned daily; others are cleaned as needed.

WHO IS RESPONSIBLE FOR ENSURING THAT OUR BEACHES ARE SAFE FOR BATHING?

In New York State, the responsibility for certifying that waters are safe for bathing rests ultimately with the New York State Department of Health (NYSDOH). The NYSDOH assigns this responsibility for operational purposes to county and city health departments and works in partnership with them to carry out this responsibility.

WHO CLOSES BEACHES?

Beaches can be closed for a variety of reasons, including public health or safety concerns. The initial responsibility usually lies with the beach operator. This is particularly true in the case of floatables. Ultimate responsibility for closing and reopening beaches in Nassau and Suffolk Counties rests with the County Departments of Health. In New York City the New York City Department of Health and Department of Parks share this responsibility. If there is a reason to suspect that public health or safety might be threatened, the responsible department of health may order a beach closed until the health threat no longer exists. The department of health may order the beach closed for swimming only, or for all recreational usage. If the beach is closed only to bathing, the public may still enjoy beachcombing, picnicking, nature study, and other beach-related activities.

Beaches may also be closed for health or safety reasons by the jurisdiction that owns or controls the beach (town, village, county, state, federal, or private), or for reasons not related to health such as maintenance (sand replenishment, restroom repairs, construction, etc.).

WHAT ARE THE REGULATIONS OR CONTROLS THAT CURRENTLY EXIST TO GOVERN MEDICAL WASTE DISPOSAL?

New York State law and regulations require that medical waste be properly disposed of. Generators of large quantities are required to contract a hauler who is licensed by the state. Infectious medical waste must be placed in "red bags" that are incinerated. Small quantity generators (less than 50 lbs. per month) used to be, but are no longer, exempt from packaging and hauling regulations. The major difference now is that such small generators may transport their infectious waste to another place, for example a hospital, which in turn contracts with a regulated hauler. However, the waste must still be labelled and packaged properly. New York State and New Jersey laws provide stiff criminal and civil penalties for illegal dumping of medical waste.

Medical waste is also the subject of a two-year pilot tracking project initiated by the Federal government. This is called the Medical Waste Tracking Act (MWTA) which was passed by

Congress in late 1988 and becomes effective in June 1989. Waste handlers will be required to carry manifests showing the source of the infectious waste and certifying its proper disposal.

WHY CAN'T THE FEDERAL GOVERNMENT GET INVOLVED IN REDUCING THE PROBLEM OF FLOATABLES POLLUTION?

The Federal government is very much involved. During the 1976 event, the National Oceanic and Atmospheric Administration, with the U.S. Environmental Protection Agency (EPA) and the U.S. Coast Guard, led an effort to investigate the sources and mode of transport of floatable materials to coastal beaches. Many of the recommendations made then are now elements of the EPA short- and long-term floatable action plans.

The EPA, Corps of Engineers, and Coast Guard are all involved in implementing the existing surveillance and clean-up program in the Hudson- Raritan Estuary. The EPA is also monitoring coastal waters for floatables, and will work with NOAA and the Coast Guard to track large floatable slicks if observed in coastal waters. The Corps has for many years been removing driftwood, dunnage, and other floating debris from harbor waters.

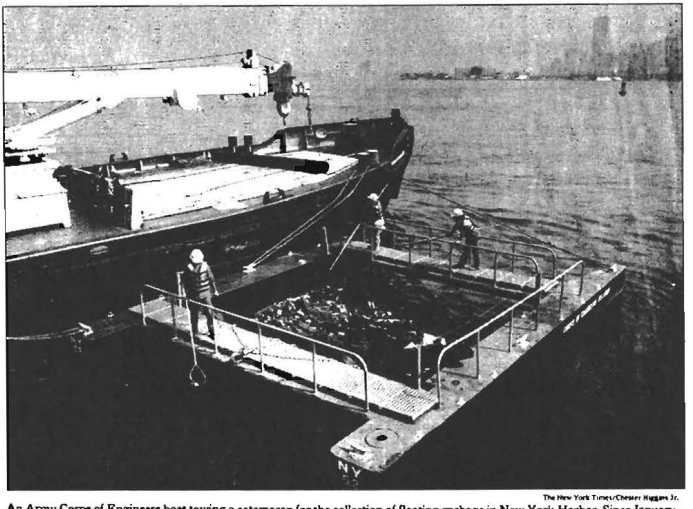
In the longer term, EPA is in the process of

