Characteristics Of Southeast Florida Publicly Owned Treatment Works

With an excerpt from *Looking Seaward: Development of a State Ocean Policy for Florida* by Donna R. Christie, Florida State University College of law, July 1997

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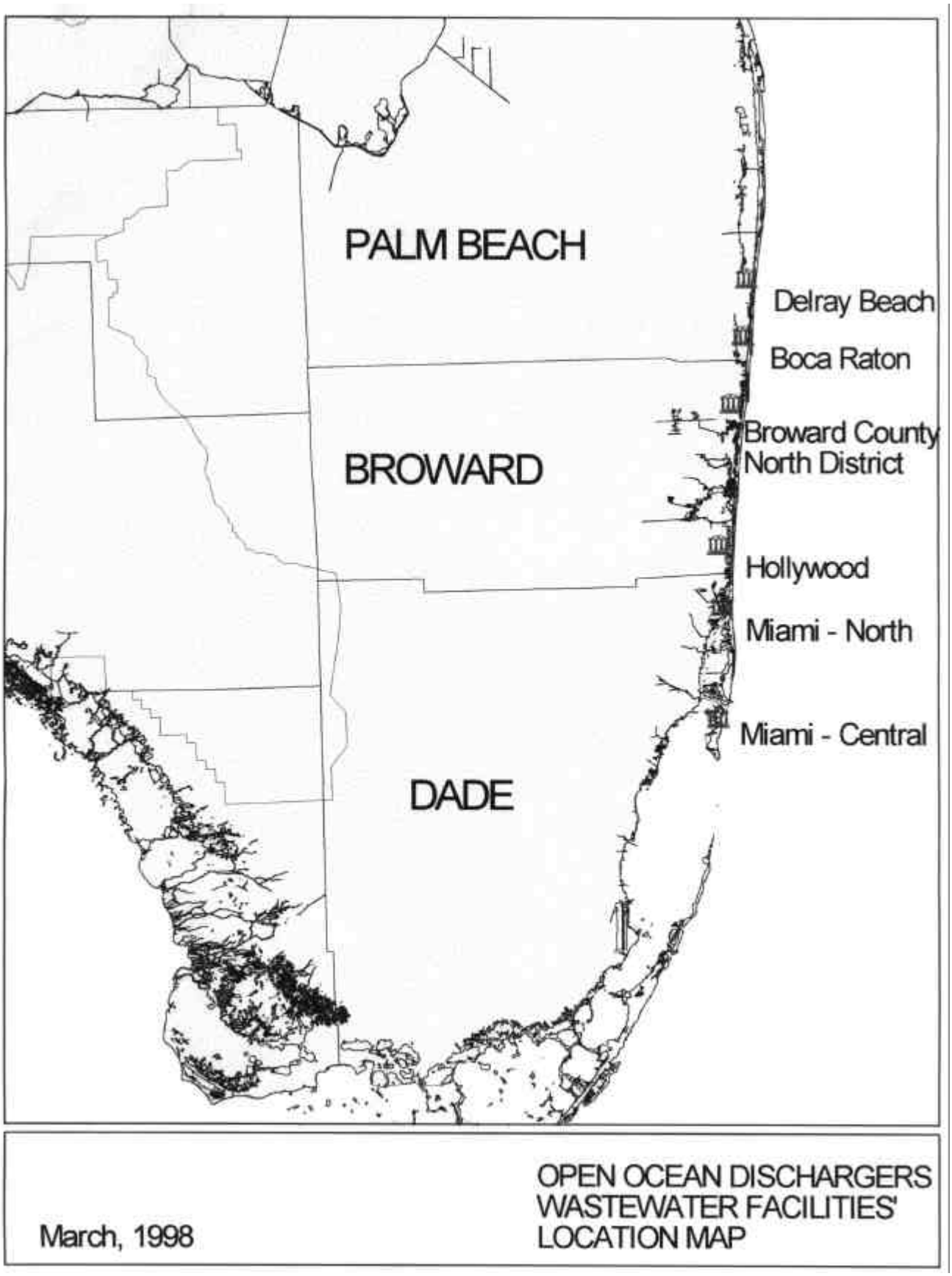
PALM BEACH
BROWARD
DADE
Delray Beach
Boca Raton
Broward County
North District
Hollywood
Miami - North
Miami - Central
March, 1998
OPEN OCEAN DISCHARGERS
WASTEWATER FACILITIES'
LOCATION MAP

