

microscreen treatment to achieve proposed limits for Total Suspended Solids (TSS).

To address comments about the lack of representation of warm water and green water systems, EPA visited two facilities that use warm water culture systems and four facilities that use green water systems. Warm water culture systems refer to the culture of aquatic animals such as catfish, tilapia, or shrimp, that normally live in warmer water. These species can survive water temperatures that exceed 70–75°F for extended periods. Cold water species, such as salmonids, live and are cultured in much colder water and would become severely stressed or die in warmer water. Green water systems contain algae and zooplankton in the water with the cultured fish. Although most green water systems are warm water, some may be used for cold water species. Some green water systems are used to grow species, such as marine fish (e.g., cod or flounder), crustaceans (e.g., shrimp), and freshwater fish (e.g., larval striped bass, walleye or yellow perch) that consume the algae and/or zooplankton as a major part of their diets. Other facilities use green water cultures to remove metabolic wastes from the aquatic animals in the process water. Green water systems could contain measurable amounts of TSS in effluents, primarily because of the plankton present in the culture water.

To address public comments about the effectiveness of microscreen treatment, especially in cold temperatures, EPA visited four facilities reporting the use of microscreen technology to treat wastewater. We chose these four facilities from a population of 13 facilities that reported in their responses to the detailed survey that they used microscreen technology as a primary or secondary solids removal treatment system. During the visits to these four facilities, EPA observed microscreens being used to remove solids from effluent streams. EPA also evaluated how these facilities incorporated microscreens into the daily operation and maintenance activities. See Section III.A. for further discussion of this issue.

Other facilities that EPA visited included several State and Federal hatcheries in California, Washington, Idaho, Pennsylvania, and Utah. EPA looked at the differences in mission, operation, and management of government facilities compared to commercial facilities.

B. Monitoring and Permit Data From the Permitting Authorities

To further assess facilities with NPDES permits, EPA asked the EPA regional offices for updated copies of permits, fact sheets, and DMR data for many of the 125 facilities. EPA evaluated NPDES permits and DMR data for 43 of the 125 facilities identified as having a NPDES permit. EPA used the detailed surveys and NPDES permit information to identify discharge points and the nature of discharges (e.g., full flow from raceways or solids collection decant water) in the DMR data.

To better evaluate the quality of current facility discharges compared to the proposed limits, EPA used the detailed surveys to determine the number of facilities reporting NPDES permits. Of the 203 facilities that responded to the detailed survey, EPA found 125 potentially in-scope facilities (i.e., facilities that are subject to the proposed regulation) with existing NPDES permits. The facilities with NPDES permits use these systems:

- 108 flow-through systems.
- 6 recirculating systems.
- 8 pond systems.
- 3 mixed flow-through and recirculating systems.

EPA found that 78 facilities did not report having NPDES permits,

- 9 facilities that are not discharging or indirectly discharge.
- 9 net pen facilities.
- 25 pond facilities.
- 4 recirculating system facilities.
- 31 flow-through system facilities.

Many of these facilities are not subject to existing requirements for NPDES permits (i.e., ponds that discharge less than 30 days, warm water facilities producing less than 100,000 pounds, and cold water facilities producing less than 20,000 pounds).

EPA was primarily interested in getting information on the permit requirements and effluent monitoring data to better assess the baseline performance of facilities (i.e., current effluent treatment conditions) that are in-scope for the proposed regulation. A listing of the NPDES permit numbers for the facilities identified for additional data gathering is available in the record (see DCN 70264). See Section III.G. for discussion of the analysis on the NPDES permits and DMR data.

EPA was also interested in getting information about best management practices (BMPs) required in NPDES permits to compare with the BMPs required in the proposed regulation. For those facilities that have BMP requirements in the NPDES permit, EPA observed that the requirements were

primarily related to developing overall facility BMP plans and to practices that addressed drugs and chemicals.

C. Information Submitted With Comments

In the proposal, EPA asked for data and information from commenters. EPA received about 300 public comments on the proposed rule. A wide range of stakeholders representing Federal, State, and local government agencies, industry associations, environmental groups, individual facilities, and members of the public provided comments. Comments addressed many aspects of the proposed regulation and EPA's supporting analysis, including scope of the rule, environmental impacts, regulatory authority, cost, economic impact, and benefit analyses. In some cases, commenters submitted supporting materials (in the form of engineering, economic, scientific, or regulatory reports or journal articles; data summaries or compilations of engineering, economic, scientific, or regulatory data; or references to such information). See Section 7.5 of the Public Docket for this rulemaking for these materials.

The comments included information on the costs associated with flow-through systems for the structural, labor, and land components described in each proposed flow-through option. In preparing this notice, EPA used this cost information to help fill gaps in the detailed survey data and to better understand industry diversity. EPA plans to use this additional cost information in refining its estimates of compliance costs for the final rule. The Agency included this information in developing the revised cost estimates presented in this notice. You can find non-confidential cost information in Section 6.5.3 of the public record. Several comments provided monitoring data, used in conjunction with the DMR data described in Section II.B.

The Joint Subcommittee on Aquaculture (JSA) has a task force known as the Aquaculture Effluents Task Force (AETF) that concentrates on the effluent guidelines efforts. The AETF is a group of interested parties representing Federal, State and local governments, academia, industry and environmental organizations. The AETF submitted detailed comments on aspects of the proposed rule such as the use of drugs and chemicals, production systems, costs and economic analyses. In response to EPA's follow-up requests, the AETF provided additional information, primarily papers that were referenced by their comments, or that supported statements made in their