Dear Mr. Karczmarczyk:

RE: Kivalina Evacuation Road – Bridge Construction
Kivalina Lagoon (Stream No. 331-00-10044)
Section 15 & 22, T27N, R26W, KM, Noatak C-5
Location coordinates (NAD83): 67.7301 N 164.5442 W

Pursuant to AS 16.05.871(b), the Alaska Department of Fish and Game (ADF&G), Division of Habitat, has reviewed your proposal to construct a bridge across Kivalina Lagoon to connect the community of Kivalina (located on the barrier island) to the mainland and an evacuation road. We received your initial application by email on May 17, 2018, and additional information by email and telephone through June 24, 2018.

Project Description
The Alaska Department of Transportation and Public Facilities (ADOT&PF) proposes to construct a 3,200-foot-long Kivalina Lagoon crossing consisting of a bridge and approaches, fish passage culverts, and overflow pipes. A single span bridge will cross the 110-foot wide Kivalina Lagoon channel, located approximately 160 feet northeast of and parallel to the barrier island lagoon shoreline. The bridge would be a pile supported structure with sloped, rock protected earthen abutments or vertical sheet pile walls, and be designed to span the entire lagoon channel width to minimize potential impact to natural channel dimensions and functions. The single span bridge length may be up to 180 feet long.

A second, though discontinuous, lagoon channel is located near the northeast end of the lagoon crossing. Two 12-foot diameter culverts, each approximately 100-feet long at that location will allow passage of
all life stages of fish, and will be designed to accommodate and convey anticipated debris and icing to prevent flow blockage. The two 12-foot diameter culverts will be designed to be easily maintained for open water passage at mean tide, preventing an area of stagnant water.

Overflow pipes will be spaced regularly along the lagoon crossing to provide hydraulic conveyance during high water events and protect the structure from flooding. The overflow pipes in the causeway will be spaced approximately 100 feet apart. The overflow pipes will be 4-6 foot diameter corrugated metal pipes that are 80 feet long. The bridge and approaches, to include culverts, will be scheduled for inspection every two years (standard for State bridges), and maintained accordingly. Additional project details are provided in your application materials.

**Anadromous Fish Act**

Kivalina Lagoon has been specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). In the project reach, the lagoon provides habitat for Chinook, chum, coho, sockeye and pink salmon; as well as Dolly Varden and whitefish species. Your project as proposed should not have adverse effects on anadromous fish or their habitat and is not anticipated to obstruct the free passage of fish.

In accordance with AS 16.05.871(d), project approval is hereby given subject to the project description above with the following stipulations:

1) Prior to initiation of construction, ADOT&PF shall provide ADF&G Habitat final construction plans and specifications for all aspects of the project occurring below OHW. After reviewing the final plans ADF&G will provide a determination in writing, as to whether work windows will be required to minimize impacts to fish.

2) All aspects of this project shall be designed, installed, and maintained to maintain important fish habitat and to accommodate the efficient passage and movement of fish, for the life of the structures. Any obstruction to the free passage of fish (including, but not limited to, excessive velocities, outwash gravels, bank destabilization, or potential fish entrapments) shall be restored to the satisfaction of the ADF&G Division of Habitat.

3) Debris that collects on the bridge piers or embankments within the limits of ordinary high water shall be removed (working from the bridge) in a timely manner and may be deposited to an upland location. If other maintenance of the structures is required, the ADF&G shall be notified and a determination made on the need for a Fish Habitat Permit or amendment before work begins.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment.
before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when a deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.871 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The department reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

This permit decision may be appealed in accordance with the provisions of AS 44.62.330-630.

Any questions or concerns about this permit may be directed to Audra Brase at 907-459-7282 or by email: audra.brase@alaska.gov.

Sincerely,

Sam Cotten, Commissioner
BY: Audra L. J. Brase, Regional Supervisor
Division of Habitat
Alaska Department of Fish and Game

ecc: James Menard, ADF&G CF, Nome
Al Ott, ADF&G HAB, Fairbanks
Brendan Scanlon, ADF&G SF, Fairbanks
Permit Coordinator, ADF&G SF, Anchorage
AWT Northern Detachment
NOAA Fisheries, Anchorage
Melissa Riordan, USACE, Fairbanks
Ben Soiseth, USACE, Fairbanks
Bob Henszey, USFWS, Fairbanks
Jeanne Proulx, ADNR, Fairbanks
Bruce Sackinger, ADNR, Fairbanks
Jonathan Hutchinson, ADOT&PF, Fairbanks