



# MARINE MAMMAL COMMISSION

14 June 2010

Ms. Carrie McEnteer  
Directorate of Public Works  
Attention: IMPC-FWA-PWE (C. McEnteer)  
1060 Gaffney Road #4500  
Building 600, Room B349  
Fort Wainwright, AK 99703-4500

Dear Ms. McEnteer:

By *Federal Register* notice of 17 March 2010 (75 Fed. Reg. 12735), the Department of the Army announced the availability of its Draft Environmental Impact Statement (DEIS) for Resumption of Year-Round Firing Opportunities at Fort Richardson, Alaska. The Army is considering use of Eagle River Flats as a target for year-round live-fire exercises as one of three alternatives to maximize training opportunities at Fort Richardson. The other two alternatives involve (1) ongoing use of the flats for winter live-fire exercises when beluga whales are less likely to be present and (2) development of a new targeting area well away from the coast of Cook Inlet in steep alpine areas within the Fort. The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the DEIS and provides the following recommendation and comments.

## RECOMMENDATION

Based on its review, the Marine Mammal Commission recommends that the Army not pursue the use of Eagle River Flats, which is integrally connected to the core habitat of endangered Cook Inlet beluga whales, for year-round live-fire training as proposed in alternative 2 of its DEIS.

## RATIONALE

The Marine Mammal Commission recognizes the Army's need for training and appreciates the Army's efforts to analyze the potential impacts of its proposed activities and to develop detailed mitigation measures to protect Cook Inlet belugas. However, the Commission does not believe that the Army's DEIS fully reflects the critically endangered status of the stock and the need to protect the whales and their habitat. The stock declined sharply in the 1990s largely because of overharvesting for subsistence. Since then, hunting has been curtailed, but the population has not recovered as expected. In fact, there is a high probability that the stock has continued to decline for unknown reasons. The National Marine Fisheries Service prepared a conservation plan that identifies several potential causes for the observed trend, but thus far the Service's research program has been slow to develop and it has not ruled out any of the potential causes. It may well be that some of the types of impacts that are identified but largely discounted in the Army's DEIS (e.g., habitat degradation, noise, pollution/contaminants) would exacerbate whatever factor or factors are contributing to the endangerment of the Cook Inlet beluga stock and impeding its recovery. Because the stock has shown no clear sign of recovery under current conditions, the Commission does not see how any analysis could conclude that adding one more potential stressor would not pose unacceptably high risks to the population. Until the Service has identified the factors causing or

contributing to the decline or lack of recovery of this stock or the Army can confidently and reliably rule out potential effects associated with conducting year-round live-fire training at Fort Richardson, the Commission believes that it would be ill-advised to choose an alternative that would pose additional risks. For that reason, the Marine Mammal Commission recommends that the Army not pursue the use of Eagle River Flats, which is integrally connected to the core habitat of endangered Cook Inlet beluga whales, for year-round live-fire training as proposed in alternative 2 of its DEIS.

The DEIS identifies five marine mammal species that may occur in that area but focuses its analysis on the Cook Inlet beluga whale stock. This focus is appropriate, given the endangered status of the stock and the extent to which it depends on this area for habitat. Eagle River Flats adjoins the Eagle River and Eagle Bay on the Knik Arm of Cook Inlet, Alaska. In fact, both areas provide important habitat for Cook Inlet belugas. The National Marine Fisheries Service's 2008 Conservation Plan for the Cook Inlet Beluga Whale (referenced in the DEIS) and the Service's 2 December 2009 proposed rule to designate critical habitat for the stock (74 Fed. Reg. 63080) both recognized the importance of Eagle River Flats. The Army's proposed area of activity at Eagle River Flats is in proposed Critical Habitat Area 1 and constitutes Valuable Habitat Area Type 1 identified in the conservation plan. Regarding Critical Habitat Area 1, the National Marine Fisheries Service's proposed rule to designate critical habitat states:

Belugas are particularly vulnerable to impacts in Area 1 due to their high seasonal densities and the biological importance of the area. Because of their extensive use of this area (e.g., foraging, nursery, predator avoidance), activities that restrict or deter use of or access to Area 1 habitat could reduce beluga calving success, impair their ability to secure prey, and increase their susceptibility to predation by killer whales. Activities that reduce anadromous fish runs could also negatively impact beluga foraging success, reducing their fitness, survival, and recovery. Furthermore, the tendency for belugas to occur in high concentrations in Area 1 habitat predisposes them to harm from such events as oil spills.

The Army's DEIS discusses possible impacts on beluga whales from the resumption of year-round live-fire training. These include direct or indirect physical effects of live fire on the belugas, their habitat, their prey and the habitat of their prey, and noise impacts on belugas from exploding ordnance of various calibers. The DEIS also describes a series of existing and proposed measures intended to prevent or mitigate the impact of live-fire activities on belugas. Those measures include establishing buffer zones around the Eagle River and Eagle Bay where targeting cannot occur, restricting seasonal live-fire activities to protect waterfowl and beluga whales, monitoring for and verifying the presence or absence of beluga whales and prohibiting the use of certain high-explosive munitions when beluga whales are present, and training personnel on the implementation of these restrictions and procedures.

