



*Office of Water
Office of Wetlands, Oceans, and Watersheds
Oceans and Coastal Protection Division*

June 28, 2002

Admiral James D. Watkins
Chairman
The Commission on Ocean Policy
1120 20th Street, NW
Suite 200 North
Washington, DC 20036

Dear Chairman Watkins:

I want to thank you for the opportunity to participate in the Commission's Meeting in Hawaii. The breadth of issues that you must address is expansive, and yet through these regional public meetings, somehow, you are covering them all. Hearing the testimony on all of the relevant issues leaves only limited time for questions. I appreciate your efforts to obtain additional information through follow-up questions to my testimony.

In your letter of May 22, 2002, the Commission requested more information on sewage treatment plants that release effluent into coastal waters without the benefit of secondary treatment, as well as the compliance records of other sewage treatment plants nationally. We have worked with several offices within EPA to provide the enclosed response. We are aware that there were some other issues raised at the public hearings that relate to combined sewer overflows/sanitary sewer overflows and storm water discharges that may also impact coastal areas. We are providing some information on these programs as well.

I look forward to continuing to work with the Commission, in order to move forward in establishing national goals to protect our ocean waters. Please feel free to call on me for any additional information on these or other issues that would be helpful to the Commission.

Sincerely,



Suzanne E. Schwartz
Director

Enclosures



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Enclosure

1) What is the number of sewage treatment facilities in the U.S. that discharge without full secondary treatment?

There are currently 42 publicly owned treatment works (POTWs) in the Clean Water Act (CWA) Section 301(h) program. Two of the POTWs in Puerto Rico discharge through a common outfall, however, and are usually considered as one 301(h) waiver.

The Section 301(h) program provides for waivers for eligible POTWs from the secondary treatment requirements of the Clean Water Act Section 402. Eligible POTWs must discharge into marine waters, and meet a set of stringent environmental criteria. Eligible POTWs generally must have applied for the waiver by the December 1982 deadline. (There is one exception. San Diego had originally applied for a waiver by the 1982 deadline but had subsequently withdrawn its waiver application. The 1994 Ocean Pollution Reduction Act (OPRA) provided San Diego the opportunity to apply for a Section 301(h) waiver for its Point Loma facility.)

At this time there may still be some POTWs with secondary treatment requirements (that do not have waivers under the Section 301(h) program) that are operating under compliance schedules or consent orders, and discharge effluent that has received less than full secondary treatment. However, the last compilation of that information is in the 1996 EPA Needs Survey, and we know this does not reflect the current status. The next Needs Survey is expected in late Fall 2002.

2) Where are these sewage treatment facilities located?

Of the 42 POTWs in the Section 301(h) program, 38 currently have waivers and 4 have pending waiver applications. They are in 6 coastal states—Maine, Massachusetts, New Hampshire, California, Hawaii, Alaska—and in Puerto Rico, Guam, and American Samoa.

Attachment 2A is a list of all of the POTWs in the Section 301(h) program and their status—those POTWs currently with waivers, and those with pending waiver applications. The list is organized by Environmental Protection Agency (EPA) Region and by State within the Region.

3) Why have these sewage treatment facilities been granted waivers, allowing them to discharge effluent without secondary treatment?

The Clean Water Act authorizes EPA to grant an eligible POTW a Section 301(h) waiver from secondary treatment if the POTW makes a satisfactory demonstration to EPA that it meets a set of environmentally stringent criteria. Key criteria include: the POTW's discharge must protect and support a balanced indigenous population of marine organisms beyond the zone of initial

dilution; the POTW must conduct an ongoing, comprehensive site-specific monitoring program; and the POTW must have a toxics control program, including nonindustrial source controls to minimize the entrance of toxic pollutants and pesticides from nonindustrial sources, and industrial pretreatment. There are additional requirements for POTWs that serve urban areas. Section 301(h) and the implementing regulations, found at 40 CFR Part 125, subpart G, specify the criteria. The criteria include those listed in Attachment 3A.

The 1994 OPRA added conditions beyond the previously existing Section 301(h) requirements for San Diego to be granted the waiver. The conditions included: increasing water reclamation capacity (45,000,000 gallons per day), resulting in a reduction in the quantity of suspended solids discharged; and removing a minimum of 58% of biochemical oxygen demanding material (BOD) on an annual average, and 80% of total suspended solids (TSS) on a monthly average.

