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

March 31, 2022

M. Earl Stewart
Forest Supervisor, Tongass National Forest
Juneau Ranger District
8510 Mendenhall Loop Road
Juneau, Alaska 99801

RE: Mendenhall Glacier Visitor Facility Improvements Project

Dear Mr. Stewart:

The Habitat Conservation Division of NOAA Fisheries has received the final Essential Fish Habitat (EFH) Assessment from the U.S. Forest Service (USFS) seeking an EFH consultation on the proposed Mendenhall Glacier Visitor Facility Improvements Project. NOAA Fisheries is a cooperating agency with the USFS on this project under the National Environmental Policy Act (NEPA). We previously provided a letter during the scoping period (March 18, 2020) and comments during the writing process of the draft Environmental Impact Statement (DEIS) (January 21, 2022). Proposed changes to the Mendenhall Glacier Visitor Facilities include parking lot expansions, trail expansions, dock installations, allowing the use of motorized vessels on Mendenhall Lake, increased visitor capacity, and an expansive Steep Creek habitat restoration project. These changes are in anticipation of increased tourist activity of up to 1,000,000 visitors by 2050 and the increased rate of recession of Mendenhall Glacier (views from the present visitor center may be lost within 20-40 years).

Overall, we agree with the USFS conclusion that permanent adverse impacts to EFH, including spawning and rearing habitat or fish migration corridors, will occur as a result of the proposed project. We are providing comments and EFH conservation recommendations on this EFH Assessment based on our authority under the EFH provisions in Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act.

EFH Description

EFH is defined for the five species of Pacific salmon and covers both their marine and freshwater anadromous lifecycle stages. Freshwater habitat for Pacific salmon includes all streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in the state (NPFMC 2021). EFH consists of the aquatic habitat, substrates for spawning and rearing, and adequate water levels and water quality. The Mendenhall Glacier Visitor Facility Improvement Project has the potential to affect the Mendenhall Lake shore and Steep Creek. According to the Anadromous Waters Catalog, those project sites are sockeye salmon (*Oncorhynchus nerka*) and coho salmon (*Oncorhynchus kisutch*) spawning and rearing habitats (Giefer and Blossom 2021).

Adopted Early Coordination Recommendations

The following are project components or recommendations that we discussed with the USFS project manager through our role as a cooperating agency. They have been adopted or included in the EFH Assessment or the DEIS.

1. ***In-Water Work Timing***

Our greatest concern for direct impacts to salmon and salmon EFH is in-water work while juveniles are outmigrating, adults are returning to spawn, and redds are present with eggs or early juveniles. The work proposed for Steep Creek could have the greatest adverse impact on the sockeye and coho salmon returns with a potential to disturb or destroy a year's worth of salmon production and the subsequent effect from that on future generations. The EFH Assessment notes that a work window start date of June 1 will be applied to Steep Creek and continued until adult sockeye salmon return, roughly around July 15. The USFS timed this work window based on observations of coho and sockeye salmon fry outmigration and the return of adult sockeye salmon (adult coho salmon return after sockeye salmon). A Mendenhall Lake work window will also account for avoiding migrating coho and sockeye salmon from April 1 to May 31.

2. ***Pile Driving***

We raised concerns about the acoustic impacts of pile driving on salmon eggs, juveniles, and adults. A recommendation we provide commonly is to avoid in-water pile driving when fish are present if the anticipated sound levels meet or exceed the thresholds defined in Popper and Hawkins (2019). The USFS incorporated those thresholds and are not expected to be exceeded during this project.

3. ***Invasive Species Monitoring***

This project has the potential to introduce invasive vegetation or introduce habitat changes amenable to invasive vegetation. Terrestrial and aquatic habitat fragmentation can result in the dispersal of exotic or invasive species three possible ways: altering conditions to provide different habitat, making invasion more likely by stressing or removing native species, and allowing easier movement by wild or human vectors (Trombulak and Frissel 2000, Liedtke et al. 2020). The USFS added that project actions will be implemented and operated in compliance with measures outlined in the 2019 Guidance for Invasive Plant Management Program: Tongass National Forest (Krosse 2019). We offer some additional recommendations in this letter to emphasize the importance of monitoring for and avoiding the introduction of invasive species.

