

October 1, 2001

Colonel Brian E. Osterndorf
New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

RE: Providence River and Harbor Maintenance Dredging Project - Final Environmental Impact Statement August 2001

Dear Colonel Osterndorf:

Thank you for providing the *Providence River and Harbor Maintenance Dredging Project Final Environmental Impact Statement* of August 2001 to the Rhode Island Department of Environmental Management (RIDEM) for review and comment. This document represents a major effort directed and coordinated by the Army Corps of Engineers and joined by the cooperating federal agencies and my Department. The project development process has been characterized by open discussion and a willingness on the part of the Army Corps of Engineers to make an extra effort to address complicated issues, which is much appreciated. Our comments are presented below.

Windows and Sequencing

The Department has conducted additional analysis concerning the impacts of important target populations (winter flounder and tautog) within the upper bay. The Department does not agree with the 0% larval tautog loss estimate and has used a 1% estimate instead. Based on our adult equivalent analyses, winter flounder and tautog losses could reach 10,000 and 5,931 respectively under no windows or no sequencing alternatives. Equivalent adult losses under the sequencing options could range from 0 to 2431 for winter flounder and from 2601 to 5203 for tautog. Although sequencing can reduce losses, the optimal alternatives are not complementary by species. The best options for winter flounder are the worst for tautog, due to the considerable difference in the species' spawning time.

Both winter flounder and tautog support important local fisheries and are currently at relatively low abundance (Figure 1 and Figure 2). Although intensive management has allowed for recovery from the historic lows of the mid 1990's, the recovery remains tenuous. Extraneous losses due to dredging could affect continued recovery.

The Department also recognizes, however, the potential ecological and economic impacts from an extended project duration if dredge windows are used. It would be helpful to have an analysis of the costs and cumulative impacts under the dredge windows alternative, taking into account the longer project time and resultant impacts over the course of additional spawning seasons, and comparing them with costs and impacts under the sequencing alternative. The Department believes this information could strengthen its ultimate determination in its Water Quality Certificate review.

Mixing Zone and Monitoring

RIDEM will require the mixing zone for the disposal of dredge material into the CAD cells to comply with the Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual (Inland Testing Manual) and the Evaluation of Dredged Material Proposed for Ocean Disposal (Green Book) in that water column toxicity shall not exceed .01 of the LC₅₀ beyond the boundaries of the mixing zone after allowing a four (4) hour mixing period. Monitoring will be required to determine compliance with these requirements. RIDEM will require that the ACOE provide a plan specifying how it will respond to any exceedences of the established criterion should they occur.

Appendix A found in Chapter 8 of the FEIS, provides a description of the modeling used to perform the mixing zone analyses. Please provide additional information to explain the model approach used to predict the mixing zones for Copper and Silver that are summarized in Table 3 of Appendix A. This information is also needed for our Water Quality Certificate review.

Monitoring of dredging and disposal operations is necessary to assure that environmental standards are being met and that impact predictions based upon modeling efforts are accurate. RIDEM recommends that an Interagency Monitoring Work Group be formed to assist the ACOE in developing monitoring protocols that address the Cooperating Agencies' needs.

Monitoring will be required to determine compliance with the State's Water Quality Standards. A monitoring plan for the CAD Cell Area is outlined under Section 5.4 of the FEIS. As stated, monitoring for TSS, turbidity, copper, silver, and dissolved oxygen will be required. Specific details of the monitoring plan will be developed following the public review of the FEIS.

In addition, a monitoring program should be incorporated into the dredging and disposal operation to evaluate the spatial and temporal extent of the sediment plume as predicted by the modeling. TSS levels should also be monitored, and in situ experiments using eggs and larvae of various species should be conducted to validate the Newcomb & Jensen model. The recent workshop on Experimental Windows for Dredging Projects sponsored by the National Research Council for the US Army Corps of Engineers strongly recommends that these types of studies be conducted.

Although located outside of State waters, RIDEM supports monitoring of the disposal site 69B to confirm predicted impacts to the site.

Preferred Alternative and Spar Island

RIDEM supports the proposal to dewater and utilize a portion of the sand and gravel from the CAD cells at upland locations described in the FEIS. Any proposal to utilize other upland sites must be evaluated under a separate application as it may result in different impacts than those described in the FEIS.

The preferred alternatives include the proposal to place a portion of the material from the CAD cells at Spar Island to "restore" bird habitat. The FEIS states (page 8-63) that the "water surrounding Spar Island contains important fisheries resources, primarily in that they provide sub-tidal nursery and spawning habitat for finfish. Specifically, the area is an important winter flounder and tautog nursery". It goes on to state that "increasing the habitat for nesting water birds has the potential for benefits greater than the associated environmental costs (see FEIS Section 4.6.2.4)." This section further states (page 4-187) that "only the 4 acre option, and possibly the 50-acre option, have the potential for benefits greater than their environmental costs."

Based upon data provided by the RIDEM Division of Fish & Wildlife's Narragansett Bay Juvenile Finfish Survey, and an internal review of the competing priorities, the Department has determined that the impacts to the spawning habitat far outweigh the benefits to the bird habitat. Fish stocks in Mt. Hope Bay are currently depressed due to the impacts from the Brayton Point Power Plant. Loss of any fish habitat in this area must be avoided. The Department, therefore, recommends that no fill be placed on Spar Island. Our data show that during the period from 1988 to 1999 Spar Island had the third highest abundance index (8.8 ± 2.5 SE fish/seine haul) of juvenile tautog for all eighteen stations sampled in the survey. These data support RIDEM's contention that the littoral zone around Spar Island is excellent nursery habitat for juvenile tautog.

The loss of this habitat would be considered to be significant degradation of the existing resources and would thus not comply with the requirements of the 404(b)(1) Guidelines.

Dissolved Oxygen

RIDEM remains concerned about the dissolved oxygen impacts during dredging and disposal. The results of the monitoring on the Boston Harbor project included in the FEIS have been reviewed. RIDEM agrees that the effects of dredging on dissolved oxygen would not be significant when concentrations are high. Also, in areas that are traditionally hypoxic or anoxic during summer months, dredging would have minimal effects because the slight reduction from dredging would have minor effects compared to the overall low concentrations. However, areas of the river that experience borderline conditions during the summer and transitional months could certainly be affected by the concentration changes predicted by the Boston Harbor monitoring.

Non-Federal Dredging Applicants

As previously stated, due to lack of necessary data for the proposed non-federal dredging projects, those projects will require separate permitting and issues such as impacts on specific shellfish resource areas and appropriate mitigation will be addressed in separate permit reviews.

This concludes the RI Department of Environmental Management's specific comments at this time. We appreciate the excellent job that the Army Corps of Engineers has done to advance this major project to this stage. We look forward to receiving your response to our comments, including the additional information requested above, prior to issuance of

the 401 Water Quality Certificate. These items will assist and ensure a complete and timely review of all issues covered under the water quality program.

We appreciate your consideration of these comments and look forward to continuing to work closely with you and the other cooperating agencies as we go forward with project development.

Sincerely,

Jan H. Reitsma
Director