

RULES and REGULATIONS
ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 140

[FRL[]7212[]4]

Marine Sanitation Devices (MSDs); Regulation to Establish a No Discharge Zone (NDZ) for State Waters within the Boundary of the Florida Keys National Marine Sanctuary (FKNMS)

Tuesday, May 21, 2002

***35735** AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is establishing a NDZ for State waters within the boundaries of ***35736** the FKNMS pursuant to section 312 (f)(4)(A) of the Clean Water Act. This action is being taken in response to an October 27, 1999, resolution passed by the FKNMS Water Quality Protection Program Steering Committee and a December 8, 1999, resolution of the Board of County Commissioners of Monroe County, Florida to establish a NDZ area for State waters within the FKNMS. These resolutions led to a December 7, 2000, letter from Governor Jeb Bush of Florida requesting this action.

DATES: This rule will take effect June 19, 2002.

ADDRESSES: Written comments or requests for information may be submitted to Wesley B. Crum, Chief, Coastal Programs, EPA Region 4, 61 Forsyth Street, Atlanta, Georgia 30303[]8960.

FOR FURTHER INFORMATION CONTACT: Drew Kendall at (404) 562[]9394 or Fred McManus at (404) 562[]9385.

SUPPLEMENTARY INFORMATION:

I. Background

The proposed rule was published in the Federal Register on July 26, 2001 (66 FR 38967). A 90-day comment period followed (ending October 26, 2001), during which time, EPA Region 4 received 1,050 comments via letter, fax, or E-Mail. The comment tally was 1,016 in favor and 34 opposed. This Federal Register document will address comments submitted in response to the July 26, 2001 (66 FR 38967), Federal Register document. Comments in opposition to the NDZ designation are addressed in section II below in general subject categories. Comments in favor of the NDZ designation focused on the fact that the FKNMS contains unique marine ecosystems (seagrass meadows, third largest coral barrier reef in the world, and

mangrove islands) that are a State and national treasure and of high ecological, educational, aesthetic, recreational, and commercial value. Commentors supporting the NDZ pointed out that these ecosystems support tremendous biological diversity, containing more than 6,000 species of plants, fish and invertebrates that depend upon pristine water quality. Further, they stated that all boaters who use the FKNMS share the responsibility to protect this resource for future generations and that establishment and compliance with the NDZ is important and necessary to protect water quality.

A map which delineates the area to be designated can be obtained or viewed by accessing the FKNMS's Web site at <http://www.fknms.nos.noaa.gov/>, by calling the Sanctuary office at (305) 743[]2437, or by writing to the Sanctuary Superintendent at P.O. Box 500368, Marathon, Florida 33050. Basically, State waters extend from land out to a distance of three statute miles on the Atlantic side of the Florida Keys and nine nautical miles on the Gulf side. It should be noted that the National Oceanic and Atmospheric Administration (NOAA) is pursuing NDZ status for Federal waters within the FKNMS. It is estimated that NOAA will complete its rule-making process in late 2002 or early 2003.

Currently, there are about 30 pump out facilities located throughout the Florida Keys. To obtain a list of these facilities you may contact George Garrett, Director of Marine Resources for Monroe County, at (305) 289[]2507, garrettg or by writing to Monroe County Service Center, 2798 Overseas Highway, Suite 420, Marathon, Florida 33050[]2227.

The Florida Keys are a national treasure of international acclaim that contain unique environments and possess high value to humans when properly conserved. Adjacent to the Florida Keys land mass are located spectacular, unique nationally significant marine environments, including seagrass meadows, mangrove islands, and extensive living coral reefs. These marine environments support rich biological communities possessing extensive conservation, recreational, commercial, ecological, historical, research, educational, and aesthetic values. These marine environments are the maritime equivalent of tropical rain forests in that they support high levels of biological diversity, are fragile and easily susceptible to damage from human activities, including nutrient enrichment. The economy of the Florida Keys is based in large part on tourism and fisheries that are directly tied to the ecological resources and quality of the waters surrounding the Florida Keys. In recognition of this, Congress created the FKNMS with the signing of H.R. 5905 (Public Law 101[]605, the FKNMS and Protection Act) on November 16, 1990. The purpose of a marine sanctuary is to protect resources and their conservation, recreational, ecological, historical, research, educational, or aesthetic values through comprehensive long-term management. The mission of the National Marine Sanctuary Program is to identify, designate, and comprehensively manage marine areas of national significance. National Marine Sanctuaries are established for the public's long-term benefit, use, and enjoyment. Congress also recognized the critical role of water quality in maintaining the ecological resources of the Florida Keys, and directed the U.S. EPA and the State of Florida to develop a Water Quality Protection Program (WQPP) for the Sanctuary. The WQPP was finalized in September 1996 and implementation of the numerous recommended actions within the WQPP is ongoing.

