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

January 28, 2009

Heather Campfield
DOWL Engineers
4041 B Street
Anchorage, AK 99503

Re: Proposed Hatcher Pass Recreational Area

Dear Ms. Campfield:

NOAA's National Marine Fisheries Service (NMFS) reviewed materials distributed by DOWL Engineers for the Matanuska-Susitna Borough (MSB) and the Federal Transit Administration (FTA) regarding the proposed development of a new recreational area at Hatcher Pass, Alaska. The proposed recreational area would provide supporting facilities for both summer (e.g., mountain biking, hiking, equestrian) and winter (e.g., cross country and down hill skiing, snowboarding, sledding) recreational opportunities. The FTA is proposing to construct transportation infrastructure to provide access to the recreational areas and trail heads. Additionally, developers have applied for water rights (864,000 gallons per day) to support the recreational facilities and winter snowmaking operations.

The proposed project area overlies several tributaries of the Little Susitna River, which supports habitat for aquatic resources, including essential fish habitat (EFH) for anadromous salmon. Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the Secretary of Commerce on any action that may adversely affect EFH. In the Alaska Region, EFH has been designated for anadromous salmon and marine species of groundfish and crab under NMFS' jurisdiction. EFH encompasses estuarine, near shore and offshore habitats and substrate to include pelagic, epipelagic, and meso-pelagic waters and the benthos. EFH for salmon consists of the aquatic habitat, fresh and marine waters necessary to support a long-term sustainable fishery and contributions to a healthy ecosystem. Please visit our web site at http://www.alaskafisheries.noaa.gov/habitat/default.htm for additional information on habitat and EFH.

NMFS offers the following preliminary comments and recommendations regarding studies, analyses, and engineering technologies and practices that would assist the MSB and FTA in identifying, avoiding and minimizing the negative impacts of the proposed project on EFH.

Recommended Studies/Analyses

Transportation infrastructure and development can negatively impact aquatic ecosystems, causing habitat fragmentation and altering surface and ground water regimes. Such impacts may adversely affect EFH, and ultimately threaten the sustainability of salmon populations, by eliminating fish passages and limiting access to spawning and rearing habitat. Environmental analyses conducted in support of the proposed project should be adequate in scope, analysis, and detail to support the National Environmental Policy Act and section 404 permit review processes, and should consider all reasonably foreseeable cumulative effects related to likely secondary development prompted by the project, including the expansion of connection

corridors, associated roads, and utilities. Additionally, each supporting study should be designed and executed in a way that is capable of achieving clearly defined project objectives with a predetermined level of precision and accuracy.

NMFS' primary concern is the identification and characterization of anadromous fish species and associated habitat in the affected landscape. However, we are also concerned about the project's potential impact on the critical ecosystem processes provided by wetland and riparian zones, as well as hydrologic function and in-stream flows, and water quality and availability within the affected tributary reaches. Consequently, we recommend project studies identify and characterize these processes within the potential impact area of road and trail crossings.

The proposed water withdrawals could reduce water levels on the Little Susitna River, exposing spawning habitat and eliminating fish access to rearing habitat in many secondary tributaries. Therefore, we recommend the project establish in-stream flow and hydrographs to measure the full impact of the proposed withdrawals on resident and anadromous fish populations, and consider strategies to avoid, minimize and/or mitigate the impacts of such withdrawals.

Aquatic studies should identify and characterize the seasonal relative abundance of anadromous and resident fish species at all life stages, and document freshwater invertebrates, vegetation, and associated habitat and substrate composition. Surveys should be conducted both upstream and downstream of any tributary reaches to be intersected by roads and trails. In this context, a reach is defined as 20 times a channel's mean bankfull width at the specified site (EPA 2004)[1]. Because presence/absence data may not represent the true historic range of anadromous species, we also recommend such studies identify all fish passage barriers downstream of the transects or crossings to ensure new construction will not compromise future restoration efforts.

Each potentially affected tributary should be identified and characterized as a primary, secondary, or tertiary tributary, according to Rosgen stream classification techniques (or a similar recognized methodology) at level I and II (Rosgen and Silvey 1996)[2]. Seasonal hydrology and in-stream flow variability should be characterized within each defined stream reach of a proposed alignment.

Where preliminary surveys have identified potential wetlands, we recommend functional assessments and wetland delineations be conducted to one half mile of either side of the proposed final alignment, according to U.S. Army Corps of Engineers or U. S. Department of Agriculture protocols (Somerville 2004, USDA 2008).[3,4] Additionally, we recommend functional assessments and wetland delineations be conducted to the same distance on either side of any fresh water anadromous fish bearing tributaries. Where wetlands are not present, these

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[1]Environmental Protection Agency (EPA). 2004. Wadeable Stream Assessment: Field Operations Manual. EPA841-B-04-004. U.S. EPA, Office of Water and Office of Research and Development, Washington, D.C.

[2] Rosgen, D.L. and H.L. Silvey. 1996. Applied River Morphology. Wildland Hydrology Books, Fort Collins, CO.

[3] Somerville, D.E. and B.A. Pruitt. 2004. Physical Stream Assessment: A Review of Selected Protocols for Use in the Clean Water Act Section 404 Program. September 2004. Prepared for the U.S. EPA, Office of Wetlands, Oceans, and Watersheds, Wetlands Division (Order No. 3W-0503-NATX). Washington, D.C., 213 pp.

[4] U.S. Department of Agriculture (USDA), Forest Service, Pacific Northwest Region. Stream Inventory and Data Analysis. Available online at: http://www.fs.fed.us/r6/water/fhr/sida/index.htm.

surveys should describe riparian characterization and cover (e.g., woodland vegetative condition and viability).

Recommended Engineering Technologies/Practices

Engineering technologies and practices can be incorporated in the design and construction of stream and river crossings to avoid adverse impacts to EFH. We recommend siting hiking trails and road crossings to avoid wetlands or anadromous fish bearing streams and rivers, wherever possible. However, in situations where this is not possible, we recommend using elevated bridges, rather than culverts, to span anadromous tributaries. We suggest bridge span consider hydrology and account for 50-year flood events. In addition, we suggest boardwalks be used to elevate trails across seeps, springs and wetlands, and equestrian and hiking trails be designed to minimize degradation of riparian areas, erosion, and sediment loading of spawning substrate and rearing habitat.

When culverts are the only available option, we recommend using stream simulation models and methods in conjunction with open bottom culverts (arched or boxed) to allow natural substrate and hyporheic function. This design approach would support fish and invertebrate passage, promote natural water course, exchange and contribution from woody debris, and support naturally occurring detrital and sediment transport and deposition. Traditional corrugated pipe culverts should not be used in any fashion, as these structures may alter water course and natural hydrology, eventually becoming elevated or perched, preventing fish passage and degrading natural ecological processes. Finally, we recommend employing Best Management Practices when using artificial structures to promote natural hydrology and instream flows; for example, practices which insure structures conform to the natural stream gradients and stream channel alignment to avoid velocity barriers and scouring during high water events.

In conclusion, the Matanuska-Susitna Valley is comprised of a diverse series of interconnected ecosystems, which support complex ecological functions. By incorporating these recommendations in project design and implementation, the MSB and FTA have the opportunity to develop a recreational area that preserves a sensitive and valuable ecosystem while minimizing restoration costs in the future.

We look forward to working with you to minimize the effects of the proposed Hatcher Pass project on living marine resources, including EFH. If you have any questions regarding the EFH process or our preliminary input and recommendations, please contact Doug Limpinsel at 907-271-6379 or Doug.Limpinsel@noaa.gov.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

Hatcher Pass Recreational Area dl jh 1-28-09 final