



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

August 11, 2008

Ms. Robin Reich  
HDR Alaska, Inc.  
2525 C Street, Suite 305  
Anchorage, Alaska 99503-2632

Re: Statter Harbor Improvements  
Project DH08-081

Dear Ms. Reich:

The National Marine Fisheries Service (NMFS) has reviewed the scoping material for the proposed Statter Harbor Improvements project in Auke Bay, near Juneau, Alaska. This project would be funded with Federal Aid in Sport Fish Restoration Act (Dingell-Johnson/Wallop-Breaux) funding passed through the Alaska Department of Fish and Game (ADF&G) and by state matching funds. This federally funded project must undergo National Environmental Policy Act (NEPA) review.

Improvements proposed by the City and Borough of Juneau (CBJ) and ADF&G include a new boat launch facility, expansion of the municipal moorage system, a commercial passenger boarding float, additional parking, retail and recreational facilities, trails, and a waterfront park. There are currently three design concepts for these proposed improvements. Concepts 1 and 2 have the same fill footprint, and differ only in the numbers of vehicle parking spaces, and the devotion of space to either a boat yard or retail facilities. The third design concept is the “no action” alternative where no changes would be made to the existing harbor. The proposed work would involve placement of an estimated 0.68 acres of subtidal and intertidal fill into Auke Bay, relocation and channelization of intertidal portions of Bay Creek (a catalogued anadromous stream), and dredging of intertidal and subtidal basin portions of the northern shoreline of Auke Bay.

NMFS offers the following comments specific to the Essential Fish Habitat provision (EFH) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Clean Water Act, the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA).

Magnusson-Stevens Act and Clean Water Act

Section 305(b)(2) of the MSA requires interagency consultation for any proposed federal action that may adversely affect EFH. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA § 3(10)). For the purpose of interpreting the definition of EFH: “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a



healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle (MSA § 600.10).

The federal action agency, or its official designee, must determine whether it’s actions may adversely affect EFH. If the action agency, or its official designee, determines that an action may adversely affect EFH, they must prepare an EFH Assessment. If the action would not adversely affect EFH, then they should document this determination in its record. Please see our website for more information: <http://www.fakr.noaa.gov/habitat/faq.htm#fed>

Under the Clean Water Act (CWA) Section 404 (b)(1) Guidelines (40 CFR 230), only the least environmentally damaging practicable alternative for a proposed discharge of fill into jurisdictional wetlands or waterways can be permitted by the US Army Corps of Engineers. Information about the proposed project’s compliance with § 404 (b)(1) guidelines for appropriate and practicable steps to minimize the effects of the discharge on the aquatic ecosystem, including evaluation of the non-water dependant uses, should be developed to present the least environmentally damaging practicable alternative.

### *Eelgrass Beds*

Eelgrass (*Zostera marina*) is an ecologically important nearshore habitat that is susceptible to degradation and loss due to coastal development and natural environmental changes (Harris et al. 2008; Johnson et al. 2003). Eelgrass bed surveys conducted within CBJ between 2004 and 2007 revealed that eelgrass was only present on approximately 3% of the estimated 235 km of shoreline surveyed. A total of over 18,000 fish in 42 species were captured, underscoring the importance of eelgrass as a fishery habitat (Harris et al. 2008). Chum salmon were the most abundant fish species encountered, and the prevalence of other juvenile fish suggests that eelgrass may be an important fish nursery habitat in CBJ for some species. Juvenile shrimp (Crangonidae and Pandalidae), hermit crabs (*Pagurus* spp.), and Dungeness crabs (*Cancer magister*) were also present. The limited distribution of eelgrass in the CBJ and its importance for many commercially important species warrants the monitoring and protection of this valuable habitat (Harris et al. 2008).

Several beds of eelgrass are present in Auke Bay within the project area. Figure 13, *Eelgrass (Zostera marina) beds sampled near Bay Creek, Juneau, Alaska, in summer 2004 to 2007* (Harris et al. 2008) (attached), shows the distribution of these beds. Please note that the eelgrass beds depicted on concept 1 and 2 diagrams do not show the full extent of documented eelgrass beds.

NMFS suggests that the following information be evaluated in the further development of design concepts. The following recommendations, and others, could help conserve eelgrass:

1. Georeference Harris et al. (2008) Bay Creek eelgrass beds to the concept designs, to correctly depict the potentially impacted eelgrass beds.
2. Reduce the size of the proposed fill and relocate the proposed non-water dependent improvements (additional parking, landscaping, trails, and retail facilities) to upland locations, in order to avoid or minimize impacts to EFH.

3. Change the reduced fill configuration to avoid eelgrass beds to the maximum extent practicable.
4. Avoid dredging of the northern shore where eelgrass beds would be destroyed or impacted from increased siltation.