CHARACTERISTICS OF SOUTHEAST FLORIDA PUBLICLY OWNED TREATMENT WORKS

	Facility Name					
	M-D Central	**M-D North**	**Hollywood**	**Broward**	**Boca Raton**	**Delray Beach**
Characteristic						
Outfall Pipe:						
Distance (ft)	18971	11091	10098	7052	5016	5297
Off Shore (m)	5730	3350	3050	2130	1515	1600
Discharge (ft)	93.4	96.0	94.4	107.6	90.4	96.0
Depth (m)	28.2	29.0	28.5	32.5	27.3	29.0
S-Single Port M-Multiport	M	M	S	S	S	S
Permitted Discharge Capacity	143 MGD	112.5 MGD	47.5 MGD*	80.0 MGD	17.5 MGD	24.0 MGD
Plan Expansion?	No	Yes**	Yes	Yes	Yes***	No

* This total represents the combined permitted flow for Hollywood, Cooper City, and Town of Davie WWTP's.

** Miami-Dade intends to go to a deep well with 20 MGD of treated effluent. This will allow them to keep their discharge to the ocean at or below 100 MGD.

*** An additional 3.0 MGD of treated effluent is proposed to be disposed of via reuse, 2.5 MGD now goes to reuse.

Table 1 - Characteristics

Note: The Miami-Dade Central outfall is currently permitted by the Environmental Protection Agency's Region IV office. The outfall is located beyond Florida's jurisdictional waters.

CHARACTERISTICS OF SOUTHEAST FLORIDA PUBLICLY OWNED TREATMENT WORKS

	Facility Name					
	M-D Central	**M-D North**	**Hollywood**	**Broward**	**Boca Raton**	**Delray Beach**
1997 Effluent Water Quality Summary						
Parameter						
Total Nitrogen (mg/L)	15.5	12.2	13.2	20.2	10.8	14.1
Total Phosphorus (mg/L)	1.5	1.8	1.5	1.3	1.2	1.1
Fecal Coliforms #/100 ml	2	2	15	10	4	N/A

Table 2 - Paramenters

These facilities are required to meet technology-based effluent limitations known as secondary treatment. Numeric limits for nutrients are not specified as part of secondary treatment requirements. However, as a point of comparison, advanced wastewater treatment (commonly referred to as “AWT”) generally is expected to achieve Total Nitrogen concentrations of 3 mg/L and Total Phosphorus concentration of 1 mg/L.

Background Reading for Small Group Discussion

Re: Ocean-Based Sources of Marine Pollution

**the following material is an excerpt from* Looking Seaward: Development of a State Ocean Policy for Florida *by Donna R. Christie, Florida State University College of law, July 1997.*

POLLUTION CONTROL - IN GENERAL

Florida's estuaries, territorial waters, and open seas are used extensively for waste disposal. Ocean waste disposal can be broken down into two main categories: point source and nonpoint source. *Point source* discharges include industrial and municipal effluents which flow from pipes to the marine environment. *Nonpoint sources* of waste include runoff from urban areas, agriculture, mining, and industrial and construction sites. Ocean dumping, arguably a form of point source pollution, includes the disposal of sewage sludge, industrial wastes, medical wastes, dredged materials, and many other pollutants. Oil and other hazardous materials may enter the ocean by intentional or accidental discharges from vessels or oil platforms. Vessels and oil platforms also contribute to the problem of persistent marine debris by disposal of plastics and non-biodegradable solid wastes at sea.

The dumping of waste in the marine environment affects the beach, water, and ocean floor. The trash which is constantly accumulating on the nation's beaches is evidence of the need to continue to regulate the disposal of waste. During the 1993 coastal cleanup, over 3.1 million pounds of trash were collected and more than half of that was plastic. The Center for Marine Conservation (CMC) has been coordinating these coastal cleanups since 1986 and has successfully monitored the different types of debris found on the coastline. Data cards list 85 debris items in eight categories: plastic, styrofoam, floss, rubber, metal, paper, wood, and cloth. By monitoring what is collected, the CMC was able to generate a list of the items most commonly found on the beaches. These items are called the "dirty dozen":

1) cigarette butts
2) paper pieces
3) plastic pieces
4) styrofoam
5) glass pieces
6) plastic food bags
7) plastic caps and lids
8) metal beverage cans
9) plastic straws
10) glass beverage bottles
11) plastic beverage bottles
12) styrofoam cups

The 3.1 million pounds collected in 1993 is just a sample of the amount of trash on our beaches. If more people had participated in the cleanup, even more waste may have been collected. This figure also fails to take into consideration the pollution generated by industry, municipalities, and other sources which is piped into the ocean or the dredge and fill material deposited by barges. Conservative estimates of wastes discharged directly into U.S. marine waters are in excess of 45 million metric tons per year. It is estimated that 80 percent of that is dredged material, 10 percent is industrial waste, and 9 percent is sewage sludge. Ocean pollution is a major concern which needs to be addressed.