The State of Florida recognized the importance of water quality to ecosystem structure and function and declared the State waters surrounding the Florida Keys as "Outstanding Florida Waters" (OFW) in 1985. Florida Statute grants the Florida Department of Environmental Protection the power to establish rules that provide for the category of water bodies called OFW, which are worthy of special protection because of their natural attributes. No degradation of water quality is allowed in

OFW, except as allowed in Florida Administrative Code (F.A.C.) 62[]4.242(2). In addition, the Florida Keys have been designated as an "Area of Critical State Concern." The objective of this program is to provide another level of legislative review for development plans within areas where unique and fragile natural resources exist and local protection may be lacking. "Areas of Critical State Concern" are declared where there is a perceived need to protect public resources from risk by unregulated or inadequately regulated development. Further, the pristine and unique habitats of the Florida Keys have led to the establishment of special protection areas by the Federal government, including the Key West Wildlife Refuge and the Great White Heron Wildlife Refuge. These actions are further evidence of the importance of the Florida Keys and their unique natural resources.

The purpose of the WQPP is to recommend priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the FKNMS. This includes restoration and maintenance of a balanced, indigenous population of corals, shellfish, fish and wildlife, and recreational activities in and on the water. NOAA's Final Management Plan/Environmental Impact Statement for the FKNMS became effective on July 1, 1997 and includes the WQPP. The Monroe County Board of County Commissioners and the State of Florida recognize and support this document.

There is a large community in the Florida Keys that live on boats and many live-aboard vessels are permanently anchored in harbors and are not capable of movement. Transient vessels also anchor in harbors and other *35737 protected sites and are very numerous in winter months. The number of live-aboard vessels has increased dramatically in recent years. While the Clean Vessel Act prohibits the dumping of raw sewage, treated wastewater from vessels may be discharged into State waters. Wastewater treatment (disinfection) by Type I and II MSDs does not remove nutrients from wastewater. Many live-aboard and transient vessels discharge wastewater into surface waters. It is estimated that nutrients from vessel wastewater account for about 2.8% of nitrogen and 3.0% of phosphorus loadings into nearshore waters of the Florida Keys (U.S. EPA, 1993, Phase II Report). Nutrient loadings from vessels may be relatively small contributions to total Keys-wide loadings. However, loadings from vessels are a significant source of nutrients to harbors and result in eutrophication of waters that typically exhibit poor circulation/flushing. Violations of fecal coliform standards are common in marinas and harbors throughout the Florida Keys (Florida Department of Environmental Regulation 1987, 1990). The WQPP Phase II Report (1993) and other studies have determined that discharges of wastewater from vessels are degrading water quality in nearshore and confined waters. The final WQPP document (1996) identified the need to eliminate sewage discharges from live-aboard vessels and other vessels as a high priority action item. The State of Florida, as requested by the City of Key West, recently determined that the protection and enhancement of the quality of waters surrounding the City of Key West require greater environmental protection. This action prohibits the discharge from all vessels of any sewage, whether treated or not, into such waters out to a distance of 600 feet from shore. The U.S. EPA, pursuant to section 312(f)(3) of the Clean Water Act (Public Law 92[]500), recently (August 25, 1999) concurred with the State's determination that adequate pumpout facilities for safe and sanitary removal and treatment of sewage from all vessels are reasonably available for the waters surrounding the City of Key West.

The Board of County Commissioners of Monroe County, Florida has for some time been concerned about water quality in the Florida Keys. Monroe County's Comprehensive Plan is very strongly predicated upon environmental protection and the associated Executive Order and Work Program adopted by the Florida Governor and Cabinet are geared toward assisting Monroe County with improving and protecting water quality. The Board of County Commissioners of Monroe County has adopted a resolution

requesting that the Governor of the State of Florida petition the EPA to declare all waters of the State within the boundaries of the FKNMS to be a NDZ for sewage, whether treated or not, from all vessels. Monroe County believes that this action would be a major step in protecting water quality around the Keys and especially in those areas where there are high concentrations of vessels. The NDZ designation is fully supported by the WQPP Steering Committee and is consistent with the overall goals of the WQPP for the FKNMS. This designation is also consistent with Florida's Area of Critical State Concern Program and the Principles for Guiding Development for the Florida Keys. The Governor of the State of Florida supports Monroe County's decision and submitted the County's request to EPA Region 4, asking EPA to designate all State waters within the boundary of the FKNMS as a NDZ under the authority of section 312(f)(4)(a) of the CWA.

Section 312(f)(4)(a) states: "If the EPA Administrator determines upon application by a State that the protection and enhancement of the quality of specified waters within such State requires such a prohibition, he shall, by regulation completely prohibit the discharge from a vessel of any sewage (whether treated or not) into such waters." This authority has now been delegated to EPA Regional Administrators. On December 7, 2000, the Governor of Florida, Jeb Bush, requested that EPA Region 4 establish the NDZ status for State waters within the FKNMS. The EPA Region 4 Administrator concurs with this request.