4) What is the estimated amount of sewage that is discharged into our waters from these sewage treatment facilities?

Each POTW has site-specific requirements for effluent limitations and level of treatment that have been evaluated to determine that the discharge meets all of the Section 301(h) criteria. The estimated total volume discharged from POTWs in the Section 301(h) program is **785 million gallons per day (MGD)**. POTWs in the Section 301(h) program discharge treated sewage effluent that has received less-than-full secondary treatment. All of these POTWs have a requirement for a minimum of primary treatment (which removes less TSS and BOD than secondary treatment). The volumes discharged by each of these POTWs vary, from less than 0.05 MGD to 240 MGD.

Generally, discharged effluent from the smallest POTWs has received primary treatment—**95 MGD from 30 POTWs**; discharged effluent from the largest POTWs has received treatment ranging from advanced primary to close to secondary standards—**250 MGD from 8 POTWs and 440 MGD from 4 POTWs, respectively**.

5) What would be the projected benefit with regards to amounts of effluent discharged to coastal ecosystems if secondary treatment at these sewage treatment facilities were required?

If the influent volumes remain the same, and the only difference considered is volume discharged with existing level of treatment under a Section 301(h) waiver compared to full secondary treatment, there would not be an expected significant difference in volumes of effluent discharged.

Waivers are granted for discharges with less than full secondary treatment. The two largest

POTWs in the program are Orange County Sanitation District and San Diego Point Loma (more than half the total volume of effluent discharged from the entire universe of Section 301(h) POTWs). About one-half of Orange County's 240 million gallons per day receives advanced primary treatment (which removes about 70% of TSS), and one-half receives full secondary treatment. These treated effluents are blended before discharge to an ocean outfall that extends about five miles offshore. The effluent is discharged in water depths of about 180 feet through a multi-port diffuser. Orange County removes an average of 79% of TSS, and 67% of BOD, consistently over the last 7 years. San Diego provides advanced primary treatment for its 190 MGD discharge. In 2001 the average percent removal of TSS was 88%; BOD percent removal has averaged 60%.

Approximately 5-10 percent additional TSS and 15-20 percent additional BOD would be removed at these two POTWs if they went to full secondary treatment.

Puerto Rico has committed to provide advanced primary treatment for any POTW that receives a Section 301(h) waiver. The 3 Puerto Rico POTWs with current waivers have a requirement to provide advanced primary treatment. The draft permits for the 2 POTWs with proposed waiver approvals include a requirement for advanced primary treatment. All 6 Puerto Rico POTWs discharge a combined volume of approximately 150 MGD. Two POTWs in Hawaii add another 100 MGD, and provide advanced primary treatment on a seasonal basis. These 8 and the previously mentioned 2 POTWs discharge approximately 680 MGD (85+%) of the total under Section 301(h). Another 2 POTWs discharge about 10 MGD of effluent that has received close to secondary treatment.

The other 30 POTWs discharge approximately 95 MGD with primary treatment. The largest of these POTWs is Anchorage, which discharges approximately 44 MGD, or about one-half of the combined discharge volume that receives primary treatment.

6) How many sewer and treatment facilities annually have been found out of compliance with secondary treatment requirements and/or existing discharge permits?

We have looked at this question several ways to put into perspective the status of compliance for publicly owned treatment works (POTWs) with treatment requirements and effluent limits. Attachments 6A, B, and C present summary information for permit effluent violations nationally (6A), and for coasts (6B) and the Great Lakes (6C). The latter two categories are estimates based on our best judgments in the short time frame to characterize discharges that fit into those categories.

We are also providing some information on EPA's combined sewer overflow (CSO)/sanitary sewer overflow (SSO) program activities. Section 112 of the Consolidated Appropriations Act for Fiscal Year 2001, P.L. 106-554, required EPA to report to Congress on the progress made by

EPA, States and municipalities in implementing and enforcing the CSO Control Policy. The Report (EPA 833-R-01-003) finds that definite progress has been made in implementing and enforcing CSO controls prior to, and as a result of, the 1994 CSO Control Policy. Today, 772 communities hold 859 Clean Water Act Section 402 permits that regulate 9,471 CSOs. Some CSO communities have made significant investments to reduce the frequency, volume, and duration of CSOs, which has resulted in increased protection of human health and water quality. All 32 states (including the District of Columbia) with combined sewer systems have developed CSO strategies, and most have adopted the key provisions of the CSO Control Policy. In spite of the progress that has been made, CSOs still present a potentially serious environmental and public health threat in some areas.