Both federal and state agencies are involved in the regulation and prevention of pollution in Florida's waters. In administering and enforcing the Clean Water Act (CWA), the Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) share responsibility on the federal level. The EPA is the federal government agency primarily responsible for implementing and monitoring those provisions of the CWA which regulate the quality of the nation's water. The Corps has a nondiscretionary duty to regulate the discharge of dredged or fill materials by issuing permits and has authority to enforce permit violations. However, the Corps is required to apply guidelines established by the EPA. The EPA is ultimately responsible for wetlands protection and has authority to seek penalties for

unpermitted discharges of pollutants into United States waters and, after consultation with the Corps, can block or overrule a Corps' decision to issue a permit.

At the state level, the Board of Trustees of the Internal Improvement Trust Fund and the Department of Environmental Protection (DEP) administer policies dealing with pollution of Florida waters. The DEP, in conjunction with the water management districts (WMDs), regulates the water quality aspects of ocean pollution and implements state dredge and fill law. The Trustees' authority relates to resource rights and uses of state sovereignty submerged lands.

THE CLEAN WATER ACT FRAMEWORK

The CWA creates a dual regulatory system for the protection of navigable waters. When first enacted, the Act simply established standards and guidelines for states to use in establishing their own water use categories and water quality standards for those categories. It became the responsibility of each state to maintain water quality within its designated parameters. Because this system was not entirely successful and water quality across the country continued to deteriorate, Congress created an additional nationwide permitting system to implement uniform national pollution standards for effluent discharges from point sources. Rather than focusing on the site specific issue of the quality of a certain water body, the federal effluent limitations reflected in the National Pollutant Discharge Elimination System CNPDES) are based on the extent of technological capability to remove pollutants from discharges with a goal of removing all pollutants.

Section 101 of the CWA sets forth the objectives of eliminating pollutant discharges, encouraging and financing publicly-owned treatment works (POTWs) and area-wide waste treatment, and controlling nonpoint sources of pollution. The declaration of policy also addresses interaction between federal and state regulation:

> It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. ... It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.... Furthermore, Congress encourages public participation in the development, revision, and enforcement on any regulation, standard, effluent limitation, plan, or program related to this topic.

To ensure the goals and policies of Congress are implemented, the CWA requires every point source of pollution be permitted under the National Pollutant Discharge Elimination System (NPDES). Additionally, a state water quality certification is required of all applicants for federal licenses or permits who wish to conduct an activity which may result in any discharge into state waters. States are also required to submit biannual water quality reports. These reports are to reflect:

a) a description of the water quality of all navigable waters,
b) an analysis of the extent to which all navigable waters provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and recreational activities, and
c) an analysis of the extent to which the elimination of the discharge of pollutants and the level of water quality which provides for the balanced sought to be achieved in the previous sentence.

States may administer their own NPDES permit programs upon approval by the EPA Administrator of the state program. However, the EPA retains authority to override a state NPDES permit. Since May 1995, Florida has administered its own NPDES permitting program. This allows Florida to regulate the discharge of numerous kinds of pollutants directly, rather than based on the effect on the receiving water body. Approval of State permitting programs can be withdrawn if it is determined at any time that the system does not meet the requirements or guidelines established by the CWA. To effect such a withdrawal of approval, there must be a public hearing, the State must be notified of the proceedings, and the reason for withdrawing approval must be written and made public.

THE STATE POLLUTION CONTROL FRAMEWORK

Article II, Section 7 of the Florida Constitution requires the abatement of water pollution. Florida's statutory policy regarding state waters is set out in Florida Statutes, section 403.021:

> The pollution of the air and waters of this state constitutes a menace to the public health and welfare; creates public nuisances; is harmful to wildlife and fish and other aquatic life; and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of air and water.

In relation to this observation made by Florida's Legislature, a policy regarding the state's waters has been established:

> It is declared to be the public policy of this state to conserve the waters of the state and to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife and fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses and to provide that no wastes discharged into any waters of the state without first being given the degree of treatment necessary to protect the beneficial use of such waters.

In sum, it is state policy to conserve waters and to protect, maintain, and improve water quality. For those purposes, sources of water pollution must be controlled, regulated, and abated.