II. Response to Comments

A. Clarification of the Requirements of Section 312 of the CWA

Several commentors appeared to misinterpret the different requirements of Clean Water Act (CWA) section 312(f)(4)(A) and CWA section 312(f)(3) and which regulatory process was being used to propose this NDZ. To propose a NDZ in this situation, there are two primary but distinct regulatory approaches that may be followed. Under CWA section 312(f)(3), the State may designate a NDZ based on a State determination that protection and enhancement of the quality of the waters within the area requires additional protection and a determination by EPA that adequate pump out facilities for safe and sanitary removal and treatment of sewage from vessels are reasonably available. This is contrasted with CWA section 312(f)(4)(A), which focuses solely on the water quality issues and does not require EPA to make the determination that adequate pump out facilities are reasonably available for State waters within the boundary of the NDZ. Under section 312(f)(4)(A), "if EPA determines upon application by a State that the protection and enhancement of the quality of specified waters within the state requires a prohibition, EPA shall, by regulation completely prohibit the discharge from a vessel of any sewage, whether treated or not, into such waters." In this particular matter, the Board of County Commissioners of Monroe County, by resolution, requested that Florida Governor Jeb Bush submit an application to EPA for a NDZ designation pursuant to section 312(f)(4)(A). The Governor honored this request and applied to EPA under the authority of section 312(f)(4)(a) based on the State's finding that its waters within the boundary of the FKNMS have particular environmental importance considering the unique, fragile, and ecologically important natural resources of the Florida Keys ecosystem. However, although section 312(f)(4)(A) does not require an analysis of whether adequate pump out facilities are reasonably available, due to the number of comments received related to this issue, EPA, working with the County and the State has provided information concerning this issue below.

B. Adequate Pump Out Facilities

Many commentors' letters expressed concern about the adequacy of existing pump out facilities in the Florida Keys, including the total number of facilities and the availability of the pump outs. In addition, a few commentors stated that EPA did not investigate the availability of pump out facilities. Although it was not required for this determination under section 312(f)(4)(a), staff from EPA, the Florida Department of Environmental Protection (FDEP), and Monroe County did conduct a survey and collect information on the existing and planned pump out facilities throughout the Florida Keys. This effort identified 29 locations with active pump-out stations and several more in the planning stages (see the summary section of this final notice for instructions on how to obtain this information). The types of pump outs varied from stationary facilities located on docks, to carts that boaters can roll to their vessels, to pump out boats/barges that navigate to vessels in need of pump out services. The hours of operation usually coincided with the normal business hours of marinas and *35738 many facilities were open seven days a week. Several pump out stations in Key West are capable of servicing large vessels. During the survey, a review of GIS maps identified several areas throughout the Florida Keys where gaps exist and where additional pump out facilities may be needed. The survey effort resulted in the development of a detailed spreadsheet and maps with specific information concerning all pump out facilities in the Florida Keys. Ideally, about 26 additional pump out facilities are recommended (by the interagency planning group mentioned above) throughout the Florida Keys for total coverage along the entire length of the islands which would eliminate the identified gaps. It should be noted that most of those areas in the Florida Keys with large populations and density of vessels have available pump out stations.

Currently, the majority of existing marinas in the Florida Keys are not required to provide pump out services. State regulations only require installation of pump out systems for new and expanded docking facilities where the development project involves construction of ten or more slips in Outstanding Florida Waters, pursuant to Rule 62[]312.430 of the Florida Administrative Code (F.A.C.), or in sovereign submerged lands owned by the State, in accordance with Rule

The FDEP Division of Law Enforcement administers the Clean Vessel Act (CVA) grant program. Under this program, grants are available to fund installation of vessel sewage pump out facilities and portable toilet dump stations at marinas. These grants can be used to fund mobile pump out systems and are available to local governments and commercial and non-profit entities operating marinas, boat ramps, mooring fields, etc.

Projects under this program receive federal/state funds for up to 75% of the project cost. Grantees are required to provide pump out services to the recreational boating public and fees shall not exceed \$5.00 per service, unless justified and approved by FDEP and the U.S. Fish and Wildlife Service. FDEP staff is currently working with local governments and marina owners to increase the number of pump out facilities. Since 1996, eighteen pump out facilities have been funded with CVA grants totaling approximately \$520,000 in the Florida Keys. In addition, National Fish and Wildlife Foundation and Coastal Improvement Assistance Program (CIAP) grants obtained by Monroe County will be used to establish mooring fields. CIAP grants will also be used to develop additional pump out systems.

FDEP in consultation with EPA and many other state, regional, local, and federal government agencies and concerned citizens have initiated an effort to develop an

implementation plan for the NDZ. This implementation plan will consist of many components, including a public education/outreach program, a strategy to develop additional infrastructure (pump outs, mooring fields, etc.) and an enforcement strategy. Initial efforts will be focused on public education and outreach and the construction of additional pump out facilities in areas where gaps have been identified. Initially, enforcement of the NDZ will be focused in the marinas, harborage, and other protected areas where vessels congregate and where pump out facilities are available. Later, after pump out stations are added in the areas with gaps, enforcement will be expanded to all areas of the Florida Keys.

