



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

April 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Peter Colosi
Assistant Regional Administrator
NOAA Fisheries, Habitat Conservation Division
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Dear Mr. Colosi:

This responds to Mr. Louis Chiarella's letter dated March 30, 2011 to Colonel Philip T. Feir, in which he outlines the National Marine Fisheries Service's (NMFS) Essential Fish Habitat (EFH) conservation recommendations for the proposed dredging of the Federal navigation project (FNP) in the Kennebec River, Maine.

As outlined in our March 1, 2011 letter, maintenance dredging is needed to remove hazardous shoaling from the channel near Doubling Point (below Bath) and near Popham Beach (mouth of the river) in advance of the transit of the United States Navy (USN) destroyer, the SPRUANCE, from the Bath Iron Works (BIW) to sea, currently scheduled for September 1, 2011. The SPRUANCE has been deemed critical to USN fleet operations and national defense and its departure from the BIW cannot be delayed.

Dredging to remove a total of about 70,000 cubic yards (i.e. 50,000 cubic yards from Doubling Point and 15-20,000 cubic yards from Popham Beach) of clean sandy material would begin around August 1, 2011 and continue for three to five weeks. The material dredged from the Doubling Point area will be disposed of at the previously used in-river disposal site located north of Bluff Head, and dredged material from the Popham Beach area will be disposed at a previously used 500-yard circular near-shore disposal site located about 0.4 nautical miles south of Jackknife Ledge.

Pursuant to Section 305(b)(4)(B) of the Magnuson Stevens Fisheries Conservation Act, NMFS recommends that the U.S. Army Corps of Engineers (USACE) adopt the following conservation recommendations:

1. In order to avoid future dredging during highly productive times within the river, a comprehensive programmatic review of the Kennebec River FNP should be completed prior to the next dredging event. This review should include an investigation of the following:

- a. Sand budget modeling based on shoaling rates in the Kennebec River, with predictions of dredging cycles needed to maintain safe navigation in the river and for the BIW facilities.
 - b. To avoid emergency dredging events outside of the time of year dredging window, a tentative schedule should be developed through coordination with BIW and the US Navy to anticipate large vessel transits within the river. This tentative schedule should be used to develop a short and long-term dredging plan for the Kennebec River, as necessary.
 - c. In order to avoid emergency dredging events and dredging outside of the recommended time-of-year dredging window, a feasibility study should be included in the programmatic review to assess the benefits and costs of winter dredging conducted on a regular schedule.
 - d. Alternative dredge material disposal locations should be identified and analyzed to reduce potential impacts related to the use of nearshore disposal sites. Beneficial uses of dredged material such as direct placement onto nearby beaches (Popham Beach or Hunnewell Beach), located only a few hundred meters from the shoal, should be evaluated.
2. In conjunction with the above comprehensive review, a programmatic EFH assessment should be developed for the Kennebec River FNP. A programmatic EFH assessment should include a description of the proposed actions, an analysis of the effects of the proposed actions on EFH, the Federal agency's views on those effects, and proposed mitigation, if applicable. In addition, the analyses discussed above should be included in the assessment.

Pursuant to Section 305(b)(4)(B) of the Magnuson Stevens Fisheries Conservation Act, USACE's responses to NMFS conservation recommendations are presented in the following paragraphs:

Response to Recommendation 1a: The Kennebec River is a highly dynamic estuary which has strong reversing currents that change direction based on the ebb and flood tides. Doubling Point appears to be a nodal point where this occurs. The Maine Geological Survey identifies the stretch of the Kennebec River near Doubling Point as a "bed-load convergence zone". The term bed-load convergence zone describes an area where bottom material moves around on a daily basis and where dual-directional sediment transport converges and induces sediment deposits causing a sinusoidal sand-wave formation. These massive sand-waves oscillate within concentrated vertical and horizontal ranges. The shoals seem to begin to form in the early summer (i.e. during low-flows) and continue to worsen into the fall; the worst shoaling conditions may occur in October through December. The severity of the shoaling is highly dependent on the river flow throughout the year and the amount and duration of significant storm/runoff events. These storm/runoff events (typically occurring in the springtime) have in the past substantially reduced and even completely dispersed shoals at Doubling Point. This unpredictable shoaling dynamic sets the Kennebec River project apart from other typical maintenance dredging projects where the shoaling rate is consistent (i.e. a certain amount of

material accretes each year and where the need for dredging can be forecasted fairly accurately). In summary, we believe that we have a sufficient understanding of the nature of the shoaling in the Kennebec River. Based on this, we do not believe that further sand-budget modeling would be cost-effective, nor would it be beneficial in more accurately predicting when dredging will be necessary in these areas.

Response to Recommendation 1b: The Corps concurs with NMFS recommendation that closer coordination with BIW and the USN is integral to maintaining this project. However, given the unpredictability of the shoaling discussed above, we do not believe that this coordination will necessarily negate the need to respond to potential unforeseen emergencies that involve the deployment of U.S. Navy vessels critical to national defense or the possibility of having to dredge outside the recommended time of year. We will continue to coordinate with the BIW and the USN in the future to determine their plans and schedule for launching vessels.

