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

December 23, 2003

Ms. Teri Camry
Community Development Planner
City and Borough of Juneau
155 S. Seward Street
Juneau, AK 99801

RE: Conditional Use Permit,
Auke Nu Cove 1,
Alaska Glacier Seafood

Dear Ms. Camry:

The National Marine Fisheries Service has reviewed the Alaska Glacier Seafood Company's (AGS) Conditional Use Permit application dated 12/01/03. NMFS continues to be concerned that this project and the currently proposed 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 (attached) , 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' assessment of the proposed dock expansion yields the same conclusion. Chronic siltation from prop wash, increased turbulence from increased boat traffic, 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 are likely to damage one of the last eelgrass beds to be found in Auke Bay. The resulting habitat loss will 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. Eelgrass habitat protects juvenile herring, flatfish, salmon, and crabs during critical periods of their early life history. Eelgrass is a living marine substrate and constitutes Essential Fish Habitat (EFH) for several species of federally managed fish and in addition is a Habitat Area of Particular Concern (HAPC) because of its ecological importance, sensitivity to disturbance, and rarity. 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).

Essential Fish Habitat

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA; 16 USC 1855(b)) requires federal agencies to consult with NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may have an adverse effect on designated EFH. There is no current federal action at hand, however, prior to construction of this project modification, the U.S. Army Corps of Engineers will review the project for compliance with Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C.) to perform work in or affecting navigable waters of the United States. Issuance of a Section 10 permit would be a federal action requiring consultation with NMFS under the EFH provisions of the MSFCMA. NMFS will either make conservation recommendations to avoid or minimize adverse effects to the Auke Nu eelgrass bed or recommend denial of this permit due to the potential for adverse effects to EFH. NMFS has not received a Corps permit application for this action. We are providing draft conservation recommendations to the CBJ as a courtesy for use in preparing the staff report for the planning commission review of the conditional use permit because the CBJ has requested our review and recommendations for consideration during the planning process.

Assessment of Project Effects

Project plans and on-site boat and SCUBA investigations indicate that the dock face will intersect 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 will be 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. 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 will be completed in January, 2004 and a copy will be provided to CBJ.

Cumulative Effects

Two related components of this project should be addressed by the applicant and the City and Borough of Juneau (CBJ). These are the facility's sewage system and the previously proposed

adjacently located commercial fishing dock. The applicant plans to install a jet aeration sewage treatment plant with a marine effluent outfall in the vicinity of the project (Chris Crenshaw, R&M Engineering, personal communication). The CBJ has proposed to construct a commercial dock facility for fishing vessels to load and off-load catch and gear accessible through an easement across the applicants property. Both of these project components are interrelated to the proposed seafood processing plant expansion, would have cumulative impacts on this highly valuable marine habitat and should be analyzed together with this proposal.

Additional input of sewage effluent to the waters of Auke Nu Cove is likely to produce algal blooms that can reduce the amount to light reaching eelgrass and decrease its growth. Auke Nu Cove currently receives sewage effluent from the waste treatment facilities of the Alaska Marine Ferry Terminal and the Auke Nu Condominiums, and possibly from private residences on either side of the cove. Documentation of total amount and location of sewage effluent entering Auke Nu Cove should be made and the location and depth of the outfalls should be recorded. This information should be of special interest to AGS in consideration of its planned seawater intake for live crab tanks and processing seafood. The depth of AGS's seawater intake line is the same as the depth of the Auke Nu Condominiums' marine outfall for sewage effluent (-60 feet MLLW).

Conservation Recommendations

The goal of NMFS conservation recommendations is to avoid or minimize the adverse impacts of this project on the eelgrass bed of Auke Nu Cove for the protection of this EFH HAPC and the federally managed fish species it supports. NMFS is likely to provide these or similar conservation recommendations to the U. S. Army Corps of Engineers after receipt and review of the permit application for this proposed project. NMFS is providing these preliminary recommendations to the CBJ as a courtesy for CBJ's use in evaluating the conditional use permit for this project.

1) NMFS recommends alternative site analysis for this proposed development. The bathymetry and seafloor characteristics of this site are more appropriate for siting a docking facility. As recommended to CBJ previously, locating this project at the initially proposed site immediately south of the Alaska Marine Highway Ferry Terminal would increase the distance from the seafood processing plant to the eelgrass bed and place the dock in deeper waters thus reducing prop wash and its adverse effects.

2) If the project is sited as proposed, NMFS recommends redesigning the dock so that it allows vessel access from deeper waters. Dock access at a depth contour of -20 to -25 feet MLLW would result in less or no prop wash and would protect the Auke Nu Cove eelgrass bed from the effects of increased turbidity and sedimentation.

