

farm effluents, a 2001 benthic macroinvertebrate survey confirmed that all six streams were still impaired. In 2002, the State prepared a TMDL for these six stream segments. The State affirmed that aquaculture effluents were the primary source of organic solids that impaired these short stream segments (ranging from 0.02 to 0.8 miles). They constitute from 86 to 99 percent of the organic solids loading in these largely first-order, spring-fed streams (DCN 40571).

F. Best Management Practices

Many commenters stated that EPA did not have enough information to develop best management practices that would apply to all CAAP facilities alike. Commenters also did not want the BMPs to be prescriptive. They wanted language changes to allow for flexibility and innovative technologies. Commenters asked EPA to consider alternatives to the preferred options selected for the proposal for certain subcategories. As a result, EPA is considering several changes to the BMP requirements in the proposed rule.

Among the comments received on BMPs are:

- Commenters preferred BMPs over direct monitoring to comply with numerical limits. One commenter reported that testing (including shipping) took about 600 employee hours and \$40,000 per year. The commenter also stated that reliance on BMPs would ease the burden and allow them to shift the hours and dollars spent on testing to implementing BMPs.
- Other concerns should be addressed in developing a BMP plan, but the appropriate personnel at the facility should identify the selected practices or control options, subject to regional or State review. Commenters also stated that the BMPs should not be prescriptive due to regional and State variations in aquatic animal production operations as well as possible misinterpretation by permit writers.
- EPA should better define the term "BMPs" and the requirements of a BMP plan.
- EPA underestimated time and costs for development of BMPs.
- Some commenters supported BMPs but did not believe that EPA should issue a final guidance document (an updated version of the proposal document). Instead, EPA should give references to other sources such as land grant universities that have researched this area.
- The proposed BMPs would control effluent discharges poorly. Some commenters indicated that BMPs should not be used as a replacement for

discharge limitations but as an added tool to achieve discharge reductions.

Based on comments, EPA is considering a simplified guidance document to identify recommended components of a BMP plan. In EPA's view, a list of these components may help guide producers in developing their own BMP plans. Such guidance might also help reduce the burden on producers of developing a plan and allow flexibility in meeting the facility's specific goals. (Section IV.C. describes these components)

G. Proposed TSS Limitations

EPA received comments stating that it lacked information to develop numerical limitations relevant to all CAAP facilities. Commenters stated that regional differences (among facilities) and effluent characteristic differences (between cold water and warm water species) would make it impractical for all facilities to meet the proposed limits.

The National Association of State Aquaculture Coordinators (*see* DCN 62387) asserted that there is no evidence to show that using best professional judgment to develop limitations associated with NPDES permits is not already protecting water quality effectively and that a national effluent guidelines regulation is not necessary. They later provided information on recent developments in some State programs on the use of BMPs in NPDES permits for CAAP facilities. EPA will consider this information with other information the Agency collected to further evaluate current wastewater treatment practices in the industry.

In response to these comments, EPA performed a preliminary assessment of the TSS limitations and found that most flow through facilities already have relatively low discharges of TSS in full flow or recombined flow effluents. The BMP approach will provide an additional control of TSS discharges. Thus, EPA is reconsidering whether monitoring of TSS concentrations is necessary for this industry. EPA seeks comment on this issue.

EPA proposed that, in the case of flow-through systems, TSS limitations would apply on a net basis (67 FR 57927). That is, the discharge limitation would apply to the amount of TSS added by the production system. This approach is consistent with the NPDES general permit conditions for CAAP facilities in at least one State (Idaho). For recirculating systems, by contrast, EPA proposed that TSS limitations would apply on a gross basis, without accounting for TSS in the source water. EPA's supporting documentation for the proposal shows that the data used to

establish the proposed limitations for both subcategories was based on gross TSS concentrations.

The NPDES permit regulation provides a procedure for adjusting limitations to reflect credit for pollutants in intake source water in certain circumstances. These include a demonstration that a discharger's control system would meet the applicable limitations in the absence of pollutants in the intake water (*see* 40 CFR 122.45(g)). EPA is now considering whether to promulgate limitations for both subcategories that leave the decision of establishing permit limits on a net or gross basis to the permit writer. A requirement to establish limitations on a net basis could be interpreted to require all CAAP facilities to collect samples from both their effluent and influent, thus doubling the number of samples required and the analytical costs, which may be unnecessary under many circumstances. For example, facilities whose source water is spring fed may have very little TSS in the source water. Likewise, some recirculating facilities may use public water supplies that also have low TSS concentrations in their source water. Another approach would require monitoring of influent only where effluent monitoring shows a possible exceedence of the limit.

EPA asked for updated copies of NPDES permits, fact sheets, and DMR data for 125 permitted facilities from the EPA regional offices. EPA was able to get NPDES permits for 49 facilities in the detailed survey. EPA also obtained DMR data directly from facilities and PCS for 47 facilities. EPA got DMR data and permits for 43 facilities. There were six facilities for which EPA had NPDES permits but not DMR data and four facilities for which EPA had DMR data but not NPDES permits.

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. EPA found reported TSS data in the DMR set from 31 of the 47 facilities for which it had DMR data. Sixteen facilities in the DMR set did not have TSS data. EPA concluded that 28 of the 31 facilities with TSS data use at least primary settling treatment. Two of the 31 facilities indicated that they have no treatment, and EPA was not able to verify in-place treatment for one facility.

To determine the ability of facilities to meet the primary treatment option, EPA then compared the reported TSS concentration data with the limits proposed for flow-through facilities that produce 100,000 to 475,000 pounds of