



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

JUN - 8 2006

Ms. Rani Franovich
Branch Chief, Environmental Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulator Commission
Washington, DC 20555-0001

Dear Ms. Franovich:

This letter is in response to your request for information regarding Essential Fish Habitat (EFH) and protected species within the area under evaluation for the Pilgrim Nuclear Power Station License Renewal Application. Pilgrim Nuclear Power Station is located within Plymouth Bay and Cape Cod Bay, in Plymouth, MA. The proposed action is to renew the existing license for an additional 20 years beyond the expiration of the current operating license. The National Marine Fisheries Service (NMFS) is providing the following comments to identify and address potential adverse impacts on EFH, protected species, as well as other public trust resources.

The EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) require federal agencies to consult with NMFS on projects such as this that may adversely affect EFH. Insofar as a project involves EFH, as this project does, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure.

Essential Fish Habitat

Plymouth Bay and Cape Cod Bay have been designated as EFH for a number of federally managed species including, but not limited to, winter flounder, Atlantic cod, windowpane flounder, red hake, and white hake. A complete list of species and life stages that have been designated for the proposed project location can be found on the NMFS Habitat Conservation Division website at <http://www.nero.noaa.gov/ro/doc/webintro.html>

EFH Assessment

The required contents of an EFH assessment include: a description of the action; an analysis of the potential adverse effects of the action on EFH and the managed species; the action agency's conclusions regarding the effects of the action on EFH; and proposed mitigation, if applicable. Other information that should be contained in the EFH assessment, if appropriate, includes: the results of on-site inspections to evaluate the habitat and site-specific effects; the views of recognized experts on the habitat or the species that may be affected; a review of pertinent literature and related information; and



an analysis of alternatives to the action that could avoid or minimize the adverse effects on EFH. The EFH assessment should be contained in the Draft Environmental Impact Statement (DEIS) and clearly labeled as such within the document. NMFS will commence the EFH consultation upon receipt of the completed assessment.

Fishery Resources under the Fish and Wildlife Coordination Act

In addition to the EFH provisions of the MSA, the Fish and Wildlife Coordination Act (FWCA) requires federal agencies to consult with federal and state natural resource agencies regarding activities or licensing that impact fish and wildlife resources. In that regard, several finfish and shellfish resources, considered to be NMFS trust resources, are expected to be present in the vicinity of the proposed project. These include, but are not limited to, American lobster, alewife, blueback herring, rainbow smelt, and Atlantic menhaden. It is important to note that all fishery resources within the project area are NMFS trust resources. Accordingly, NMFS will seek to avoid and minimize adverse effects to these resources, pursuant to the FWCA.

Impingement and Entrainment

As currently operated, the Pilgrim Nuclear Power Station adversely affects a variety of fish and shellfish resources through impingement on cooling water intake screens and through entrainment into the plant's cooling system. Pilgrim Station has been monitoring entrainment of eggs and larvae for over 25 years, and such site-specific information should be utilized in the evaluation of impacts from the proposed action. Based on this analysis, alternatives which avoid and minimize adverse effect to fishery resources should be considered and analyzed in the DEIS.

As described within the 2001 draft EFH assessment, the NRC utilizes the "adult equivalent" analysis in order to determine relative impact of the facility on fishery resources. However, this method focuses solely on finfish survival to maturity and does not account for ecosystem and food web benefits resulting from egg and larval predation. In order to fully account for adverse impacts resulting from the facility, the proposed assessment should include an analysis of ecosystem and food web benefits foregone as a result of operational impacts on eggs and larvae.

Thermal discharges

The Pilgrim Nuclear Power Station is currently authorized to discharge heated effluent into Plymouth Bay. As stated within the 2001 draft EFH assessment, discharge temperature differentials ranging from 33.8 - 48 degrees Fahrenheit have been found to occur in an area of up to 1.17 acres. Adverse impacts on fishery resources and EFH resulting from the thermal plume within this "mixing zone" should be detailed within the EFH assessment.