EPA submitted the Report to Congress on Implementation and Enforcement of EPA's Combined Sewer Overflow Policy in January 2002. The weblink to this document is:

<http://www.epa.gov/npdes/cso> (scroll down the page and click on Report to Congress). The entire document may be accessed from this site. For your convenience we are including links specifically to the executive summary and to the appendix that summarizes State enforcement activities through June 2001. It is difficult to generalize nationally as the program has not been fully implemented in all states. The executive summary weblink is:

<http://www.epa.gov/npdes/pubs/csorcexecsum.pdf>. The pertinent appendix for enforcement (Appendix P) is: http://www.epa.gov/npdes/pubs/esortecappsd_s.pdf. We are also including a hard copy of Appendix P (Attachment 6D).

In addition, we are providing a general overview of EPA's stormwater program requirements and status of implementation. This program addresses municipal separate stormwater sewer systems (MS4). The 1990 Phase 1 storm water regulations addressed medium and large municipalities (incorporated areas with 100,000 population or greater). The 1992 Phase 2 regulations address small urbanized areas. The Phase 1 stormwater program is administered by the States, as will the Phase 2 program. California has been permitting MS4s longer than any other State. California and Florida have taken efforts recently to evaluate existing MS4 programs with the intent of making these programs more consistent and more effective. We do not have a compilation of enforcement activities nationwide.

We are including a compilation of information about the municipal storm water program, including: Phase 1 and Phase 2 stormwater program regulations; fact sheets; lists of municipalities covered under Phase 1 and potentially covered under the Phase 2 regulations; Reports to Congress and reports by the General Accounting Office (GAO) and the EPA Office of the Inspector General (OIG).

The 1990 Phase 1 storm water regulations are found at 40 CFR Section 122.26 (exclusive of the 1999 additions from Phase 2). Permits for Phase 1 communities are based on the application requirements detailed in Section 122.26(d)(iv). Generally, the storm water management programs are required to include a comprehensive planning process which involves public

participation and intergovernmental coordination to reduce the discharge of pollutants to the maximum extent practicable through the use of management practices, control techniques and system design and engineering methods. Separate programs are to be implemented by each co-permittee. Programs are to include:

- Structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the MS4.
- A program to detect and remove illicit discharges and improper disposal into the storm sewer.
- A program to monitor and control pollutants from municipal landfills, hazardous waste treatment, disposal, and recovery facilities, industrial facilities subject to SARA 313 requirements, and any other industrial facilities that the MS4 determines are contributing a substantial pollutant loading to the MS4.
- A program to implement and maintain structural and non-structural BMPs.

Details of each of these programs are provided in 122.26(d)(iv).

Attachment 6E is a spreadsheet containing a list of the approximately 270 Phase 1 MS4s (with co-permittees as applicable). Attachment 6F is the Phase 2 storm water rule. The list of potential Phase 2 communities requiring permit coverage is included as Appendices 6 and 7 of the Phase 2 rule. That list is based on 1990 census data. The actual list of Phase 2 communities requiring permit coverage is to be based on the 2000 census data. On May 1, 2002, the Census Bureau published a list of urbanized areas from which the list of Phase 2 communities will be developed that may be useful for identification of areas covered by Phase 2. A copy of the federal register notice announcing the new urbanized areas is Attachment 6G.

We are also providing a summary of the requirements for Phase 2 MS4s. First, here is a link to a series of fact sheets that describes the requirements for Phase 2 MS4s:

http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm?program_id=6. (Cut and paste this into a web browser, or use the following web link: <http://epa.gov/npdes/stormwater>. Then, click on Phase 2 in the Topics window. Then scroll down the page and click on Storm water Phase 2 fact sheet series.)

One of those fact sheets (fact sheet 2.0) provides an overview of the Phase 2 MS4 program and is probably most relevant, so we have included it here for your convenience. Page 2 of that fact sheet provides a good overview of the six minimum control measures that are to be included in a small MS4 storm water management program. This fact sheet is Attachment 6H.

Reports by GAO and OIG also discuss EPA's storm water program. These are Attachments 6I and 6J, respectively.

Finally, here is a long link to two Reports to Congress (for Phase 1 and Phase 2 storm water) on

EPA's website:

http://cfpub.epa.gov/npdes/docs.cfm?document_type_id=6&view=Program%20Status%20Reports&program_id=6&sort=name (please cut and paste into a web browser).