Florida has established its own water quality standards and permitting requirements for sources of pollution and has administered its own approved NPDES permit program since May 1995. Pollutant sources have to assure that discharges meet NPDES criteria for pollutant levels in the point source discharges and also will not cause a violation of quality standards in the receiving water body. Florida initiated its own NPDES permit program in order to consolidate the permitting process, provide for more effective and efficient regulation of the discharge of pollutants into waters of the State, and eliminate the duplication of the permitting process. While Florida's NPDES permitting program has come under attack for some backlogging of permits, many fail to take into account the learning curve associated with any new project in which new procedures and regulations are implemented. With time, Florida's NPDES permitting program likely will prove to be a worthwhile investment.

For the purpose of establishing water quality standards, all of the surface waters of the State have been classified according to designated uses as follows:

Class I	Potable Water Supplies
Class II	Shellfish Propagation/Harvesting
Class III	Recreation, Fish and Wildlife
Class IV	Agricultural Water Supplies
Class V	Navigation, Utility and Industrial Use

These water quality classifications are arranged in order of the degree of protection required, with Class I water having the most stringent water quality criteria and Class V the least. Most water bodies are Class III waters. The criteria assigned to each class of water is designed to maintain the minimum conditions necessary to assure the suitability of water for the designated use of the classification. Any petitions for reclassification require public notice and public hearings. A water body may also be designated as an Outstanding Florida Water (OFW) in addition to its above classification. It is DEP policy to afford the highest protection to OFWs and, in general, not allow significant degradation of water quality.

The minimum criteria established for all surface water in Florida, *regardless of class*, is that it should at all times be free of domestic, industrial, agricultural, or other man-induced nonthermal components of discharges which, alone or in combination with other substances: 1) form putrescent deposits or otherwise create nuisance; 2) float as debris, scum, oil, or other matter in such amounts as to create a nuisance or; 3) are toxic or in some way pose a serious danger to the public health, safety or welfare.

If a discharge will not violate water quality standards for a receiving body, DEP may issue an NPDES permit if the discharge "is necessary or desirable under federal standards and under circumstances which are clearly in the public interest." DEP applies federal criteria for required pollution control standards found at C.F.R. § 122.28.

Florida's NPDES permits are directed at point sources of pollutants. However, nonpoint sources such as aquaculture and silvaculture, mining, and construction are major contributors of pollutants to estuaries and nearshore waters. Urban stormwater runoff continues to be a major source of nonpoint source pollutants.

> In Florida, rapid urbanization, with its associated land clearing and paving of pervious areas, has accelerated the problem over the last several years. While some amount of runoff from rainfall is a natural occurrence, the problem lies in the kind of land on which the rain falls. As the amount of paved, impervious surfaces increases, the volume and rate of runoff and the accompanying pollutant loads also increases. Stormwater flowing over roofs, streets, lawns, commercial sites, industrial areas and other permeable and impermeable surfaces transports many pollutants into surface and ground waters. Rain washes sediments from bare soil; heavy metals and oils and greases deposited on streets and parking lots by motor vehicles; nutrients from fertilized lawns and crops; and coliform bacteria from animal wastes into receiving waters.

DEP's goal in regard to stormwater discharge is "to protect, preserve and restore the quality, quantity and environmental values of water resources." Section 403.0891 of Florida Statutes requires water management districts, DEP districts and local governments to cooperate and implement a comprehensive stormwater management program designed to minimize the adverse effects of stormwater on land and water resources. These programs are to be designed to improve and restore the quality of waters that do not meet state water quality standards and maintain the water quality of those waters which meet or exceed state water quality standards. DEP rules provide "no discharge from a stormwater discharge facility shall cause or contribute to a violation of water quality standards in waters of the state.

OCEAN DUMPING

Although there are many possible definitions of ocean dumping," probably the one most widely used was established by the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention):

(i) any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea; (ii) any other disposal at sea of vessels, aircraft, platforms or other man-made structures at sea.

The London Convention established a "black list" of wastes which could no longer be dumped into the ocean. Countries ratifying this treaty agreed to abstain from dumping materials on the "black list," including mercury, cadmium, organohalogens, oil, persistent plastics, and high-level radioactive wastes. Special permits are required for ocean disposal of "gray list" materials set out in Annex II of the Convention. All other substances require a general permit for ocean disposal. The treaty also provides general criteria for site designation and permitting.

To implement the London Convention, Congress enacted the Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA). Congress reasoned that "unregulated dumping of material into ocean waters endangers human health, welfare, and amenities, and the marine environment, ecological systems, and economic potentialities." The first two titles of MPRSA, known as the Ocean Dumping Act (ODA), allow the regulation of all material dumped in the ocean. The Environmental Protection Agency and the Secretary of the Army were given the authority to regulate ocean dumping. The ODA defines ocean "dumping" broadly as "a disposition of material" and provides a list of material covered by this definition, including but not limited to solid wastes, garbage, industrial waste, radioactive waste, sewage sludge, incinerator residue, rock, waste, discarded equipment, and dredged materials.