The New York Times

Metropolitan News

NEW YORK, NEW JERSEY, CONNECTICUT / TUESDAY, MAY 23, 1989

Beach Armor Rolls Out — Big Rakes and Catamarans



The New York Times/Chester Higgins Jr.

An Army Corps of Engineers boat towing a catamaran for the collection of floating garbage in New York Harbor. Since January, the city has covered its garbage barges with giant hairnets to keep junk bound for the Fresh Kills landfill from blowing off.

working with municipalities to implement CSO abatement programs. NOAA, through the National Marine Fisheries Service, has been extremely active in examining the problem of plastic pollution in the ocean, particularly as it relates to the abandonment of fishing gear at sea and how this gear is adversely affecting marine animals.

The U.S. Coast Guard has been given the task of implementing the provisions of the Marine Plastic Pollution Research and Control Act of 1987 (MARPOL Annex V) in U.S. waters and its ports and harbors. Most of the provisions of the law went into effect on 31 December 1988.

WHO SHOULD BE RESPONSIBLE FOR CLEANUP ... LOCAL GOVERNMENT, COUNTY, STATE?

Routine beach cleanup operations are the responsibility of the beach operator. If a beach is operated by the State, the State is responsible for ensuring that the beach is clean; if it is operated by one of the counties, the county has that responsibility; if it is operated by local government, then local government has the responsibility. The Federal government is responsible for ensuring that beaches under its jurisdiction are clean. Privately operated beaches are the responsibility of the owner-operator. The State is responsible for enforcement of laws regarding illegal disposal of medical wastes.

WHO MONITORS DISPOSAL OF DIFFERENT KINDS OF WASTES?

The disposal of wastes is monitored by a variety of county, state and federal agencies, including:

* New York State Department of Environmental Conservation
* New York State Department Of Health
* County Departments Of Health
* Municipal Sanitation Departments
* Municipal Departments of Environmental Protection

Different agencies monitor different classes of wastes and different environments. The principal agencies involved in monitoring relevant to floatables are listed below.

LEVEL AND ORGANIZATION	MONITORING ACTIVITIES RELEVANT TO FLOATABLES
City	
NYC DEPARTMENT OF SANITATION	Operations at marine transfer stations

NYC Department of Health	Collection of spilled waste
County	
County Health Departments	Water quality: coliform bacteria; closing and opening beaches because of floatables
State	
NYS Department of Health	No direct monitoring activities; issuance of guidelines
NYS Department of Environmental Conservation	Patrol vessel surveillance of harbor waters for slicks of floatables; collecting and investigating evidentiary medical waste found on beaches
Federal	
U.S. Environmental Protection Agency	Helicopter and patrol vessel surveillance of waters for floatable slicks
U.S. Coast Guard	Implementation of the Plastic Pollution Research and Control Act of 1987

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COPIES OF ALL PUBLICATIONS ARE AVAILABLE FOR THE COST OF DUPLICATING

CONTACT MARINE SCIENCES RESEARCH CENTER

9. RESOURCES

Marine Sciences Research Center
State University of New York
Stony Brook, NY 11794-5000
516 632-8700

Waste Management Institute
Marine Sciences Research Center
State University of New York
Stony Brook, NY 11794-5000
516 632-8704

New York Sea Grant Extension Program
Dutchess Hall
State University of New York
Stony Brook, NY 11794-5001
516 632-8730

New Jersey Sea Grant Extension Program
New Jersey Marine Sciences Consortium
Sandy Hook Field Station
Fort Hancock, NJ 07732
201 872-1300

Beach Information and Hotline Numbers
(To find out the beach conditions or to report floatable wastes)

New Jersey:
INFORMATION: 609 648-SAND
ACTION HOTLINE: . . 609 292-7172

New York:
INFORMATION: . . . . . 1-800-CALL NYS
HOTLINE: Suffolk (24 hrs) 516 360-5555
Nassau (Day) . . .516 535-3602
Nassau (Night) . 516 795-0880
New York City . .212-340-4493

10. GLOSSARY

AIDS (ACQUIRED IMMUNE DEFICIENCY SYNDROME) A group of symptoms caused by the infection by a particular virus, the Human Immunodeficiency Virus (HIV).