### *Bay Creek*

Bay Creek is a catalogued anadromous fish stream (No. 111-50-10390; Johnson and Daigneault 2008). Pink salmon spawn in the intertidal portion of the stream, and chum and Dolly Varden rear in the stream (Bethers et al. 1993). Concepts 1 and 2 both propose filling nearly all the intertidal portion of the stream, and rerouting the water through an artificial channel west of the proposed fill. Please note that when the Harris et al. (2008) eelgrass maps are superimposed over the proposed project, the proposed channel would apparently destroy portions of the existing eelgrass beds. These activities would cause the permanent loss of spawning and rearing habitat, and could potentially result in the degradation of water quality and increase the water velocity in the channelized section of the creek. Bethers et al. (1993) recommend that future development in the Bay Creek drainage should not be allowed to impact the fish habitat values and natural features in its drainage, and that the stream be given streamside buffers that would protect habitat from fill encroachment and sedimentation. They also note that in this small but productive stream “water quality should be maintained and considered extremely important” (Bethers et al. 1993, p. 20).

NMFS suggests that the following information be evaluated in the further development of design concepts. The following recommendations, among others, could help conserve Bay Creek:

1. Georeference Harris et al. (2008) Bay Creek eelgrass beds to the concept designs, to correctly depict where potential stream channelization would impact eelgrass beds.
2. Reduce the size of the proposed fill and relocate the proposed non-water dependent improvements (additional parking, landscaping, trails, and retail facilities) to upland locations, in order to minimize impacts to Bay Creek, particularly intertidal spawning and rearing areas.
3. Change the reduced fill configuration to avoid the natural Bay Creek contour to the extent practicable.
4. Add stream buffers to the portions of Bay Creek within the project area, to maintain the natural fish habitat, including water quality and natural drainage features.
5. Avoid dredging of the northern shore where Bay Creek would potentially be impacted from siltation.
6. Additional information on spawning and rearing habitat should be collected and used in further concept development.
7. To minimize the effects of pile driving, a vibratory hammer should be used for all piles installed, with impact-driving used only for final proofing. A pile cushion should be used between impact hammer and the piling to attenuate sound. Pile driving can generate

intense underwater sound pressure waves that can disrupt migration and injure or kill fish. Vibratory hammers produce less intense sounds than impact hammers (NMFS 2005). Fish have been observed to avoid sounds similar to those produced by vibratory hammers and to remain within the field of harmful sound associated with an impact hammer (Dolat 1997).

8. Steel pilings should be used, and existing creosote-treated wood pilings and deck of existing structure should be removed to avoid the toxic effects from PAH leaching. Treated wood should be disposed of at an approved upland site in an approved manner.
9. Solid docks limit the amount of light on the pilings that support them and on the ground below, which in turns limits or eliminates habitat for marine algae and associated light dependant species. Habitat diversity could be enhanced by using open steel grating on the docks, which reduces the amount of shading caused by solid docks.

### Threatened and Endangered Species/ Marine Mammals

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. In addition, the Marine Mammal Protection Act (MMPA) specifically prohibits the taking of marine mammals, including harassment, unless the activity is exempted by law or permitted under the Act.

In southeast Alaska, endangered marine mammal species include the Steller sea lion (*Eumetopias jubatus*) eastern and western Distinct Population Segments (DPS), fin whales (*Balaenoptera physalus*), sperm whales (*Physeter catodon*) and humpback whales (*Megaptera novaeangliae*). Salmon (*Oncorhynchus* sp.) from several ESA-listed Evolutionarily Significant Units along the west coast may occur in Alaska waters. The only threatened or endangered marine mammal species likely to be found in the general project area are the endangered humpback whale and the eastern or western DPS of Stellar sea lion.

Marine mammal species that are not listed under the ESA are afforded protection by the MMPA. In southeast Alaska, these species include harbor seals (*Phoca vitulina*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), minke (*Balaenoptera acutorostrata*), and killer whales (*Orcinus orca*). General information on ESA species and MMPA species under NMFS jurisdiction can be found at:  
<http://www.fakr.noaa.gov/protectedresources>.

Pile driving can generate intense underwater sound pressure waves that can disrupt migration and harass or injure marine mammals. Sound pressure levels (SPLs) in the range of 130-135 dB re: 1 $\mu$ Pa have been measured up to one kilometer from an active pile driver (Johnson et. al., 1986). Reyff (2003) measured SPLs of 159 dB re: 1 $\mu$ Pa about 200 meters from a pile driver driving 14-inch diameter hollow steel piles. Humpback whales have been observed to react to SPLs greater than 115-129 dB re: 1 $\mu$ Pa within 200 meters of a sound source (Reyff 2003).

NMFS recommends that the following information be evaluated in the further development of design concepts. If the current versions of concept 1 and 2 are used, the following conservation

recommendations should be included to minimize disturbance and avoid take of marine mammals during construction of the project:

1. Use a vibratory hammer for all piles installed to minimize the effects of pile driving; impact-driving should only be used for final proofing.
2. Use a pile cushion between impact hammer and the piling to attenuate sound.
3. A marine mammal monitor should be assigned to the project during pile driving operations. The observer should begin to observe 15 minutes before pile driving and throughout each pile driving event. If the marine mammals are observed within a 200 meter radius of the pile being driven, driving should cease until the animal is clear of the zone. If marine mammals are observed during pile driving and thought to be disturbed by the noise/activity, pile driving should be discontinued. Pile driving should not resume until the mammal is no longer seen.