The Administrator of the EPA is charged with the duty of enforcing the provisions of the ODA. The general conditions which are required to be met prior to issuing a permit for ocean dumping are substantially similar to those required for CWA permits. The Administrator may grant permits for ocean dumping of non-dredged materials that "will not unreasonably degrade or endanger human health, welfare or amenities, or the marine environment, ecological systems, or economic potentialities." When evaluating permit applications, the following criteria is to be evaluated :

a) the need for the proposed dumping;
b) the effect of such dumping on human health and welfare, including economic, esthetic, and recreational values;
c) the effect of such dumping on fisheries resources, plankton, fish, shellfish, wildlife, shore lines and beaches;
d) the effect of such dumping on marine ecosystems;
e) the persistence and permanence of the effects of the dumping;
f) the effect of dumping particular volumes and concentrations of such materials;
g) appropriate locations and methods of disposal or recycling;
h) the effect on alternative uses of oceans; and
i) the need to utilize locations beyond the Continental Shelf, where feasible.

There are currently four permanent Ocean Dredged Material Disposal Sites that have been designated by the EPA off Florida's coasts: Pensacola (near shore and deepwater), Jacksonville, and Fernandina. Other sites are interim designations with indefinitely extended expiration dates. Many of the interim sites are undergoing the necessary study for permanent designation.

The 1992 amendments to 33 U.S.C.A. section 1416 (d) preserve the rights of states to "adopt or enforce any requirements respecting dumping of materials into ocean waters within the jurisdiction of the State." There are, however, restrictions placed upon this regulatory power. States are precluded from adopting and enforcing requirements more stringent than those provided for under the ODA when the projects are federal projects and the Administrator finds that such requirement:

a) is not supported by relevant scientific evidence showing the requirement to be protective of human health, aquatic resources, or the environment;
b) is arbitrary or capricious; or
c) is not applicable or is not being applied to all projects without regard to Federal, State, or private participation and the Secretary of the Army concurs in such finding.

In addition, the President is authorized to exempt a federal project from any state requirement respecting dumping of materials into ocean waters if it is in the paramount interest of the United States. Along with consideration of state regulations, the Corps is required to consider environmental impact criteria established by the EPA, along with "the potential effect of a permit denial on navigation, economic and industrial development, and foreign and domestic commerce of the United States." The Corps must also weigh other methods and sites for disposal and must, "to the extent feasible, utilize the recommended sites designated by the [EPA]."

Section 103 of the ODA authorizes the Secretary of the Army to issue permits for the dumping of dredged material. The Secretary's authority has been delegated to the United States Army Corps of Engineers(Corps). Under section 404 of the CWA, the Corps also has authority to permit the discharge of dredged materials into navigable waters. Since dredged materials (up to three percent of which are considered to be highly contaminated with toxins) constitute over 90 percent of all material dumped in the nation's ocean waters, section 103 of the ODA and section 404 of the CWA give the Corps of Engineers tremendous regulatory authority in the area of ocean pollution.

While the Corps of Engineers does not administratively issue itself permits for its own disposal operations, the requirements that must be met before dredged material derived from federal projects can be discharged into ocean waters are the same as those where a permit would be required. The Corps must also certify that its activities are consistent with the state coastal management programs.

State NPDES permits are not required for the discharge of dredged or fill materials regulated under 404 of the Clean Water Act. Under section 404, the Corps of Engineers evaluates permits based on ocean discharge criteria developed by the EPA. Permits must specify the disposal site, and the EPA may veto any proposed site. The authority granted the EPA under 404 of the Clean Water Act is assumable. Because of the jurisdictional overlap of CWA and ODA, the Corps has defined the situations under which each will be applied.

The disposal into ocean waters, including the territorial sea, of dredged material excavated or dredged from navigable waters of the U.S. will be evaluated by the Corps in accordance with the ODA. In those cases where the district engineer determines that the discharge of dredged material into the territorial sea would be for the primary purpose of fill, such as the use of dredged material for beach nourishment, island creation, or construction of underwater berms, the discharge will be evaluated under section 404 of the CWA.

For those cases where the district engineer determines that the materials proposed for discharge in the territorial sea would not be adequately evaluated under the section 404(b)(l) guidelines of the CWA, he may evaluate that material under the ODA.