One group of commentators representing the tugboat, barge, and towboat industry commented that there are no existing facilities in the Florida Keys that can accommodate large tug/towboat units. In 1999, pursuant to section 312(f)(3) of the CWA, the State of Florida designated the waters around the City of Key West out to a distance of 600 feet from shore as a NDZ and EPA determined that adequate pump out facilities for safe and sanitary removal and treatment of sewage from vessels are reasonably available. In addition, according to the Assistant City Manager of Key West, there are existing facilities in the City of Key West that can accommodate large ocean-going vessels and can provide pump out services. The dock at Mallory Square can accommodate large tugs and towboats and presently, the City pumps the holding tanks of large vessels by running a hose from the dock to a sewage collection line that is directly connected to the City's state-of-the-art sewage treatment and disposal facility. The City has plans to install a large capacity pump station capable of servicing large vessels at Mallory Square by April 2002. The U.S. Naval Base at Truman Annex in Key West can also accommodate large vessels and is equipped with a pump out station that is directly connected to the collection system of the City's wastewater treatment facility. This U.S. Naval facility may be transferred to the City of Key West in the near future and can now be used by the City in emergency situations for pump out services. The U.S. Coast Guard Base at Trumbo Point does receive fuel shipments via tankers and this facility has a pump out station that is connected to the Key West wastewater management system. In addition, the City of Key West operates a pump out vessel with a capacity of 300 gallons and is scheduled to acquire another pump out vessel with a capacity of 1,000 gallons by summer 2002. Accordingly, consistent with our 1999 determination, EPA still believes that there are sufficient pump out facilities in the Key West area to service the limited number of ocean-going tugs, towboats, and other large vessels with destinations in the Key West area. Further, we believe that ocean-going barge traffic navigating through Sanctuary waters should be able to retain the minimum volume of sewage generated while in Sanctuary waters and then discharge that sewage when outside the established NDZ in an environmentally safe manner.

C. Effectiveness of Land-Based Wastewater Treatment Facilities/Adequacy of Existing MSDs

Some commentators questioned whether land-based wastewater treatment systems were more effective at treating and disposing of sewage from vessels than Type 1 and 2 MSDs. EPA believes that the land based facilities which are available to treat the pumped sewage are more effective in removing a greater range of pollutants than the Type 1 and Type 2 MSDs. Type 1 and 2 MSDs are flow-through devices for treating and discharging sewage on commercial and recreational vessels that are equipped with installed toilets. When operated properly, these devices macerate fecal material and add chemicals, or otherwise treat/disinfect the sewage to meet specified requirements for fecal coliform bacteria. However, Type 1 and 2 MSDs do not remove nutrients and other pollutants (e.g.; oxygen demanding materials) that

contribute to water quality degradation. The City of Key West and the City of Key Colony Beach have recently completed significant and costly upgrades to their wastewater management systems, including construction of advanced wastewater treatment plants, subsurface well injection of effluent, and replacement of inadequate sewage collection lines. In addition, there are waste water treatment facilities in the Miami area that properly treat and dispose of sewage pumped from vessel holding tanks. Further, Monroe County's Sanitary Wastewater Master Plan has been completed and the County is pursuing wastewater system upgrades to state-of-the-art wastewater management systems that remove the vast majority of *35739 nutrients from sewage prior to disposal. Pursuant to recent State legislation, all new and expanded land-based wastewater discharges permitted in the Florida Keys after June 1999 are required to meet best available technology standards for treatment and disposal, including nutrient removal. In addition, the legislation requires all existing sewage treatment plants and on-site sewage treatment and disposal systems to meet these standards by year 2010.

Several commentors stated that they had already installed an approved Type 1 MSD and that this type device is adequate to protect the environment. Boaters who have taken the initiative to install approved Type 1 MSD devices are to be commended. However, as mentioned above, Type 1 MSDs do not remove nutrients or the biochemical oxygen demand loading from vessel sewage. The population of the Florida Keys includes a large number of individuals that live on their boats and many of these vessels are permanently anchored in various harbors throughout the chain of islands. Thousands of transient vessels also anchor in harbors and other protected sites and are especially numerous in the winter months. Nutrient loadings from vessels may be a relatively minor contribution to total Keys-wide loadings. However, loadings from vessels are a significant source of nutrients to harbors and other protected areas that experience poor circulation and flushing contributing to eutrophication. Several scientific studies have determined that discharges from vessels have caused degraded water quality in nearshore areas of confined and semi-confined waters. The discharge of minimally treated sewage from vessels is not consistent with the numerous actions that the State of Florida and Monroe County have taken to restore and protect the water quality of the Florida Keys, and which formed the basis for the State's application for a NDZ.

D. Land-Based Sources of Pollution

Some respondents to the NDZ Federal Register Notice pointed out that land-based sources of pollution are the primary cause of water quality problems in the Florida Keys and that the relative contribution of vessel sewage versus other sources is minuscule. It is true that comparatively, most sewage nutrients entering the nearshore waters of the Florida Keys are from land-based sources such as inadequate cesspits, malfunctioning septic systems, and leaky collection lines associated with aging wastewater treatment plants. It is also true that the relative contribution of vessel sewage versus other sources represents a small percentage of the overall sewage load entering the system. Several scientific studies conducted in the Florida Keys have documented that sewage and the associated nutrients from onsite wastewater treatment systems migrate from land to semi-confined waters (canal systems) and other nearshore coastal waters and cause water quality degradation and eutrophication of the environment. It is estimated that nutrients from vessel wastewater account for only about 2.8% of the total nitrogen and 3.0% of the total phosphorus loadings into nearshore waters of the Florida Keys (EPA, 1999). However, loadings from vessels are a significant source of nutrients to harbors, marinas, and other protected areas where vessels congregate and result in eutrophication of waters that typically exhibit poor circulation and flushing. The

WQPP document and action plan (EPA, 1996) concluded that sewage discharges from vessels were degrading water quality in nearshore and confined waters. However small the contribution from vessels may be, the fact remains that nutrients from vessel sewage does negatively impact the fragile environment of the Florida Keys (additional information is provided in section G below).