If you have any questions regarding our habitat recommendations for this project, please contact Chiska Derr at 907-586-7345 or by email at [Chiska.Derr@nmfs.gov](mailto:Chiska.Derr@nmfs.gov). Please direct any questions regarding marine mammals and endangered species to Aleria Jensen at (907) 586-7248.

Sincerely,



Robert D. Mecum  
Acting Administrator, Alaska Region

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NMFS, AKR, Records  
\* electronic copy

Enclosure: Figure 13. *Eelgrass (Zostera marina) beds sampled near Bay Creek, Juneau, Alaska, in summer 2004 to 2007* (Harris et al. 2008)

References:

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- Reyff, J.A. 2003. Underwater sound levels associated with seismic retrofit construction of the Richmond-San Rafael Bridge. Document in support of Biological Assessment for the Richmond-San Rafael Bridge Seismic Safety Project. January 31, 2003. 18pp.

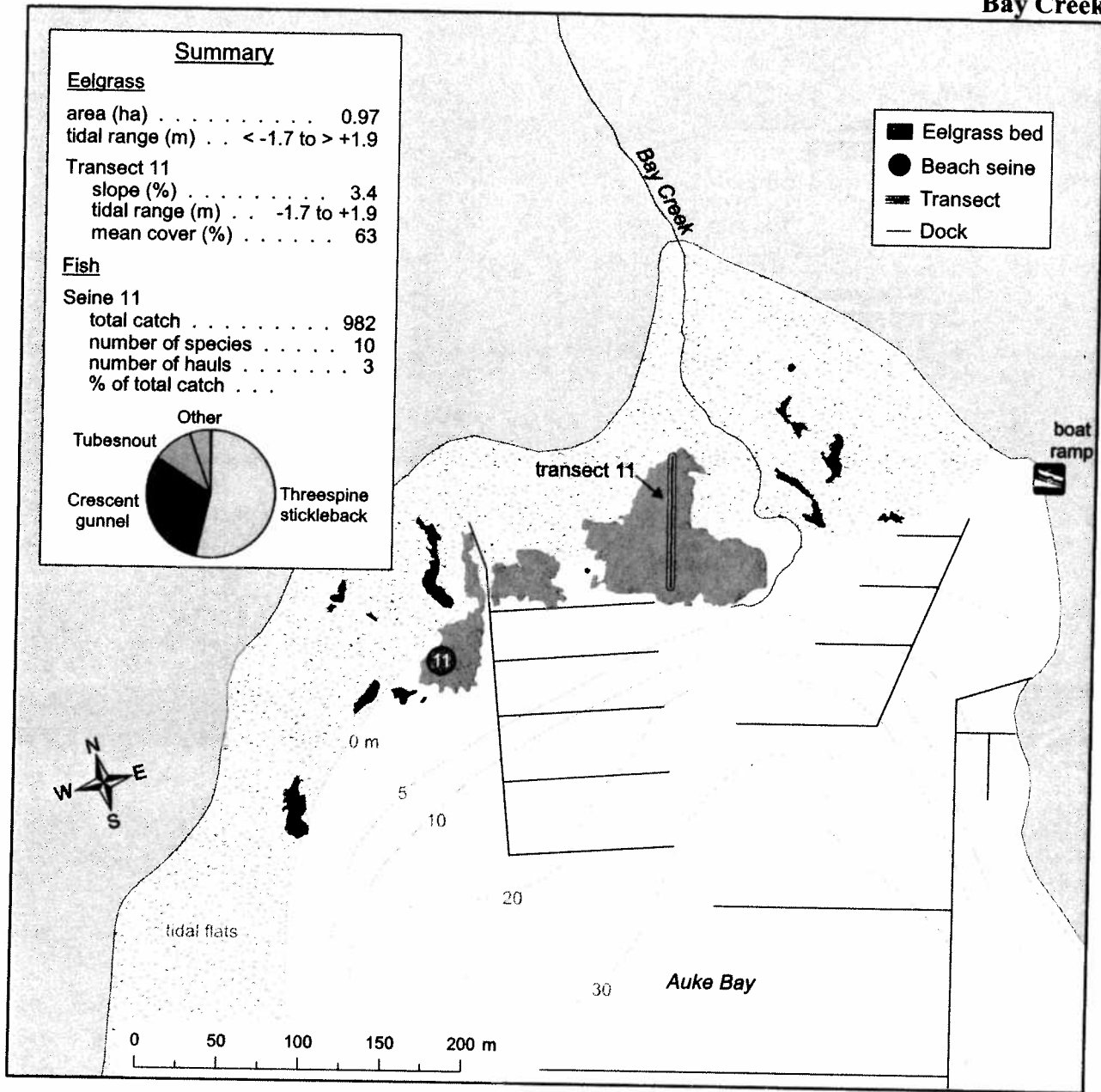


Figure 13.-- Eelgrass (*Zostera marina*) beds sampled near Bay Creek, Juneau, Alaska, in summer 2004 to 2007. Eelgrass was mapped with global positioning system technology. Shown are an eelgrass transect, fish sampling site (beach seine), and private and public docks. See Figure 1 for location within the City and Borough of Juneau.