7) How does EPA enforce discharge permit requirements and what are the limitations of current enforcement capabilities?

The Clean Water Act provides EPA with various enforcement mechanisms for responding to violations of Sections 301 and 402 for discharging without, or in violation of, a Clean Water Act Section 402 permit. Under Section 309(a), the Agency is authorized to issue an administrative compliance order (AO) requiring a violator to cease an ongoing unauthorized discharge or to refrain from future illegal discharge activity. Section 309(g) of the Act authorizes EPA to assess administrative penalties for permit violations or discharges into the waters of the U. S. without a permit. Section 309(g) establishes two classes of administrative penalties, which differ with respect to procedure and maximum assessment, for such violations. A Class I penalty, provided for under Section 309(g)(2)(A), may not exceed \$11,000 per violation, or a maximum amount of \$27,500. A Class II penalty under Section 309(g)(2)(B) may not exceed \$11,000 per day for each day during which the violation continues, or a maximum amount of \$137,500.

EPA may also seek injunctive relief, criminal penalties (fines and/or imprisonment), and civil penalties through judicial action under CWA Sections 309(b), (c) and (d), respectively. Under these provisions, the Agency may refer cases to the Department of Justice (DOJ) for civil and/or criminal enforcement. Under Section 309(d), EPA may seek civil penalties of up to \$27,500 per day per violation in the Federal district courts for CWA violations including the violation of a Section 309(a) administrative compliance order.

One limitation on Clean Water Act jurisdiction is the fact that under Sections 301 and 502 of the Act an enforcement action may only be brought for "point source discharges" of pollutants. Non-point sources of pollution such as agricultural runoff are generally not regulated. In addition, EPA and the States have limited resources to address a myriad of potential point source discharges. Only a limited amount of inspections and surveillance can be done to uncover violations on an annual basis.

Admiral James D. Watkins
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Dear Chairman Watkins:

Thank you for the opportunity to provide EPA's perspectives during the Ocean Commission's Regional Meeting in Hawaii. I appreciate your efforts to obtain additional information regarding the important issues being addressed by the Commission.

In your letter dated July 15, 2002, you requested more information concerning the incorporation of educational programs into laws and regulatory practices. Current laws requiring educational programs are often general and do not provide specific guidance, thus allowing for individual interpretation. As such, EPA has developed a wide variety of educational programs with specific goals and intentions. Enclosed please find examples of various EPA programs devoted to educating the public or industry regarding coastal and ocean issues. Some of these programs are mandated by law and others are based on voluntary efforts.

I look forward to continued work with the Commission to develop a coordinated and comprehensive national ocean policy. Please feel free to call on me for any additional information on these or other issues that would be helpful to the Commission.

Sincerely,

Suzanne E. Schwartz
Oceans and Coastal Protection Division
Director

Enclosure

Clean Water Act Section 301(h)

The Clean Water Act Section 301(h) program provides for waivers from full secondary treatment requirements for eligible publicly owned treatment works (POTWs) that discharge into marine waters. Less treatment may result in less removal of toxic pollutants in the effluent. For example, toxic pollutants may adsorb to greater concentrations of particulates. The CWA Section 301(h) establishes greater controls to reduce the introduction of toxic pollutants to the POTW. In addition to requiring industrial pretreatment, CWA Section 301(h)(7) requires the applicant to establish a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources to the POTW. The implementing regulations establish a nonindustrial source control program requirement for 301(h) waiver applicants to propose a public education program designed to minimize the entrance of nonindustrial toxic pollutants and pesticides into its POTW(s). The POTW must implement it no later than 18 months after the 301(h) modified permit is issued. (40 CFR Part 125.66(d)).

Beaches Environmental Assessment and Coastal Health (BEACH) Act

The BEACH Act requires EPA to provide technical assistance to States and local governments for assessing and monitoring floatable materials. EPA is providing initial assistance by developing and making available to the public the "*Assessing and Monitoring Floatable Debris*" document that should be released in August 2002.