E. Enforcement

Several commentors expressed concern over the relatively large size of the proposed NDZ and felt that enforcement would be difficult. These respondents also commented that previous NDZ designations in other areas (i.e., Rhode Island) have been ineffective. As mentioned above, FDEP in consultation with EPA and many other state, regional, local, and federal government agencies and concerned citizens have initiated an effort to develop an implementation plan for the NDZ. This implementation plan will consist of many components, including a public education/outreach program, a strategy to develop additional infrastructure (pump outs, mooring fields, etc.), and an enforcement strategy. Initial efforts will be focused on public education and outreach and the construction of additional pump out facilities in areas where gaps have been identified. The NDZ implementation plan recommends that enforcement activities be phased in after the public education/outreach initiative. The recommended approach is to conduct a comprehensive public education/outreach program, after the NDZ designation becomes effective, before taking formal enforcement action, issuing citations, and imposing penalties. This phased approach will not apply to the previously established NDZ for the jurisdictional waters surrounding the City of Key West. Marine law enforcement agencies including federal, State, and local governments will actively participate in the implementation of the public education/outreach program by distributing information on the NDZ regulations to boaters.

Initially, enforcement of the NDZ will be focused in the marinas, harborages, and other protected areas where vessels congregate and where pump out facilities are available. Later, after pump out stations are added in the areas that have been identified as requiring pump outs, enforcement activities can be expanded to all areas of the Florida Keys. Achieving 100% compliance with the NDZ designation in all the State waters of the FKNMS is probably not realistic. However, EPA does believe that the vast majority of the boating public will voluntarily comply with the requirements of the NDZ and utilize the available pump out stations. This will lead to a decrease in the amount of nutrients and other pollutants entering the waters of the FKNMS and an increase in the level of protection for the waters and unique marine resources of the Florida Keys ecosystem. EPA staff reviewed the magazine articles provided by respondents concerning the Rhode Island NDZ and have discussed the status of this NDZ with staff from EPA Region 1 in Boston, Massachusetts. Problems do appear to exist with the availability of pump out facilities during certain times of the day and in some specific areas throughout the designated NDZ area. However, this information does not lead to a conclusion that the NDZ for the State of Rhode Island is ineffective. Based on the existing level of public concern for and demonstrated desire to protect the environment of the Florida Keys and the level of commitment and willingness to cooperate and coordinate on the part of all levels of government, we are confident that the NDZ designation for State waters within the boundary of the FKNMS will be successful.

F. Economic Impacts, Safety, and Feasibility

The Florida Keys have been, and continue to be an international tourist/boating destination. According to a study sponsored by NOAA, the Florida Keys Tourist Development Council, and The Nature Conservancy, visitors in the Florida Keys spent \$1.38 billion during the 12-month period from June 1997 through May 1998. The primary *35740 attractions for people who visit this area are warm weather, historic areas, fishing, and diving/snorkeling activities that are available in the nearby coral reef communities. Currently, the coral reef ecosystem is degrading. Coral reefs require waters low in nutrients to thrive. Therefore, actions that reduce the input of nutrients into this system are likely to benefit coral reefs. If the coral reefs and associated biological resources are allowed to decline, then a significant portion of the attraction for visiting this area will no longer exist.

One commentor thought that a NDZ would make it illegal to discharge grey water associated with bathing and washing dishes. Designation of an area as a NDZ does not make it illegal to discharge grey water. Another commentor believed that the NDZ would outlaw existing Type 1 and 2 MSDs currently installed onboard vessels. The NDZ designation would not cause existing Type 1 and 2 MSDs to be in violation by their mere presence onboard the vessel. However, it would be illegal for vessel operators to discharge from these devices while inside the NDZ. Type 1 and 2 MSDs should be secured to prohibit discharge while navigating or otherwise situated within the NDZ.

Some commentors stated that holding tanks were personally unacceptable and installation of Type 3 MSDs could cause various problems, including unpleasant odors, decrease in boat stability, and substantially reduce the limited usable space on the average vessel. Cost to retrofit was also cited as a negative impact on boat owners. It is indisputable that boating safety is an important consideration. Neither EPA or the State of Florida would promulgate any rule which compromises the safety of the boating public. Installation of a holding tank should be approached no differently than any other marine retrofit, and if done properly by a well-trained and certified marine mechanic, safety, odor, and cost issues can be dealt with effectively. According to the Monroe County Department of Marine Resources and the FDEP Division of Law Enforcement, the average cost of installing a typical Type 3 MSD in most vessels should be about \$600. As an alternative, portable toilets (i.e.; porto-potties) can be purchased (\$50 to \$100) and used onboard most vessels, or boaters can tie-up at a marina with shoreside facilities.