BEACH OPERATOR The person appointed to oversee beach operations on site.

BIODEGRADABLE PLASTICS One form of enhanced degradable plastics (the other form is photodegradable), using cornstarch or other material in the polymer matrix that microorganisms break down readily into smaller and smaller pieces of plastic. Photodegradable plastics rely on sunlight to break them down.

BLOOD VIALS Glass vials with caps used by medical personnel to hold samples of blood.

COLIFORM BACTERIA Rod-shaped bacteria associated with the gut of mammals. These are the harmless bacteria that are counted in seawater to give an indication of the possible presence of

human feces, which may contain pathogens.

CSO (COMBINED SEWER OVERFLOW) The excess volume of water reaching the sewage treatment plants, usually during storms, which is too large to go through treatment and thus flows directly into coastal marine waters. The cause of this problem is the outmoded sewage system found in the New York metropolitan region and in other old cities that combine septic and storm sewers.

FLOATABLE WASTES Any articles of garbage, trash, litter and septic sewer wastes that float and do not readily break up -- wood, tampon applicators, and plastic cups are all floatable wastes.

FRESHET A flood or overflowing of a river from heavy rains or melted snow.

GREASE BALLS (ALSO CALLED "FAT BALLS") Coagulation of animal and vegetable fats disposed of via kitchen sink waste water.

HIV Human Immunodeficiency Virus, the virus responsible for causing AIDS.

LITTER Trash and debris thrown into streets and roads or left on beaches by people.

MARINE TRANSFER STATION (MTS) A facility where garbage and trash collected by trucks is offloaded to barges for the purpose of transporting the wastes to the Fresh Kills landfill.

MEDICAL WASTE Any wastes that are generated from the care of patients, including non-infectious, infectious, chemical, radioactive, and general waste, such as from food service.

MEDICAL WASTE TRACKING ACT A 10-state program mandated by the federal government requiring physicians, dentists, veterinarians, small clinics, laboratories and hospitals to keep detailed records that follow a particular medical waste from origin to disposal -- much like bills of lading for cargo. New York, New Jersey and Connecticut are required to participate in this program for two years.

METEOROLOGY The science that deals with the atmosphere and atmospheric phenomena; the study of weather and climate.

NEW YORK BIGHT The portion of the ocean over the continental shelf southeast of Montauk Point, on the eastern end of Long Island, and east of Cape May, New Jersey and along the northern New Jersey shore and Long Island shore.

OCEAN DUMPING Waste materials hauled to sea by vessels or barges for the express purpose of disposing of the wastes in the ocean.

PATHOGENS (PATHOGENIC ORGANISMS) Any microorganism or virus that can cause disease.

RAW SEWAGE Untreated sewage.

RED BAG WASTE Infectious medical waste from hospitals and other health care facilities that has been put into red plastic bags to designate it as infectious. This waste is specially handled and disposed of.

SEWAGE SLUDGE The settled material in waste treatment settling tanks, composed of roughly 95% water and 5% solid organic matter derived from waste water.

SEWAGE TREATMENT PLANT The facility at which putrescible matter and floatable materials are removed from waste water and disease-causing microorganisms are destroyed.

SKIMMER BOATS Boats used at sites where garbage is offloaded from garbage barges to the landfill. These boats have a special apparatus to collect the waste material that accidentally falls into the water.

STORM SEWERS Conduits for transporting storm water to a receiving body of water.

WASH UP The stranding of large amounts of floatable wastes on beaches.

11. APPENDIX

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