Several states, including Florida, objected strongly to the Corps regulations. In permitting discharges under the CWA the Corps recognized that both the state water quality certification requirements of the CWA and federal consistency requirements of the CZMA are applicable to activities within three miles of the coast. The Corps rejected comments that federal consistency should apply to projects located within three leagues of the coast or beyond the point that affects the coastal zone. The Corps also rejected Florida's contention that state water quality certification should be sought for projects within the State's territorial sea beyond three miles. The Corps asserted that the ODA may preempt both

the CWA certification provisions and the CZMA. As a matter of comity, the Corps will continue to seek state water quality certification and consistency determinations but specifically reserved its legal rights on the issue.

OIL SPILLS AND VESSEL DISCHARGES

While Florida's coast has not been subjected to many major oil spills of 100,000 gallons or more, the frequency of major and small spills is increasing. Between 1987 and 1994, there were more than 5,000 notifications of oil or hazardous material spills in Florida. Because of Florida's geographical position, it is potentially vulnerable to oil spills from tankers, use of marine terminals and ports, and offshore oil production.

Vessels to, from, and around the State present the greatest threat. Not only has Florida's continued population boom increased the State's energy demands and need for petroleum, but the demand for petroleum products throughout the United States has increased as well. Currently, the U. S. imports an average of 114 billion gallons of crude oil and other petroleum products annually. Florida's coastal waters are part of a major shipping route for these petroleum products. The increase in demand for petroleum products has resulted in increased vessel traffic delivering oil and an increased need for marine terminals for servicing vessels and storing petroleum products. Oil from all over the world passes through the Florida Straits en route to Louisiana and Texas refineries. Conversely, oil and petroleum products from the Gulf of Mexico must pass Florida's coast to reach ports and terminals in the northeastern United States.

International

Recognizing that pollution of the seas by oil is a truly international issue, nations have negotiated a number of treaties to control intentional discharges and in an attempt to minimize accidental discharges. The major treaties are:

1. 1954 Convention for the Prevention of Pollution of the Sea by Oil as amended in 1962, 1969, and 1971.
2. 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties and the 1973 Protocol.
3. 1969 International Convention on Civil Liability for Oil Pollution Damage.
4. 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution.
5. 1973 International Convention for the Prevention of Pollution from Ships (MARPOL).

In addition to these public law treaties, private oil companies have created a worldwide insurance syndicate for compensation of damages arising from tanker oil spills. The Tank Owners' Voluntary Agreement concerning Liability for Oil Pollution (TOVALOP) provides cleanup costs to governments up to $10 million, and the Contract Regarding an Interim Supplement to Tanker Liability (CRISTAL) extends coverage to other governmental costs and private damages. Liability is based on negligence, but the burden of proof is on the charterer or shipowner.

Although international efforts have had a significant effect in the area of liability and cleanup costs for pollution from oil and hazardous substances, many commentators believe that the conventions have actually provided very little relief from chronic discharges from vessels. The major weakness of the conventions is inadequate coastal state enforcement authority, even within "prohibited" zones. Enforcement is the responsibility of the flag country, and unfortunately, there is very little economic incentive for a country to engage in vigorous enforcement of the treaty obligations against its ships in

distant waters. The 1982 Law of the Sea Convention offers increased opportunities for coastal state enforcement, but the United States has still not become a party to the treaty.

The United States and twelve other countries are parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region and the Protocol concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region, commonly called the Cartagena Convention. An additional sixteen countries are participating in a Caribbean Action Plan to implement the treaty. The convention is intended to address a number of sources of marine pollution including vessels, dumping, seabed activities, airborne pollution, and land-based sources and to provide a dispute resolution procedure. In addition to adopting the protocol on oil spills, the parties have adopted a resolution urging nations in the region to refrain from ocean incineration, dumping, and disposal of nuclear wastes except in accordance with the 1972 London Dumping Convention. The United States has proposed that the oil spill protocol be extended to include other hazardous substances.

Federal Legislation and Regulation

The Clean Water Act (CWA) prohibits the discharge in harmful quantities of oil and other hazardous substances into or upon the navigable waters of the United States. A "harmful quantity" is any amount that creates a film or sheen on the water or shoreline or causes a sludge to be deposited below the surface or on the shore. For purposes of the oil spill provisions of the act, navigable waters include the U.S. contiguous zone, *i.e.,* 12 miles offshore.