National Estuary Program Monitoring Program

The EPA developed the *Volunteer Estuary Monitoring: A Methods Manual* to serve as a tool for volunteer leaders who want to launch a new estuary monitoring program or enhance an existing program. In the process, the manual shows how volunteer groups can collect meaningful data to assess estuarine health. The manual is not intended to mandate new methods or override those currently being used by volunteer monitoring groups. Instead, it presents methods that have been adapted from those used successfully by existing volunteer estuary monitoring programs throughout the United States. The manual describes methodologies and techniques for monitoring water quality parameters, starting and maintaining a volunteer estuary monitoring program, working with volunteers, ensuring high quality data, and analyzing and presenting the data following collection.

EPA's Volunteer Monitoring Program

The EPA's Office of Water established the Volunteer Monitoring Program as a way for citizens to learn about their water resources and the benefits associated with it. The program helps volunteer monitors to build awareness of pollution problems through trainings in pollution prevention. It also helps clean up problem sites, provide data for waters that may otherwise be unassessed, and increase the amount of water quality information available to decision makers at all levels of government.

The EPA sponsors national conferences that bring together volunteer organizers and agency representatives; manages a list-server for volunteer monitoring program coordinators; supports a national newsletter for volunteer monitors; prepares and regularly updates a

directory of volunteer monitoring programs; and publishes manuals on volunteer monitoring methods and on planning and implementing volunteer program

Marine Plastic Pollution Research and Control Act (MPPRCA)

The Marine Plastic Pollution Research and Control Act requires that the effects of plastic pollution on the marine environment be identified and reduced. This comprehensive legislation amends the Act to Prevent Pollution from Ships (APPS). Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL) prohibits the discharge in the sea of all plastics including, but not limited to, synthetic fishing nets and plastic garbage bags. It also prohibits discharge of food wastes and other floating materials within specified distances from land. APPS implements MARPOL Annex V domestically. Under the MPPRCA, EPA has developed and implements the National Marine Debris Monitoring Program (NMDMP); provides leadership for the International Coastal Cleanup (ICC); and assists other Federal agencies, State, Tribal, and local governments, industry, universities, environmental groups, and citizens in addressing marine debris issues.

The International Coastal Cleanup

The Ocean Conservancy, formerly known as the Center for Marine Conservation, established and maintains the annual International Coastal Cleanup Campaign (ICC) with support from EPA and other stakeholders. As of 2001, worldwide more than 4.7 million volunteers from 118 countries have cleaned 114,025 miles of shoreline, picking up 92.6 million pieces of debris weighing over 78.7 million pounds. The growth of this program over the last 16 years is proof to the global nature of the marine debris problem. What started as a local effort in the State of Texas back in 1986 is now the largest volunteer environmental data gathering effort and associated cleanup of coastal and underwater areas in the world. It takes place every year on the third Saturday in September.

National Marine Debris Monitoring Program

EPA along with other federal agencies helped to design the National Marine Debris Monitoring Program (NMDMP), and EPA is supporting The Ocean Conservancy's **implementation of the program. NMDMP is designed to gather scientifically valid marine debris data following a rigorous statistical protocol. The NMDMP is designed to identify trends in the amounts of marine debris affecting the U.S. coastline and to determine the main sources of the debris. This scientific study is conducted every 28 days by volunteers at randomly selected study sites along the U.S. coastline. The program began in 1996 with the establishment of 40 monitoring sites ranging from the Texas/Mexico border to Port Everglades, Florida and included Puerto Rico and the U.S. Virgin Islands. The NMDMP calls for the establishment of 180 monitoring sites located along the coast of contiguous U.S. states and**

Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands. To date 163 study sites have been designated and 128 sites are collecting data. The program will run for a 5-year period once all of the study sites have been established.

Marine Debris Learning Guide

Turning the Tide on Trash: A Learning Guide on Marine Debris is an interdisciplinary curriculum designed to provide maximum flexibility in the classroom. The guide can be used as a stand-alone teaching tool, or individual activities may be used to supplement work in other subject areas. The Learning Guide opens with an exercise that encourages students to think about their own behaviors and attitude respects to litter. This document provide a basis for students to understand their contribution to the marine debris problem and will help teachers to engage to students into activities presented later in the guide that deals with the sources and effects of marine debris.

Storm Drain Sentries Program

Supported by the U.S. Environmental Protection Agency (EPA) Office of Wetlands, Oceans and Watersheds, the Storm Drain Sentries Program was created because information collected from the International Coastal Cleanup and other research and analysis suggested that storm drains are major sources of marine pollution. The main goal of the program is to increase public awareness about the problems associated with nonpoint sources of pollution with a goal of having volunteers stencil one million storm drains with educational messages to protect our waterways.