The vast majority of vessels that operate within the FKNMS are recreational (approximately 22,000 registered recreational vessels). However, there are a significant number of commercial fishing, charter/dive/party boats, and some tugboats/towboats that operate within the boundary of the FKNMS. According to the U.S. Coast Guard, most charter/dive/party boats in the Florida Keys are already equipped with Type 3 MSDs and these commercial vessels will be able to use the available pump out facilities (most already do this) and comply with the NDZ rule. Other commercial vessels without Type 3 MSDs should be able to retrofit for less than \$1,000 in most cases. A commercial vessel (e.g., tugboat/towboat, etc.) operator with an existing Type 2 MSD that chooses not to retrofit (prohibitive cost or other considerations) may install an appropriate portable toilet in addition to the existing Type 2 MSD for use while navigating through waters of the FKNMS designated as a NDZ.

Several commentors were concerned about the cost to pump out vessel holding tanks. EPA, FDEP, and Monroe County conducted a survey and collected information on the existing pump outs in the Florida Keys and determined that the range of costs to pump out was from \$5.00 to \$25.00, with the majority of pump out facilities

charging \$5.00. The number of times a tank will need to be pumped out will depend on usage. Live-aboards will have to pump out fairly often while less frequent boat users will need to empty the tank much less often. Using \$10.00 as the pump out charge, (\$10 is on the high end, most pump outs cost \$5) and one pump out per week, results in an estimated annual cost of \$520 per vessel per year. Annual costs in this range are considered reasonable. It should also be noted that pump out fees may qualify as a business expense and may be tax deductible for some vessel owners.

One commentor suggested that it would be a better use of funds from FDEP to provide money for research into more effective MSD technology. The State of Florida, in accordance with section 312 (f)(4)(A) filed an application for the designation of the NDZ and EPA has the responsibility of processing that application. EPA would always encourage research into more effective means to reduce pollution that is being discharged into the nation's waters. However, whether FDEP should fund research into more effective MSDs is an issue that EPA would defer to the State.

G. Availability of Scientific Evidence to Support NDZ

Several commentors claimed that there is no scientific evidence to demonstrate that the proposed NDZ will improve water quality in the Florida Keys aquatic environment. It is their opinion that Type I or Type II MSDs are effective and that their use does not contribute to water quality problems.

As part of the Florida Keys National Marine Sanctuary and Protection Act of 1990, specific programs were established to address water quality issues. Water quality matters in the Florida Keys are reviewed and evaluated by the Steering Committee for the Water Quality Protection Program. The Steering Committee consists of federal and State resource agency managers, local elected officials and knowledgeable citizens. The Steering Committee receives technical guidance from the Water Quality Protection Program Technical Advisory Committee which consists of scientists from the Florida Keys and South Florida. Both committees concurred that water quality concerns in the Florida Keys must be addressed comprehensively. The committees concluded that elimination of discharges from vessels, including discharge from Type I or Type II MSDs, will eliminate a known source of water quality degradation.

A major challenge to scientists and managers working in the Florida Keys, and elsewhere, is being able to differentiate the natural variability of ecosystems from human-caused disturbances. Signs of ecosystem stress in the Florida Keys include loss of coral cover and diversity, particularly at offshore bank reefs, increasing nitrogen and phosphorus concentrations in the near shore waters, decreased water clarity, and changes in the natural benthic community composition. Comprehensive monitoring has documented a 37% reduction in stony coral coverage between 1996 and 2000. Also, the reason that monitoring was initiated was the observed, but poorly quantified loss of coral cover at many sites prior to 1996. Habitat and water quality degradation in canals and other semi-confined waters within the Florida Keys has been measured and is related to population density. The distance from shore at which ecological changes are attributable to sources of pollution continues to be a subject of scientific debate.

Scientists have postulated that the observed degradation of the Florida Keys marine ecosystem is due to multiple stressors operating on different scales. The increase in atmospheric carbon dioxide and warming of ocean waters is occurring on a global scale and may be responsible for weakening corals through bleaching or

other heat-related stresses. Nutrient addition to coastal waters is a local stressor that may be more easily managed than others by implementing wastewater and storm water treatment technologies to *35741 eliminate or significantly reduce nutrient addition.

Just like lawn fertilizer, human wastes contain nutrients that if discharged to water can stimulate algal growth and deplete the amount of oxygen in the water. Algal growth and changes in water chemistry are two of the identified factors in ecosystem decline. The most readily observed impacts of nutrient addition occur in confined waters (canals, marina basins) because of reduced circulation and/or reduced dilution. However, it is feared that if nutrient additions continue or increase, those perturbations will result in changes in community structure further and further from shore.

Manipulative experiments in seagrass beds in south Florida have demonstrated that the time course of response of seagrass beds to nutrient enrichment is on the order of decades. Since the bank reefs are already stressed and are a major component of the economy of the Keys, it is prudent to reduce all manageable sources of pollution before additional environmental degradation occurs.

The Florida Keys ecosystem is, hydrologically, very "open." Water current directions and speeds are very complex and are just beginning to be understood. Nutrients and other pollutants derived from other geographical areas undoubtedly reach waters surrounding the Florida Keys. The mass balance loadings from these various sources have not been quantified because of the hydrological complexity. However, nutrient loadings from land-based sources and vessels in the Keys have been estimated (EPA, 1993; Monroe County Sanitary Wastewater Master Plan, 2000; Monroe County Storm Water Master Plan, 2001). Nutrient loading to a water body can come from various land-based sources including residential, commercial, and municipal sewage treatment systems, poor storm water practices, and other discharges from shoreline facilities and boats.