Spillers have two obligations: 1) to report the spill to the U.S. Coast Guard; and 2) to contain and remove the oil or hazardous substance. While civil penalties apply to the spill itself, criminal penalties apply for failure to report a spill. The federal government must monitor the cleanup. If the cleanup is not being properly done or the spiller does not attempt to cleanup the spill or cannot be identified, the federal government is responsible for removal or arrangements for removal of the pollutants. Spillers are strictly liable for all clean up costs, but liability is limited unless the spiller acted recklessly or intentionally.

While the CWA remains the framework for dealing with oil pollution in U.S. waters, the 1990 Oil Pollution Act (OPA) amends portions of the CWA by clarifying federal response authority, increasing penalties and raising limits on liability for oil spills, requiring tank and vessel response plans, and providing contingency plans for designated areas. The OPA was pushed through Congress in part as a result of the 1989 Exxon Valdez spill in which 11,000,000 gallons of oil were spilled into the waters off the coast of Alaska. The OPA is essentially a comprehensive set of statutes designed to expand the oil spill prevention, preparedness, and response capabilities of the federal government and industry.

Congress has declared that the OPA and the CWA do not preempt state law. States may impose additional liability, funding mechanisms, requirements for removal actions, and fines and penalties for responsibility.

Florida's Oil Spill Legislation and Regulation

Florida has long recognized that "[s]pills, discharges, and escapes of pollutants occurring as a result of procedures involved in the transfer, storage, and transportation of such products pose threats of great danger and damage to the environment of the state, to owners and users of shore front property, to public and private recreation, to citizens of the state and other interests deriving livelihood from marine-related activities and to the beauty of the Florida coast." For these reasons, Florida's Legislature created the Pollutant Discharge Prevention and Control Act which largely parallels provisions of the federal CWA in that it prohibits coastal and ocean discharges of pollutants and provides that any person discharging a pollutant into Florida waters is responsible for the immediate cleanup of the substance.

Florida maintains the liability limitations for clean-up costs established by the OPA for vessels, offshore facilities, onshore facilities, and deepwater ports. There are no liability limitations for natural resource damages or personal property damages. Strict liability for spills applies to both cleanup and damages to individuals. Spillers' defenses and the standard for lifting cleanup liability limitations are identical to federal exceptions. Vessels must establish and maintain proof of financial responsibility as required by federal law. Additionally, vessels operating in state waters with a storage capacity to carry 10,000 gallons or more of pollutants must maintain a ship-specific discharge prevention and control contingency plan.

The Act regulates terminal facilities as well as vessels. Terminals are defined to include pipelines and every shore facility from a gas pump at a small marina to the largest tank farms and refineries. All terminal facilities are required to obtain a discharge prevention and response certificate issued by the DEP which is valid for 12 months. Cleanup liability for terminals for state costs is limited to $150 million.

The Department of Environmental Protection has responsibility for oil spill control in the State's coastal waters. Under Florida Statute § 376.07, the DEP was granted the authority to create a state-wide contingency plan which contains detailed emergency operating procedures for the containment and cleanup of pollution. This plan replaced the Coastal Pollutant Spill Contingency Plan and is contained in a manual used to establish in-house guidelines for dealing with pollutant spills.

Florida's Coastal Sensitivity Atlases comprise an important element of the oil spill planning effort. Developed through the Department of Community Affairs, the atlases use an environmental sensitivity index (ESI) which is based on geomorphic, biologic, and other resource information to identify critical feeding and reproduction habitat. The index provides a scientific basis for setting priorities for response and protection. Recently, the Florida Marine Research Institute has been allocated funds to update and enhance the original ESI atlases which were created in the 1970s.

Like the federal government, Florida has established a fund to assure prompt and adequate response to oil spills. The Florida Coastal Protection Trust Fund monies may be used for all costs involved in the prevention and abatement of pollution related to the discharge of pollutants and possible pollutants, the cleanup, restoration and rehabilitation of natural resources, to compensate private parties for damages, and to provide grants to local governments to remove derelict vessels from public waters. The DEP is responsible for recovering monies expended from the fund from the persons responsible for the spill or from the federal government.

PERSISTENT MARINE DEBRIS

Throughout the United States, coastal states are experiencing severe problems due to beach litter, attributed primarily to the disposal of plastics and other marine debris from ships. The term "ships" includes every type of marine craft, including small recreational boats, commercial fishing boats, cruise ships, supertankers, cargo vessels, military craft, and oil platforms. While all ocean debris does not come from ships, they are responsible for much of the waste, especially plastics found in coastal waters and on beaches. In 1975, it was estimated that international ocean sources dumped 7 billion kilograms of garbage into the sea annually. Of that figure, it was estimated that 8 million kilograms were plastics. It is currently estimated that the amount of plastic being thrown away will increase by 50 percent by the year 2000. Current estimates show plastic making up 14 to 21 percent of all wastes.