3) Pilings should not be constructed of creosote-treated timbers. Creosote is carcinogenic and highly toxic to all living organisms, especially juvenile fish, aquatic plants and invertebrates. NMFS recommends using steel and concrete pilings for dock construction.

4) A dock-side emergency oil spill response kit should be purchased and made available to allow fast response to small oil spills and accidental discharge of hydrocarbon contaminated bilge waters. Typical kits are contained in a 55 gallon drum or similar container, contain oil boom, absorbent pads and personal protective gear. These kits are widely available from many retail sources. The kit should be of sufficient size to contain up to a 250 gallon spill.

5) Restrict vessels from motoring, mooring or anchoring in the immediate vicinity of the eelgrass beds. NMFS will provide the CBJ with the current coordinates of the eelgrass bed in our January 2004 report. A floating breakwater, signs or other effective means of restricting access should be designed and constructed to ensure that fishing vessels to not directly impact the eelgrass bed.

6) Investigate options for improving spawning conditions for Pacific herring including the installation of artificial spawning substrates to the to dock structure. NMFS offers assistance to the CBJ in developing and monitoring the success of an artificial Pacific herring substrate.

7) Construct the dock's decking of materials that allow light penetration so that the intertidal and subtidal habitat beneath the dock continues to receive sunlight. Open-mesh gratings or glass blocks are decking materials that would allow light to penetrate the decking. Paint the underside of decking materials white so that sunlight is reflected into the subtidal and intertidal lands. These techniques have been successfully used by Washington Department of Transportation in design and construction of state ferry docks.

NMFS is available to assist the CBJ and AGS with any further information needs regarding this interesting site, and in developing an acceptable solution for the AGS project that will protect the valuable eelgrass bed of Auke Nu Cove. We will provide a copy of 2003 eelgrass report and are available for further scuba assessments of the area if more information is needed. Please contact Susan Walker (907-586-7646 or susan.walker@noaa.gov) with any project related questions or concerns.

Sincerely,

For James W. Balsiger,
Administrator, Alaska Region

Attachment

cc:
ADF&G, Janet Schempf
ADNR OHMP, Moira Engle

M. Erickson
USFWS, Bruce Halstead
ACOE, Susan Hitchcock

h:/wpdoc/shawauknu2

October 1, 2002

Memorandum To: Teri Camery, Planner
City and Borough of Juneau
Community Development Department

From: Linda Shaw, Habitat Conservation Division
National Marine Fisheries Service, Juneau

Subject: Information on environmental impacts of proposed Auke Bay seafood processing plant, file no. USE2002-00027

This is a report of the National Marine Fisheries Service, Regional Office based on research conducted in association with the National Marine Fisheries Service, Auke Bay Laboratory. This report provides information to the City and Borough of Juneau regarding a proposed conditional use permit application for a seafood processing plant in Auk Nu Cove, Juneau, Alaska, file number USE2002-00027. Scientists from the NMFS Auke Bay Laboratory and Regional Office biologists conducted intertidal and subtidal surveys in the immediate area of the proposed tidelands fill in Auke Nu Cove. The purpose of the survey was to estimate the size and define the boundaries of the existing eelgrass bed in Auke Nu Cove, and assess potential effects to that habitat from the proposed action.

Survey Methods

The intertidal survey was conducted on September 6, 2002 beginning at 0700 hrs. The tide height at 0700 hrs was -0.91 m (relative to mean lower low water, MLLW) and in this report we define the intertidal zone as depths ≥ -0.91 m. Note however that the true intertidal zone for the Auke Bay area is defined as depths ≥ -1.31 m. The footprint of the proposed fill was delineated with markers using the measurements provided in the R & M Engineering diagrams, dated July, 2002. The boundary of the continuous eelgrass bed (≥ 70% coverage) was delineated with markers and the distance between points measured with a surveyors tape. Markers with attached buoys were left at the extent of the continuous bed for use during the subtidal survey. The position (latitude and longitude) of each marker was measured with a Global Positioning System (GPS) supplemented with a Wide Area

Augmentation System (accuracy ± 3 m, precision = 100%). Positions were mapped with a Geographical Information System (GIS) and the area of the continuous eelgrass bed was calculated. The subtidal survey was conducted using SCUBA on September 6, 2002 beginning at 1055 hrs. Divers delineated the boundary of the continuous eelgrass bed (≥ 70% coverage) by deploying buoys along the perimeter of the bed. The position of the buoys were measured with a Differential GPS (accuracy ± 3 m, precision = 100%) and the positions were mapped with GIS. The attached