In all but one instance of potential physical or noise impacts examined in the DEIS, the Army has determined that the proposed action may affect—but is unlikely to adversely affect—the Cook Inlet beluga population. Only in the case of training with high-explosive munitions using 105-

mm howitzers or 120-mm mortars, which may expose undetected whales in Eagle Bay or Eagle River to sounds above 160 dB, has the Army determined that noise from training activities identified in proposed alternative 2 is likely to adversely affect the whale population. Here, again, the Commission does not see how the Army can conclude that those activities that “may affect” the stock can be considered acceptable when existing conditions already are such that the stock has not been able to recover.

With respect to noise, the biological assessment appended to the DEIS provides an in-depth analysis of sound levels from different types of ordnance and the ranges at which the sound from each type of ordnance would exceed threshold levels of 160 dB and 180 dB. The analysis concludes that only high-explosive rounds of 105-mm howitzers and 120-mm mortars would exceed the 160-dB threshold used in the DEIS as the “appropriate” standard at which marine mammal disturbance would occur and that none will exceed 180 dB. On the basis of this finding, the DEIS contends that all other live-fire activities using less noisy ordnance may affect—but are not likely to adversely affect—Cook Inlet belugas. The Army does not anticipate any take by Level A harassment (i.e., an act that injures or has a significant potential to injure a marine mammal or marine mammal stock) as a result of the proposed action. The projected annual take by Level B harassment of Cook Inlet beluga whales from the resumption of year-round firing is estimated at 126 whales, or 33.6 percent of the population. This level of take was estimated on the basis of the numbers and densities of beluga whales observed at Eagle River Flats from June through November, the projected hours of firing per month during those live-fire exercises using 105-mm howitzers and 120-mm mortars (a subset of all live-fire events), and the estimated area of ensonification to a threshold of 160 dB.

However, the Commission does not believe that, for these whales, the 160 dB threshold for noise reflects the best scientific information available. Table 5-7 of the biological assessment attached to the DEIS supports the Commission’s view and suggests that the effects of the proposed activities are underestimated. That information describes responses of Cook Inlet beluga whales (e.g., departure from the area) to noise from a variety of sources (e.g., aircraft, small vessels) unrelated to Department of Defense activities. The information clearly shows that the normal daily activities of belugas can be disturbed by activities that produce sound at levels below the 160-dB threshold in the DEIS. In fact, beluga whales appear to be among the most sensitive marine mammals to sound disturbance. In the most extreme documented instance, in the Canadian Arctic, belugas were observed to react to ice-breaking ships at distances of more than 80 km with alarm calls and strong avoidance<sup>1</sup>. In light of such observations, the Marine Mammal Commission does not believe that the DEIS provides an adequate justification for discounting the effects from noise under the 160 dB level.

In the DEIS, the Army suggests that it can avoid direct and indirect effects on belugas and waterfowl by interweaving concentrated target areas with buffer zones. However, the Commission questions whether all the proposed mitigation measures can be implemented without some level of

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<sup>1</sup> LGL and Greeneridge. 1986. Reactions of beluga whales and narwhals to ship traffic and ice-breaking along ice edges in the eastern Canadian High Arctic: 1982–1984. *Environmental Studies* 37. Indian & Northern Affairs Canada, Ottawa, Ont. 301 pp.

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human or mechanical error. Such error during implementation of these measures may mean that ordnance might land in the buffer zones and in the waters of Eagle River and Eagle Bay. Any such errors could well result in physical harm to the whales, their habitat, their prey, and the habitat of their prey, and may expose beluga whales to unanticipated levels of noise. The Commission does not believe that the DEIS provides an adequate basis for concluding that such errors will not occur from time to time, with potentially significant adverse effects.

The Army proposes to use monitoring to determine when belugas are too close to the target area. However, no observer or monitoring system is 100 percent effective, particularly in an environment such as Cook Inlet, which has considerable tidal fluctuation, high levels of siltation, and seasonal ice. The Army's biological assessment recognizes that its monitoring and mitigation measures will not be 100 percent effective in eliminating the potential to take beluga whales. On that basis, the Army intends to request an incidental take authorization under §101(a)(5)(A) of the Marine Mammal Protection Act for the period from 2010 to 2015. Also, the Army has requested that the National Marine Fisheries Service initiate formal consultation under section 7 of the Endangered Species Act because of the potential impacts from noise resulting from high-explosive 105-mm howitzer and 120-mm mortar rounds.

The Commission concurs with the need for such review if the Army decides to pursue alternative 2. However, as noted at the beginning of this letter and as warrants repeating here, the Cook Inlet beluga stock is critically endangered and all the evidence suggests that it has no tolerance for additional stressors. At worst, any additional stress to the stock may drive it to even lower numbers until it cannot recover or, at best, will prolong the recovery period, thereby extending the need for onerous regulations on all those whose activities may affect the stock. It is for that reason that the Marine Mammal Commission recommends that that the Army not pursue the use of Eagle River Flats for year-round live-fire training as proposed in alternative 2 of its DEIS.

Please contact me if you have any questions concerning these comments.

Sincerely,



Timothy J. Ragen, Ph.D.  
Executive Director