4. ***Compensatory Mitigation***

We recommended the USFS consider compensatory mitigation while reviewing the in-progress DEIS and included a list of four compensatory mitigation providers in Southeast Alaska that sell credits: Southeast Alaska Land Trust, Southeast Alaska Mitigation Fund, Trillium Mitigation Bank, and Natzuhini Mitigation Bank. The USFS included that consideration in Section 6.1, stating they, "will utilize their 2020 Conservation Land Use Agreement to address any unavoidable actions requiring compensatory mitigation outlined by USACE permits on NFS lands."

Project Components with Potential Adverse Impacts to EFH

The following project components could have adverse impacts to salmon EFH and will use the construction techniques described in the EFH Assessment section 3.2: driving pile supports for docks, trails, and bridges; dredging within waters during dock construction and maintenance operations; restoring and enhancing Steep Creek fish habitat, discharging fill within wetlands and waters; placing overwater structures and stream crossings; and using motorized vessels during construction and project operation. Each project component is described as a non-fishing effect and we refer to the 2017 report for more information on potential adverse effects from each component: *Impacts to essential fish habitat from non-fishing activities in Alaska: EFH 5 year review: 2010 through 2015* (Limpinsel et al. 2017). Here we highlight some of the components:

1. ***Habitat Restoration and Enhancement***

Project components: Steep Creek Habitat Restoration, Pond of Time improved connectivity, and the Backside Pond mitigation effort.

Impacts to EFH: This project has the greatest potential impact on salmon EFH in Steep Creek. Actions include in-stream and riparian habitat disruption from heavy machinery (4.1 acres of temporary disturbance and 0.6 acres of permanent disturbance), paving of the parking lot replacing some of the current stream's location (see *Discharging Fill* below), migration interruption, and redd disturbance. The proposed work windows will ideally avoid interrupting fry emergence or returning adult migration and avoid destroying established redds. If done well, this project can enhance salmon habitat with the new direction of Steep Creek, and we recognize the restoration benefits of replacing the culvert with a bridge for better fish habitat. However, this project component is high risk instream work with long-term and permanent changes.

2. ***Discharging Fill***

Project components that would fill wetlands and riparian areas: the visitor parking lot, Photo Point Trail, Glacier Spur Road Trailheads, at grade portions of the Lakeshore Trail, Lakeshore Trail Bridge foundation, Dredge Lakes Outer Loop, extended Nugget Falls Trail, cabin development in Mendenhall Campground, Dredge Lakes Multi-Use Trail improvements, the decommissioned portion of Steep Creek, at grade portion of the Dipper Falls viewing area, uplands areas and in-water infrastructure for boat docks, and West Glacier Unit trail improvements

Impacts to EFH: The two concerns for discharging fill and paving wetlands and riparian areas are the permanent destruction of existing habitat and runoff from paved surfaces. Road runoff can carry metals, oils, and other contaminants that are harmful to aquatic life and salmon (Spromberg et al. 2016, Chow et al. 2019). Mitigation measures include the use of bioswales, revegetated native planting, catchment basins, and quarterly monitoring of runoff; however there are additional mitigation measures, including pervious paving systems that could be implemented as well. Climate change is increasing the probability of high precipitation events (Lader et al. 2020) and decreasing our ability to predict runoff that overwhelms stormwater discharge systems.

3. ***Dredging***

Project components: Welcome Center Dock and one orientation of the West Glacier Dock

Impacts to EFH: Dredging has the potential to affect aquatic habitats through increased sedimentation, habitat disruption, shoreline disturbance and fuel leaks from barge operations, and cumulative impacts from long-term maintenance dredging. The use of work windows for Mendenhall Lake and Steep Creek will help minimize the impacts to fish, however the long-term impacts of habitat disturbance still apply.