It is estimated that nutrients from vessel wastewater account for only about 2.8% of the total nitrogen and 3.0% of the total phosphorus loadings into nearshore waters of the Florida Keys (EPA, 1999). While these percentages may not seem significant Keys-wide, it is thought that vessel discharge is a major contributor of nutrients in harbors and other anchorages where vessels congregate.

Type I MSDs treat sewage with disinfectant chemicals before discharge and the discharges must not show any visible floating solids. Type II MSDs provide a higher level of maceration and disinfection, and the discharge contains a greater level of chemicals. Neither Type I or Type II MSDs remove nutrients from the discharge. Raw sewage or improperly treated sewage from vessels or other sources is not only visually repulsive, but also has the potential to expose swimmers and shellfish to pathogens.

Waterborne illnesses directly attributable to sewage pollution include hepatitis, typhoid, cholera, and gastroenteritis. The indicators used to detect the presence of sewage pollution are usually not the pathogens themselves, but rather a type of bacteria called fecal coliform bacteria. Fecal coliform bacteria detected in water can be an indicator of the presence of human waste and the potential exposure to diseases. Enterococci bacteria are another indicator of fecal contamination that is more specific to human wastes than fecal coliform bacteria. When bacteria levels exceed designated public health standards, swimming beaches and shellfish beds may be closed, which can harm tourism and deteriorate the quality of life.

Several studies conducted by the FDEP, or its predecessor agency, have documented

water quality standard violations or other signs of eutrophication (nutrient enrichment) in areas where vessels congregate in the Florida Keys. In 1985, State scientists studied the water quality of waters surrounding the Keys in preparation for their proposed designation as Outstanding Florida Waters (OFW). That study concluded that the majority of waters met the criteria for designation as OFW, but that certain areas, including canals and other confined waters exhibited low values in dissolved oxygen, high nutrient concentrations, and violations of the fecal coliform standard. These areas were listed as "hot spots" by EPA (Phase 1 Report, 1992). Included in that list are several marinas or boat basins (e.g., Plantation Yacht Harbor, Faro Blanco Marina, Boot Key Harbor, Oceanside Marina, and Garrison Bight Marina).

In 1984, FDEP (1987) measured water quality parameters in the vicinity of the City of Marathon (Middle Keys). High levels of nutrients and fecal coliform bacteria were found at Faro Blanco Marina during the tourist season due to discharge of sewage from vessels. In 1990, the Florida Department of Environmental Regulation conducted an intensive one-year study to assess the water quality in Boot Key Harbor (Marathon). Boot Key Harbor is a basin with limited flushing that has approximately 400 live-aboard vessels during winter months. The canals discharging into the basin and the basin itself had reduced oxygen concentration and high fecal coliform concentrations. Fecal coliform levels in the basin were highest during winter months at stations in close proximity to live-aboard vessels; violations of the State standard for fecal coliform bacteria were common.

In 1994, Lapointe et al. assessed nutrient concentrations along transects from known sources, including House Boat Row (Cow Key Channel), Key West. Nutrients were highest at the sources and decreased seaward. They found elevated nutrients hundreds of meters offshore of the source. Because any degradation from ambient conditions is a violation of OFW standards, these elevated nutrient concentrations were a violation of State water quality standards. They also concluded that nutrient enrichment was resulting in significant degradation to seagrass community structure for a considerable distance from shore.

One commentor stated that the use of MSDs on commercial vessels transiting the Keys would cause no water quality or habitat degradation. There are no site-specific scientific studies available that directly address that matter. There are many variables to consider in assessing the impacts of vessels transiting Keys waters including the volume of discharge, level of treatment, the number of vessels, the depth and distance from shore or other sources of pollution, current patterns, and the habitat type at the discharge point. The dilution of wastewater from a single vessel transiting the Keys may be so great that the discharge may not cause serious ecological problems and may not be detectable within a short distance from the point of discharge. However, the cumulative impact from many transiting vessels could be significant. The potential impacts are increased if the transiting vessels discharge in close proximity to coral reef or seagrass habitats. As a practical matter, allowing some vessels to discharge at some locations within the FKNMS would lead to confusion among boaters and enforcement problems. Thus, it is our determination that the prudent and expedient course of action is to eliminate all discharges of wastewater from all vessels in State waters in the FKNMS.

H. Geographic Scope of NDZ

At least one commentor noted that the jurisdictional waters surrounding the City of Key West have previously been designated as a NDZ and suggested that the

proposed Keys-wide NDZ be limited *35742 to 600 feet from shore and only in areas with adequate pump outs. EPA, pursuant to section 312 (f)(3) of the CWA, concurred (August 1999) with the State of Florida's determination that adequate pump out facilities for safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters surrounding the City of Key West. The action cited above prohibits the discharge from all vessels of any sewage, whether treated or not, into such waters around Key West out to a distance of 600 feet from shore.