Response to Recommendation 1c: Our goal with respect to any FNP is to provide an acceptable level of service within the available resources. In the Kennebec River, the narrow dredging window coupled with the unpredictable nature of the shoaling combined with the time necessary to issue a contract makes addressing shoaling in a programmatic fashion difficult at best. For many years, we've recognized that the Kennebec River might require more frequent dredging to meet the needs of the project users – this was evidenced by the need to dredge in 1997, 2000, 2002 and 2003. We also recognize that projects that require frequent maintenance dredging (i.e. <1-3 years) do not fit the "critical path" timeline of a regular maintenance-dredging project and therefore require streamlining. To that end, in March 2002, we prepared a long-term (i.e. 10 year) generic Environmental Assessment (EA) to cover periodic maintenance dredging of these two reaches and coordinated with the various state and Federal resource agencies to obtain long-term approvals. Both the 2000 and 2002 EAs included EFH Assessments that evaluated the potential impacts to managed species within the recommended window. Given the unpredictable nature of the shoaling in the Kennebec River, having the necessary approvals in-hand best positions us to be able to address the shoaling as needed, as funding becomes available, and within the recommended dredging window.

With regard to funding, you may be aware that Federal funding for maintenance dredging projects (including the Kennebec River) has been severely limited within recent years; this is a trend that we fully anticipate will continue. Absent a consistent funding stream, more frequent maintenance dredging (e.g. "during the winter on a more regular schedule" as NMFS suggests) is unlikely. Additionally, even if we had the resources to dredge every year during the winter as NMFS suggests, doing so would not guarantee that shoaling that could hinder navigation would not occur prior to the next dredging window. Therefore, in this instance, we do not believe that a separate feasibility study to assess the costs and benefits of winter dredging conducted on a regular schedule is practical or necessary to meet our above stated goal.

Response to Recommendation 1d: Sampling of the benthic community at the nearshore disposal area south of Jackknife Ledge indicates that the benthic community was representative of pioneering organisms on disturbed substrates. This is most likely due to the strong wave influence there. The grain size sample taken in 2011 at the nearshore disposal site is very similar

to that taken from the shoal area in the channel off of Popham Beach. Although there may be areas with more gravel and rock between the disposal site, Jackknife Ledge, and the nearby beaches, these areas would not be directly impacted by use of the nearshore disposal area.

In developing proposals for maintenance dredging of any Federal project, our objective is to identify the least cost dredging and dredged material management alternative consistent with Federal environmental regulations. The draft Environmental Assessment (EA) entitled "*Environmental Assessment For Maintenance Dredging of the Kennebec River Federal Navigation Channel, Sagadahoc County, Maine*" prepared for the proposed work addresses and evaluates disposal alternatives. The previously used near shore disposal site south of Jackknife Ledge was originally proposed in the 1989 Environmental Assessment and was chosen in close coordination with the Maine Department of Environmental Protection and the Maine Geological Survey. This site was selected because it is believed that sand deposited there will remain in the near shore system and may help to indirectly re-nourish the glacially deposited beach due to the prevalent sediment gyre.

Although placing material directly on an adjacent beach at the mouth of the river may be feasible, this alternative requires further investigation and would likely involve cost sharing by a non-Federal sponsor to incur the additional costs associated with that alternative. Given the small quantity of material that is typically dredged from the channel at the mouth of the river, and the costs associated with placing this material directly on a beach, this alternative might not be attractive to a non-Federal sponsor due to the limited benefits realized versus the cost associated with it.

In summary, the USACE believes that disposal at the nearshore disposal area south of Jackknife Ledge still represents the least cost, environmentally suitable dredged material management alternative. In the future, if a non-Federal sponsor is identified that is willing to pay the additional cost associated with direct beach nourishment then this alternative could possibly be used.

Response to Recommendation 2: Be assured that the USACE concurs with NMFS that maintenance dredging (whenever practicable) should be performed during the recommended time of year in order to protect managed species and to avoid the most biologically productive times. And while in theory, a programmatic EFH assessment may be useful (see response to recommendation 1c concerning long-term approvals); based on conversations between Dr. Valerie Cappola and Mr. Mike Johnson, it is our understanding that a programmatic EFH consultation and resultant EFH recommendations would only consider work completed within the recommended dredge window.

We believe that we have sufficiently documented herein, the atypical nature of the project and the reasons why dredging within the recommended dredging window may not always be possible. As such, and due to the ongoing need to respond to potential unforeseen emergencies that may involve the deployment of U.S. Navy vessels critical to national defense, the USACE cannot commit to restricting all future dredging to within the recommended window. Therefore,

we do not believe that a programmatic EFH consultation would serve the intended purpose of streamlining the processes for either agency.

In Mr. Chiarella's letter he states that the dredging events conducted in December 2000, April 2002, and October 2003, were all reviewed by NMFS under "emergency dredging requests". Although the maintenance dredging events in 2000 and 2002 required an expedited review process, those maintenance dredging events were performed within the recommended dredging window. It was only the 2003 emergency dredging event and now the proposed 2011 work (almost 8 years later) that required, (and will require), dredging outside the recommended time of year dredging window. As stated previously, the ACOE has considered ways to streamline processes that might alleviate the need to respond to emergent dredging needs in the Kennebec River. One approach that has been discussed with NMFS, Protected Resources Division (Julie Crocker) is for the USACE to develop a more expansive Biological Assessment which recognizes the potential need to dredge outside the recommended time of year and which evaluates the impacts to the endangered species from the "Federal action" during the months outside the window. We suggest that this approach might also streamline the EFH consultation process for the Kennebec River and request that you give this approach some consideration for future discussions concerning this project.

In closing, the above constitutes our response to the EFH Conservation Recommendations. We look forward to working with NMFS concerning the ongoing maintenance of the Kennebec River FNP, and minimizing negative effects to EFH and Federally managed species.

If you need any further information you may contact Mr. Bill Kavanaugh, Project Manager at 978-318-8328, or Dr. Valerie Cappola, Marine Biologist at (978) 318-8067.

Sincerely,


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Chief, Engineering/Planning Division

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