4. ***Vessel Operations***

Project component: Alternatives 2 and 3 of the proposal to allow motorized vessels on the lake

Impacts to EFH: Similar to concerns with pumping sewage from portable bathroom facilities, the allowance of motorized vessels will increase the likelihood of wastewater discharges in Mendenhall Lake. Aside from human waste, there is also the increased probability of plastic pollution and other refuse from vessel goers, fuel leaks, and continued habitat disruption from the boat launch area.

5. ***Visitor Capacity***

Project component: Visitor Capacity and Commercial Use Management

Impacts to EFH: NOAA's draft National Mitigation Policy was released in 2021 and directs the agency to consider climate change and climate resilience when evaluating and developing mitigation measures (NOAA 2021). The EFH Assessment should include climate projections and assessments of effects to habitats and species in the project area from climate change. The concern with the proposed increases to visitor capacity is the impact of increased vehicle traffic, greenhouse gas emissions, and pollution to the area. There should also be the consideration of increased foot traffic on trails near the shoreline and streambeds, and how that might change given the number of visitors allowed.

EFH Conservation Recommendations

In accordance with Section 305(b)(4)(A) of the MSA, we make the following EFH Conservation Recommendations:

1. Utilize and install pervious paving systems for the expanded parking lot and commercial overflow lot. Americans with Disabilities Act-compliant pervious paving should be used to minimize stormwater discharge from road surfaces combined with passive treatment using vegetated bioswales. Pervious road surface alternatives, along with low maintenance bioinfiltration methodologies, can both reduce and passively treat road runoff to fish bearing waterbodies in the project area (Spromberg et al. 2016).
2. Maintain and monitor the catchment basins used for runoff mitigation before and after storm events, when they are most likely to fail, to protect surrounding waters from contamination or suffer functional damage.
3. Use upland storage and disposal options as much as possible. For example, the risk of human waste discharges from a portable toilet on land is lower than the risk from a portable toilet on a floating dock facility with the need for periodic removal.
4. Update monitoring and reporting of stream temperature, lake temperature, dissolved solids, conductivity, pH, and hydrocarbons. A quarterly monitoring plan could ensure non-passive treatment of stormwater runoff is functioning to protect anadromous waters.

Results of monitoring can inform the frequency of maintenance of non-passive stormwater management devices.

5. A current survey of the species and distributions of invasive species should be conducted. The results of the survey should be used to plan construction activities with appropriate best management practices designed to anticipate the potential to spread invasive species from and between construction sites due to disturbance or contamination from items including boots, vehicles and vessels, and earth disturbing equipment.
6. Further recommendations to avoid or minimize invasive species are:
    a. Inspection and cleaning best management practices should be planned and implemented for personnel and equipment brought into construction sites from outside the area.
    b. Shoe cleaning stations should be placed at existing and newly constructed trails with interpretive signage.
7. To the extent practicable, minimize the footprint of dredged areas to reduce the impacts of sedimentation and habitat disturbance as well as the long-term impacts of dredging for maintenance purposes.
8. Avoid wetland impacts by avoidance and minimization of project footprints. For unavoidable impacts to wetlands, the compensatory mitigation plan mentioned above should be developed in consultation with NMFS and implemented.

Under section 305(b)(4)(B) of the MSA, the Federal action agency is required to respond to our EFH conservation recommendations in writing within 30 days. If your response is inconsistent with our recommendations, please explain the reasons for not following our recommendations, including the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(k)).

If you have questions regarding our recommendations for this proposed project, please contact Molly Zaleski at molly.zaleski@noaa.gov or Linda Shaw at linda.shaw@noaa.gov.

Sincerely,

Jonathan M. Kurland
Regional Administrator

CC: Monique Nelson, USFS, monique.nelson@usda.gov
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