

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES OFFICE OF PROJECT MANAGEMENT/PERMITTING

FRANK H MURKOWSKI, GOVERNOR

*SOUTHCENTRAL REGIONAL OFFICE
ANCHORAGE, ALASKA 99501
PH: (907) 269-7470 / FAX: (907) 269-3981*

May 9, 2005

Edrie Vinson
Environmental Project Manager
Federal Highway Administration
709 W. 9th St. RM 851
Juneau, Alaska 99802

Dear Ms. Vinson:

The Alaska Department of Natural Resources has reviewed materials and considered information provided at the April 25, 2005 Agency Scoping meeting conducted by the Federal Highway Administration (FHWA) and Alaska Department of Transportation and Public Facilities (ADOT&PF) for proposed Knik Arm Crossing Project. We appreciate the efforts of FHWA and ADOT&PF to integrate involvement of state agencies in the development of the project and the required environmental impact statement (EIS). The department is committed to employing our resources to meet the project's timelines and information needs. This letter represents the consolidated comments of state resource agencies.

The purpose of the project is to create an efficient link between Port Mackenzie and the Port of Anchorage (POA), provide an alternate North – South emergency response and evacuation corridor, provide transportation infrastructure for economic growth and to implement a legislative mandate. Interagency Scoping meetings between March 29, 2005 and April 25, 2005 have centered around the concept of a bridge crossing.

The proposed preferred bridge alternative is a 7,000 foot, pile supported multi-span bridge with approximately 3,000 feet of embankment approach ramps on either side. The concept is to maintain an open flow width no narrower than the narrowest natural width of Knik Arm. The location of the bridge would be approximately 3 miles north of Cairn Point where Knik arm is around 13,000 ft wide. The bridge location is constrained by the bathymetry of Knik Arm, marine shipping corridors, current land use in Anchorage, and restrictions imposed by operations at Elmendorf Air Force Base and the U.S. Army base at Fort Richardson. A second bridge alternative is a fully pile supported bridge spanning the full 13,000 foot width of Knik Arm.

Intertidal habitat in upper Knik Arm is characterized by scoured cobble and rock substrate heavily embedded within fine sediment. Within the vicinity of man-made structures at Port Mackenzie and the POA these cobble substrates are covered with several feet of fine sediments and clay. The proposed preferred bridge alternative with approach ramp embankments extending approximately 3,000 ft into Knik Arm is expected to create sediment deposition zones both upstream and downstream of the abutments. Based upon what has occurred at Port Mackenzie and the POA, sediment deposition may be expected to fill between 206 and 412 acres of intertidal area around the proposed bridge approaches. Sediment build-up increases the slope

along the intertidal zone, shortening the time shallower waters are available to fish for travel or feeding between high and low tide events and forces fish into higher velocity flows for a longer time period. We recommend the EIS identify how each build alternative avoids or minimizes impacts within the intertidal zone of Knik Arm.

Initial Knik Arm Hydraulic studies estimate that restricting the width of Knik Arm from 13,000 ft down to 7,000 ft will increase maximum tidal flow velocities by 16 – 20% (1.12 – 1.40 knots). Local flow acceleration could be larger around the approach ramp abutments. In addition to increases in water velocity through the bridge abutments constriction, changes in both vertical and horizontal currents and flow patterns could be expected. Such changes will likely affect resident and transient fishes by altering local current dynamics and current velocity. We recommend the EIS analyze the potential extent of these impacts.

We are pleased to see a comprehensive methodology for assessing the indirect and cumulative effects of a Knik Arm Crossing. We recommend the EIS specifically address conservation of green space corridors to maintain moose and bear population connectivity, as well as methods to avoid and minimize moose/human encounters, particularly vehicle collisions, in the Point Mackenzie area.

We also appreciate the extent of fisheries data collected so far under clearly adverse sampling conditions. In order to conduct a fully informed review of the potential impacts of constructing a bridge with approach ramp embankments on the habitat structure of Knik Arm, we request information based on two key questions:

- What is the residence time of juvenile salmon within Knik Arm and how do they maintain that residency with such extreme current velocities?
- Are salmon and other species of fish utilizing the mid-channel portions of Knik Arm as well as the near shore?

With these questions addressed, resource agencies will be better able to identify the environmental effects of constructing an embankment approached bridge across Knik Arm in adequate detail for comparison with economic and technical analyses and consideration of alternative proposals.

Accessing a bridge may require a road along intertidal lands between Cairn Point and the bridge approach ramps. This road would cross the mouth of Sixmile Creek (Stream No. 247-50-10090). Sixmile creek is specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 41.14.870 (a). It is known to support sockeye, coho, and pink salmon. A Fish Habitat Permit will be required for this crossing.

Thank you for the opportunity to provide these scoping comments. We look forward to working with FHWA and ADOT&PF on this project as it progresses. Please don't hesitate to contact me with any questions regarding these comments.

Sincerely,



Den Perrin

Project Management and Permit Coordinator