UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

November 7, 2005

Peter Freer
Community Development
City and Borough of Juneau
155 S. Seward St.
Juneau, Alaska 99801

RE: Auke Nu Cove 1
M-1999-1426

Dear Mr. Freer:

The National Marine Fisheries Service has reviewed the Alaska Glacier Seafood Company's (AGS) development permit application to modify use permit USE-2003-00056. The applicant proposes to allow small tender mooring on the west side of the existing dock near the head of Auke Nu Cove in Juneau, Alaska.

NMFS continues to be concerned that this proposed project expansion will further degrade the nearby eelgrass beds of Auke Nu Cove. In a memorandum to the City and Borough of Juneau (CBJ) dated October 1, 2002, NMFS assessed the potential effects of this project on the eelgrass beds of Auke Nu Cove and concluded that construction and use of this facility would result in continued loss of eelgrass habitat by changing current flows and increasing sedimentation. NMFS provided CBJ with a letter on December 23, 2003 assessing the negative effects of the proposed dock expansion project on the Auke Nu Cove eelgrass bed.

Threats to eelgrass in Auke Nu Cove include; chronic siltation from prop wash; increased turbulence from increased boat traffic at all tidal ranges; siltation during project construction; chronic input of hydrocarbons from fishing vessels' bilge waters; changes in water flow and sedimentation into and out of the cove; and discharge of sewage effluent into the waters of Auke Nu Cove. Prop wash results in sedimentation that can bury and kill eelgrass and negatively effect the eelgrass's natural ability to decrease subtidal erosion by reducing current velocity, trapping fine sediment and binding sediment particles together (Thayer et al. 1975; Kenworthy et al. 1980; Fonseca et al. 1983). The resulting habitat loss can have negative effects on fish and invertebrate species dependant upon it.

Ecological Importance of Eelgrass

The ecological importance of the Auke Nu eelgrass bed has been substantially documented as described in our earlier report. Eelgrass is a highly valued habitat because it is an abundant primary producer, it stabilizes soils in transitional wetlands and provides food, attachment substrate and shelter for many marine fish, birds, epiphytic algae and invertebrates. Seagrass

beds are well documented nursery areas for fish (reviewed by Kenworthy et al. 1988). As nurseries, these habitats provide food and refuge from predators for sub-adult fish. Both numbers of fish and fish biomass can be considerably higher in seagrass beds than in unvegetated areas (Kemp et al. 1984; Fonseca et al. 1990). Eelgrass habitat protects juvenile herring, flatfish, salmon, and crabs during critical periods of their early life history. Eelgrass is a living marine substrate and provides important habitat for several federally managed species of fish. Eelgrass beds are also considered "special aquatic sites" under section 404 (b) (1) Guidelines of the Clean Water Act due to their ecological importance.

Beach seining of the Auke Nu Cove eelgrass bed during April, May, June and July of 1999 yielded sixteen species of fish, three shrimp and one crab species. Juvenile chum, pink and coho salmon were sampled along with many species of sculpins, flatfish and juvenile Pacific herring (Pat Harris, NMFS Auke Bay Lab, personal communication).

Assessment of Project Effects

Project plans and on-site boat and SCUBA investigations indicate that the dock face intersects the -15' MLLW depth contour at the southwest corner of the dock, and most of the dock will allow access to water of -12' MLLW to -15' MLLW. Docked fishing vessels with a typical draft of four to six feet are within six to eight feet of the sea floor at a zero tide, and within zero to two feet in an extreme minus tide. Prop wash will disturb the site's soft sediments at these depths and will result in sediment being suspended in the water column. Turbulance from propeller wash and from vessel wakes can dislodge sediments and uproot seagrass (Lockwood 1990). Prop wash from vessels approaching, docking, and departing from the seafood processing plant will result in increased turbidity and decreased light penetration in Auke Nu Cove. Tidal action is likely to carry suspended sediments into the eelgrass bed where they will settle, burying the eelgrass. Increased turbidity will decrease the amount of light reaching the sea floor, decreasing the growth rate of eelgrass. The resulting increased turbidity and sedimentation are likely to cause decreased growth of eelgrass and further reductions in the size of the eelgrass bed of Auke Nu Cove.

Data from NMFS October 2003 GPS mapping and SCUBA investigations of the Auke Nu Cove eelgrass beds document an 8.6% decrease in the size of the Auke Nu eelgrass bed from 2002 measurements. These measurements further document the continuing decline of this important eelgrass habitat. NMFS report on the Auke Nu eelgrass bed was completed in February, 2004 and a copy was provided to the CBJ.

NMFS recommends that the amended use not be allowed due to the potential for additional prop wash from the small tender to further impact the important eelgrass habitat in Auke Nu Cove. At the time the facility was initially permitted, the applicant assured all agencies and the CBJ that vessels would only dock along the seaward face of the facility.
NMFS is available to assist AGS and the CBJ with any further information needs regarding this site, and in developing an acceptable solution for the AGS project that will protect the valuable eelgrass bed of Auke Nu Cove. We are available for further scuba assessments of the area if

more site-specific information is needed. Please contact Susan Walker (907-586-7646 or susan.walker@noaa.gov) with any project related questions or concerns.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

cc:
*ACOE, John Leeds
*ADNR, OHMP, Jackie Timothy
M. Erickson
*USFWS, Richard Enriquez

Literature Cited

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