Compensatory Mitigation

Currently, Pilgrim Station attempts to offset adverse impacts on living marine resources through a winter flounder hatchery/stocking program. Pilgrim Station, through Llenoco, Inc., currently stocks approximately 25,000 winter flounder young-of-year (YOY) juveniles/larvae per year into Plymouth Bay. The NRC should analyze the success of the

current mitigation program within the proposed environmental review, as well as potential modifications to the program, as compared to the loss of ecosystem and food web benefits forgone as a result of operational impacts on eggs and larvae of all species.

Protected Resources

Several listed species of whales and sea turtles are known to occur seasonally in the waters off of Massachusetts. Federally endangered Northern right whales (*Eubalaena glacialis*) have been documented in the nearshore waters of Massachusetts from December through June and are likely to be present in Cape Cod Bay from December 15 – April 15 and Great South Channel from March 1 – June 30. Endangered humpback whales (*Megaptera novaeangliae*) feed during the spring, summer, and fall over a range that encompasses the eastern coast of the United States. Humpback whales are found off the coast of Massachusetts from March 15 – November 30. Fin (*Balaenoptera physalus*), sei (*Balaenoptera borealis*), and sperm (*Physeter macrocephalus*) whales are also seasonally present in New England waters but are typically found in deeper offshore waters.

Certain New England waters have also been designated as critical habitat for the Northern right whale (final rule at 59 FR 28793). The Great South Channel critical habitat is the area bounded by 41°40' N/69°45' W; 41°00' N/69°05' W; 41°38' W; and 42°10' N/68°31' W. The Cape Cod Bay critical habitat is the area bounded by 42°02.8' N/70°10' W; 42°12' N/70°15' W; 42°12' N/70°30' W; 41°46.8' N/70°30' W, and on the south and east by the interior shore line of Cape Cod, Massachusetts.

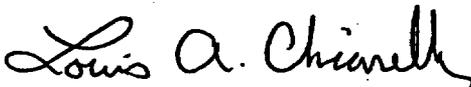
The occurrence of sea turtles in northeastern nearshore waters are typically small juveniles with the most abundant being the federally threatened loggerhead (*Caretta caretta*), followed by the federally endangered Kemp's ridley (*Lepidochelys kempi*). Loggerhead turtles have been found to be relatively abundant off the Northeast coast (from near Nova Scotia, Canada to Cape Hatteras, North Carolina). Loggerheads and Kemp's ridleys have been documented in waters as cold as 11 degrees Centigrade (C), but generally migrate north towards New England when water temperatures exceed 16 degrees C. These species are typically present in New England waters from June 1 – November 30. Federally endangered leatherback sea turtles (*Dermochelys coriacea*) are located in New England waters during the warmer months as well. While leatherbacks are predominantly pelagic, they may occur close to shore, especially when pursuing their preferred jellyfish prey. Green sea turtles (*Chelonia mydas*) may also occur sporadically in New England waters, but those instances would be rare.

Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended, states that each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species, or result in the destruction or adverse modification of designated critical habitat. Any discretionary federal action that may affect a listed species must undergo Section 7 consultation. The NRC is responsible for determining if the proposed project is likely to affect listed species, and for obtaining the concurrence of NMFS with their determination. If the NRC determines that the project is "not likely to adversely affect"

any listed species (i.e., when direct or indirect effects of the proposed project or its interdependent and/or interrelated actions on listed species are expected to be discountable, insignificant, or completely beneficial) and NMFS concurs with this determination, NMFS will reply to NRC in a letter that will convey the concurrence, thus completing Section 7 consultation. If the ACOE determines that the project is "likely to adversely affect" any listed species (i.e., if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effects are not: discountable, insignificant, or beneficial) or NMFS does not concur with the NRC's "not likely to adversely affect" determination, formal Section 7 consultation, resulting in the issuance of a Biological Opinion, may be required. Any effects that amount to the take of a listed species (defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct") are not discountable, insignificant, or entirely beneficial. Therefore, if any take is anticipated, formal consultation is required.

Thank you for your coordination with NMFS regarding this issue. If you have further questions regarding this project, please contact Christopher Boelke at 978-281-9131. For more information on the Section 7 process or listed species that are likely to be present in Cape Cod Bay, please contact Julie Crocker in NMFS Protected Resources Division at (978)281-9300 x6530.

Sincerely,

for 
Peter D. Colosi
Assistant Regional Administrator
for Habitat Conservation

cc: Alicia Williamson, Project Manager (NRC)
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