Federal Legislation

The following list summarizes the federal laws dealing with marine waste:

1. The Refuse Act of 1899 (33 U. S.C. §§ 407 et seq.) - This Act prohibits the disposal of any refuse matter, including garbage such as plastics, from any source into the navigable waters of the U.S., including territorial seas. However, the statute is limited in geographic application, and its enforcement mechanism is too weak to be effective.

2. The Federal Water Pollution Control Act O;WPCA) (33 U.S.C. §§ 1251 et seq.) - Under the FWPCA [as amended] and the National Pollutant Discharge Elimination System (NPDES), waste discharge is allowed, provided the discharge meets federal effluent limitations and an EPA permit is acquired. This Act, however, is primarily designed to deal with effluent discharges, sewage, and dredge and fill activities - not solid waste.

3. The Marine Protection, Research, and Sanctuaries Act (MPRSA) (33 U.S.C. §§ 1407 et seq.) which implements the 1973 Convention on the Prevention of Marine Pollution by dumping of waste and other matter (London Dumping Convention - LDC), prohibits unlawful dumping and transporting of materials, including plastics, for dumping. The LDC, as implemented by MPRSA, prohibits the transport of persistent plastics and other specified pollutants for the purpose of dumping at sea. In addition, MPRSA prohibits material from outside the U.S. being dumped in our territorial waters or contiguous zone. However, MPRSA does not apply to ship-generated garbage, because such garbage is considered incidental to the operation of a ship.

4. The Marine Plastics Pollution Research and Control Act (MPPRCA) (33 U.S.C. §§ 19011912). This Act adopted Annex V of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution by Ships, 1973 (MARPOL 73/78) for prohibiting uncontrolled discharges of pollutants from ships into the oceans of the world. MPPRCA applies to U.S. ships anywhere in the world and to all foreign ships, whether or not their country is a party to MARPOL, while operating in the navigable waters of the U. S. or the 200-mile Exclusive Economic Zone (EEZ). MPPRCA serves to fill in gaps left after MARPOL by applying to all ships over which the U.S. has jurisdiction, from the largest supertanker or oil platform to the smallest recreational craft. In addition, MPPRCA requires reception facilities at all ports or terminals in the U. S. Large ports and terminals that receive more than 500,000 tons of fish annually must have certificates of adequacy from the U.S. Coast Guard in order to continue to receive ships. MPPRCA essentially prohibits the disposal into the sea of all plastics including, but not limited to, synthetic ropes, synthetic fishing nets, and plastic garbage bags. It also provides for disposal facilities in port and minimum distances from land in which other types of garbage may be dumped.

State Regulation

Not only does Florida regulate marine debris directly, through water related laws such as outfall regulations and open ocean dumping, but it also regulates marine pollution indirectly through other waste related laws. Some of the provisions of Florida's Solid Waste Management Act which impact marine debris are as follows: a) each county in the State must initiate a recycling program to recycle, among other things, plastic; b) all "six-pack" yokes must be composed of material capable of degrading within 120 days; c) plastic bags used to carry purchased items must degrade within 120 days; d) all polystyrene foam or plastic-coated paper used in connection with human consumption of food must degrade within 12 months; and e) the Board of Regents is directed to coordinate research by the state universities in, among other areas, product packaging.

Penalties for illegal dumping of litter include the following: a) $50 civil penalty for dumping 15 lbs. or 27 cubic feet or less [noncommercial]; b) dumping more than 15 lbs. or 27 cubic feet [noncommercial], but less than 500 Lbs. or 100 cubic feet is a first degree misdemeanor. If violation occurs with the use of a motor vehicle, 3 points may be assessed to the individual's driver's license; and

c) dumping more than 500 Lbs. or 100 cubic feet of commercial waste is a third-degree felony. In addition, any motor vehicle, vessel, aircraft, container, crane, winch, or machine used to dump more than 500 Lbs. or 100 cubic feet of waste will be considered contraband and subject to forfeiture.

In addition to plastics and litter, Florida has also addressed other problems such as medical waste. Although medical wastes are relatively small in comparison to other forms of waste found on Florida's beaches and in its coastal waters, the threat is real and Florida is certainly not immune. The Department of Health and Rehabilitative Services (MRS) and DEP share responsibility for storage, treatment, transfer, offsite transport and storage, incineration, and final disposal facilities for biomedical wastes. Biomedical wastes include any solid or liquid waste which may present a threat of infection to humans