Survey Results

The attached map shows the GIS representation of the eelgrass bed as it now exist. We estimated the area of the continuous eelgrass bed in Auke Nu Cove at 1.55 hectares (3.82 acres). Small patches of eelgrass (< 1 m^2) are located northeast of the bed and several larger patches (< 5 m^2) are located northwest of the bed. Eelgrass is less densely distributed (about 50% coverage) near the southern end of the continuous eelgrass bed. Approximately 89.5% (1.38 hectares) of the eelgrass is in the intertidal zone and extends up to a depth of approximately + 1.0 m MLLW. The subtidal portion of the eelgrass bed extends to a depth of approximately -2.47 m MLLW. With the exception of several larger patches (< 5 m^2) of eelgrass located northeast of the bed, the subtidal bed is continuous and is bordered along its entire perimeter by a dense aggregation of *Eupentacta* sp. sea cucumbers. During the subtidal survey divers observed a school of juvenile (probably young of the year) pollock (*Theragra chalcogramma*) and several adult Dungeness crabs (*Cancer magister*) within the eelgrass bed. The "Harris transect" indicated on the map shows a long-term monitoring transect of Auke Bay Laboratory. Monitoring of this transect for biological parameters of the eelgrass bed will probably continue into the future, provided the eelgrass persists.

Potential Effects from Auke Nu Cove 1

The proposed fill footprint is approximately 48.5 m from the continuous eelgrass bed. Two smaller patches are located 4.6 and 24.4 m from the proposed fill. While the proposed fill will not directly cover the existing eelgrass bed, it will fill an area that was almost certainly covered with eelgrass as recent as the mid 1980's. The eelgrass bed covered approximately 5.67 hectares (14 acres) of Auke Nu Cove in 1984 (Janet E. Schempf, Alaska Department of Fish and Game, Habitat Division, personal communication). The eelgrass bed had been reduced by 68% to 1.82 hectares (4.5 acres) by 1996. This measurement was made as part of an environmental assessment completed prior to expansion of the Alaska Marine Highway Ferry Terminal (Michelle Ridgway, Oceanus Alaska, personal communication). Our measurements

indicate that the bed has been further reduced by 5% since that project was completed in 1997. The decrease in the size of the eelgrass bed is strongly correlated with the progressive loss or alteration of approximately 4.05 hectares (10 acres) of intertidal habitat along 762 m (2500 feet) of shoreline immediately adjacent to Auke Nu Cove. The cumulative effects from the loss or alteration of the adjacent habitat and associated activities have stressed the eelgrass community significantly.

A major concern with the proposed action is the close proximity of the fill to the eelgrass habitat. The ecological role and value of eelgrass habitat has been well documented (Kurland, 1994; Thayer et al. 1997). The presence of essential fish habitat in Auke Nu Cove has been exhaustively documented by state and federal agencies in review of similar projects since 1981. Eelgrass beds are considered "special aquatic sites" under the Section 404 (b) (1) Guidelines of the Clean Water Act and as "Habitat Areas of Particular Concern" by the North Pacific Fishery Management Council. This proposed activity will result in continued loss of eelgrass habitat by causing further alteration to the current regime and increased sedimentation due to fill activities and propeller wash.

This project was previously proposed for the intertidal area immediately east of the existing Alaska Marine Highway Ferry Terminal facility. Although the intertidal and shallow subtidal areas at that site are productive, the ecological effects associated with placing fill in that area are considerably less than the proposed action. The existing Alaska Marine Highway Ferry Terminal fill would provide a 412 m buffer between the proposed fill and the eelgrass habitat. This location is also a more feasible location for a loading/unloading facility owing to the bathymetry and slope of the seafloor. Observations made during our September 6 survey revealed the seafloor immediately seaward from the proposed fill has very low gradient ($< 5°$ slope) and is composed of fine sand and silt. According to the schematics (R & M Engineering), no docking facility is proposed and the facility will consist of a retaining wall at elevation -0.3 m (-1 foot) MLLW. Our observations indicate that the facility would be accessible to fishing vessels during higher tides ($\geq$ 2.0 m) only. As proposed, the facility would be accessible only during a few hours each day. At the location east of the ferry terminal however, the bathymetry and seafloor features are more appropriate for a docking facility. The seafloor has a steeper slope ($> 7°$ slope) allowing for better access. The seafloor consists of larger-grained sediments (pebble and cobble) and propeller wash would be less of a detriment to the eelgrass habitat 412 m away. Propeller wash has been identified as a major threat to eelgrass beds nationwide

(Kurland, 1994).

Recommendation

Due to the immediate proximity of the proposed fill to the eelgrass habitat in Auke Nu Cove (the only remaining eelgrass in Auke Bay) and the certain effect it will have on that habitat, we recommend that approval of this action be denied. However, an alternative site exists 412 m away. Engineering design has been completed on this site, most of the permits have been acquired, and the continued loss of a valuable public and commercial resource would be thwarted by its use as an alternative to the proposed location. Thank you for the opportunity to comment.