

been limited in part by implementation of pre-prepared recovery plans, some of which have included deregulating catch limits for public fishing on escaped farm fish, and by programs to monitor the background populations of fish in nearby watersheds. These responses will continue to be effective management practices to minimize impact, together with further advances in the technology. Improvements in the design and engineering of net pens and their anchorages, and the use of new net materials, are continuing to reduce the incidents of loss following structural failure or damage from large predators.”

In addition, JSA gave references updating information contained in earlier sources we cited in developing the proposed rule addressing viral hemorrhagic septicemia (VHS) on the West Coast. In contrast to that earlier information, the more recent references provided by JSA demonstrate that VHS was a pre-existing condition in marine fish throughout the Pacific Northwest. These references are:

- Amos, K.H., J. Thomas, B. Stewart, and C.J. Rodgers. 2001. “Pathogen transmission between wild and cultured salmonids: risk avoidance in Washington State, United States of America.” *Risk Analysis in Aquatic Health: Proceedings of an International Conference*, Paris, France, 8–10 February, 2001:83–89 (DCN 40609).

- Amos, K.A., J. Thomas, and K. Hopper. 1998. “A case history of adaptive management strategies for viral hemorrhagic septicemia virus (VHSV) in Washington State.” *Journal of Aquatic Animal Health* 10:152–159. (DCN 70732)

- Meyers, T.R. and J.W. Winton. 1995. “Viral hemorrhagic septicemia virus in North America.” *Annual Review of Fish Diseases* 5:3–24. (DCN 40592)

Some commenters urged EPA to more effectively and appropriately align any considerations about invasive species with existing Federal (*e.g.*, the National Invasive Species Council), State, and other authorities and requirements. Other comments asserted that EPA should not regulate non-native species because they are already regulated by other agencies.

Commenters further stated that EPA should better define some of the terms we used in the proposal (such as “non-native species” and “biological pollutants”). The proposed non-natives definition applies to an individual, group or population of a species that is introduced into an area or ecosystem outside its historic or native geographic range and that was identified by the appropriate authority as non-native or

invasive. Most States have, by statute or regulation, identified certain species of plants and animals as non-native, invasive or exotic species that could threaten native aquatic biota. The term excludes species raised for stocking by public agencies in a given State. EPA excluded these species because the action of stocking a species in public waters provides a sanctioned opportunity for the species to become established. In any given State, if an aquatic animal species that is otherwise defined as non-native is raised to be stocked in public waters, then any commercial facilities producing the same species, by definition, would not be producing a non-native species. EPA defers to the States to determine what species are considered non-native in their State.

EPA recognizes that non-native species do not always present a problem. The problem lies in a species becoming invasive or established in an area to the point where it creates adverse human health, economic or ecological/environmental impacts. EPA is evaluating the information described in Section II.E.3 of today’s notice and comments on the proposal and will assess whether the requirements for minimizing and/or reporting on escapes of non-native species are appropriate. EPA is particularly interested to learn about prevention measures that reduce the likelihood that species or pathogens will become invasive or established (*e.g.*, regular inspection and maintenance of escape prevention devices). For the final rule, EPA will also consider costs, economic impacts, effectiveness, and possible benefits, and existing relevant Federal, State, Tribal, and other requirements or practices.

#### *E. Water Quality Impacts From TSS, BOD, and Nutrients*

EPA received several comments about water quality impacts from CAAP facilities. (This section addresses comments on discharges from flow-through and recirculating facilities. Section III.B.2 discusses comments on water quality impacts at net pen systems. Elsewhere in Section III, you will find discussions on impacts from other discharges.) As discussed in Section II.E.4, some information indicated that CAAP facilities may be a significant part of local water quality impacts. Commenters were especially concerned with one source of information EPA considered in developing the proposed rule (State CWA section 303(d) reports on the causes and status of impaired water bodies) and questioned whether water quality impacts from CAAP facilities

were of sufficient national scope to warrant a national effluent guideline.

Commenters also discussed situations where CAAP effluents might contribute to positive water quality impacts. In addition, commenters reviewed existing regulatory structures that, they asserted, provided adequate water quality protection. Following public comment, EPA received materials from a State agency drawing attention to what they characterized as serious adverse water quality impacts at several CAAP facilities in their jurisdiction (Section II.E.4. describes additional information about water quality EPA compiled since proposal).

Two stakeholder groups (JSA and NASAC) argued that there is no evidence that CAAP is a “significant threat to our Nation’s waters.” They asserted that “[t]o justify promulgating national effluent rules for the U.S. aquaculture industry, EPA must provide scientific documents irrefutably identifying that most of the U.S. aquaculture facilities are compromising the water quality of the receiving waters from aquaculture facilities.” These groups offered the results of a NASAC study documenting that a far smaller number of States (two) than discussed in EPA’s proposal documents (seven) identified aquaculture as a major source of impairment in the 1998 and 2000 303(d) lists they submitted to EPA (DCN 70583).

EPA reviewed this information and concurs with several key findings of the NASAC 303(d) report. First, NASAC’s analysis correctly shows that although seven States listed aquaculture as a possible source of impairment to water bodies within their borders, only two of these States (North Carolina and Virginia), when contacted by NASAC, verified that aquaculture facilities were a source of impairment. The remaining States indicated to NASAC that aquaculture was not a known source of impairment on the impaired stream segments reported to EPA. However, one of the States noted that aquaculture had subsequently been identified as a possible source of impairment on a different stream segment. EPA also concurs that, for the reported aquaculture-related water body impairments, local authorities reported that impairments are being addressed by site-specific solutions. In the case of North Carolina, according to the NASAC report, the State addressed water quality impairment in the affected arm of Santeetlah Lake by structuring a buy out that will remove the trout farms contributing to the impairment. In the case of the six stream segments that Virginia reported impaired due to trout