Based on information provided by the Monroe County Department of Marine Resources, there are many vessel anchorage areas (both nearshore and offshore) throughout the Florida Keys that are outside the zone that would be delineated by a line 600 feet from shore. Many, if not most, of these anchorages are situated in areas with extensive living corals, seagrass meadows, and other unique and ecologically important marine resources. A NDZ limited to 600 feet from shore would not provide an increased level of protection to a vast area within the FKNMS that contains fragile and nationally significant marine resources. In addition, limiting the NDZ area to a line 600 feet from shore would cause confusion among the boating public and would complicate and confound enforcement of the NDZ designation. Therefore, EPA believes that the NDZ should encompass all State waters within the boundary of the FKNMS to provide the highest level of protection afforded by law to the waters and the precious marine ecosystem of the Florida Keys.

III. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is significant and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. This Order defines "significantly regulatory action" as likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact or entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

EPA, in consultation with local and State government officials, has determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

B. Executive Order 13132

The State of Florida is requesting that EPA take action to designate State waters within the FKNMS as a NDZ. Therefore, this order does not apply.

C. Executive Order 13175

This order pertains to compliance costs of this rule to tribes. There are no tribal lands within the boundaries of the FKNMS. Therefore, this order does not apply.

D. Executive Order 13045

This order authorizes EPA the discretion to consider health or safety risks (especially for children) when making regulatory determinations. The net result of this action will be to improve environmental conditions within the FKNMS.

E. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act of 1980, 5 U.S.C. 6501 et seq whenever an agency is developing regulations, it must prepare and make available for public comment the impact of the regulations on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). A regulatory flexibility analysis is not required if the head of the agency certifies that the rule will not have significant economic impact on a substantial number of small entities. EPA policy dictates that an Initial Regulatory Flexibility Analysis (IRFA) be prepared if the proposed action will have any significant effect on any small entities. An abbreviated IRFA can be prepared depending on the severity of the economic impact and relevant statute's allowance of alternatives. After considering the economic impacts of this proposed regulation/rule on small entities, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities.

F. Paperwork Reduction Act

The Paperwork Reduction Act, 44 U.S.C. 3501 et seq., is intended to minimize the reporting and recordkeeping burden on the regulated community, as we minimize the cost of Federal information collection and dissemination. In general, the Act requires that information requests and recordkeeping requirements affecting 10 or more non-Federal respondents be approved by OMB. Since today's rule would not establish or modify any information and recordkeeping requirements, it is not subject to the requirements of the Paperwork Reduction Act.

G. Unfunded Mandates Reform Act of 1995

Under section 202 of the Unfunded Mandates Reform Act of 1995 (the Act), Public Law 104[]4, which was signed into law on March 22, 1995, EPA generally must prepare a written statement for rules with Federal mandates that may result in estimated costs to State, local, and tribal governments in the aggregate, or to the

private sector, of \$100 million or more in any one year. When such a statute is required for EPA rules under section 205 of the Act, EPA must identify and consider alternatives, including the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. EPA must consider that alternative, unless the Administrator explains otherwise in the final rule. Before EPA establishes regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must develop under section 203 of the Act a small government agency plan. The plan must provide for notifying potentially affected small governments, giving them opportunity for meaningful and timely input during the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising them of compliance with the regulatory requirements.

EPA, in consultation with local and State government officials, has determined that this rule does not include a Federal mandate that will result in estimated annualized costs of \$100 million or more to either State, local, and tribal governments in the aggregate, or to the private sector. All vessels that are equipped with MSDs and that navigate throughout the FKNMS are already subject to the EPA MSD Standard at 40 CFR part 140 and the U.S. Coast Guard MSD Standard at 33 CFR part 159. These standards prohibit the overboard discharge of untreated vessel sewage in State waters in the FKNMS and require that vessels with on-board toilets shall have U.S. Coast Guard certified MSDs which *35743 either retain sewage or treat sewage to the applicable standards.

There are 3 types of MSDs certified by the U.S. Coast Guard. Only those vessels that have either one of the two types of certified flow-through devices will be affected by this rule. Those vessels affected by this rule will either retain and pump out treated sewage or discharge outside of the designated NDZ. Any costs associated with those activities is minimal and it is therefore estimated that the annualized costs to State or tribal governments in the aggregate, or to the private sector, will not exceed \$100 million.

Therefore, this rule is not subject to the requirements of sections 202 and 205 of the Act. Because the rule contains no regulatory requirements that might significantly or uniquely affect small governments, it is also not subject to the requirements of section 203 of the Act. Small governments are subject to the same requirements as other entities whose duties result from this rule and they have the same ability as other entities to retain and pump out treated sewage or discharge outside of the designated zones.

List of Subjects in 40 CFR Part 140

Environmental protection, Sewage disposal, Vessels.

Dated: May 7, 2002.

J.I. Palmer, Jr.,

Regional Administrator, Region 4.

Title 40, Chapter 1, Part 140 of the Code of Federal Regulations is amended as follows:

PART 140-[AMENDED]

1. The authority citation for part 140 continues to read as follows:

Authority: 33 U.S.C. 1322.

2. Section 140.4 is amended by adding paragraph (b)(1)(ii) to read as follows:

§ 140.4 Complete prohibition.

* * * * *

(b) ***

(1) ***

(ii) Waters of the State of Florida within the boundaries of the Florida Keys National Marine Sanctuary as delineated on a map of the Sanctuary at <http://www.fknms.nos.noaa.gov/>.

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[FR Doc. 02[]12283 Filed 5[]20[]02; 8:45 am]

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