

Commenter	Discipline	Comment	Response
NMFS	EFH	Develop a comprehensive mitigation plan to offset the adverse effects of any unavoidable fill for the bridge approaches. Suitable mitigation to compensate for the proposed impacts to EFH in Knik Arm would be costly, and reducing the need for compensatory mitigation by reducing the amount of proposed fill would offset a substantial portion of the costs of a less damaging design for the crossing.	A comprehensive mitigation statement was developed for the project and is included in Attachment D: Mitigation Statement to the <i>Section 404 Permit Application</i> . Unavoidable impacts to marine waters and wetlands within the Municipality of Anchorage will be compensated using formulas outlined in the Anchorage Debit-Credit Methodology. An increased bridge length would have increased impact to the Cook Inlet beluga whale and is not practicable in consideration of costs, logistics, and technology.
USFWS	Migratory Birds	A Knik Arm bridge crossing may pose a hazard to flocks of migratory birds that likely seasonally traverse Knik Arm as a migratory corridor (as identified in Bird Migration Near Fire Island, Cook Inlet Alaska, Spring and Fall 2004, by Robert Day, et. al., prepared in 2005 for Chugach Electric Association, Inc.). Potential impacts should be addressed, such as strike hazards and aggravating effects including possible attractant or disorientation caused by aviation safety or ambient roadway lighting on the bridge during low visibility or inclement weather.	The Knik Arm Bridge is unlikely to present a hazard to migratory Birds. This portion of Knik Arm is not a major flyway for migratory bird species (<i>Knik Arm Shorebird Study</i> ; URS 2006). The bridge will be a low concrete structure with no high protrusions or wires for birds to fly into. The bridge will also be illuminated using low-profile luminaires, approximately 15 to 20 feet above the approach road and bridge deck, installed in a way that minimizes light scatter.
USFWS	Bald Eagles	Bald eagle nests have been identified in the project vicinity, according to the FEIS. Eagles and their nests are federally protected under the Bald and Golden Eagle Protection Act. A permit is now available for the unavoidable take, including disturbance, of eagles and their nests. Please see the USFWS website for the Alaska Region Eagle Permit Program at http://alaska.fws.gov/eaglepermit/index.htm for information about the permit process and for guidelines on avoiding and minimizing impacts to eagles, a prerequisite for consideration of any permit.	There are currently no active bald eagle nests in the project area. An additional eagle nest survey will be performed prior to construction, as outlined in Section 2.5.1 of the Mitigation Statement of the <i>Section 404 Permit Application</i> . If a nest is located in or adjacent to the project area, the appropriate steps and permits will be obtained before construction begins.
ADF&G	Fish	Given the significant number of piles required and the anticipated requirement for at least 522 hours of impact pile driving, ADF&G requests that pile driving activity is conducted during the months of September to March to protect migrating anadromous fish.	The NMFS Section 7 Biological Opinion for beluga whales prohibits pile-driving during high-density beluga whale periods from August 1 through November 30. Pile driving from barges in winter is difficult and ineffective due to constant movement of ice floes and the need to establish a stationary position for the driving barge. See Section 2.3 of the Mitigation Statement to the <i>Section 404 Permit Application</i> for KABATA's measures to avoid, and minimize impacts to anadromous fish habitat.
ADF&G	Fish	The ADF&G recommends that the U.S. Army Corps of Engineers fully evaluate the potential impacts to anadromous fish migration from changes in current velocities which would result from bridge construction. These impacts are briefly discussed in the Final Environmental Impact Statement (FEIS) (section 4.8.8.2.2) and in more detail in the EFH Assessment for this project (Appendix F, FEIS).	<p>Analysis of current velocities around the bridge abutments is detailed in the <i>Hydrology and Hydraulic Environment of Knik Arm</i> (HHEKA 2009) technical report. This report was researched and led by Dr. Jack Colonell with input from the U.S. Army Corps of Engineers' Coastal Hydraulics Laboratory.</p> <p>Anadromous fish in Knik Arm are exposed to extreme tides and tidally-generated currents. The HHEKA report measured existing conditions and modeled conditions with an 8,200 foot bridge. Maximum existing tidal currents commonly exceed 11.5 ft/s. The modeled changes to current speeds during maximum flow events were within 5-10 percent of the existing flows. Additional information on maximum current flows and root-mean-square differences in tidal speeds is detailed in the HHEKA Report.</p> <p>The HHEKA Report also shows that the 2:1 side slope of the abutment will create a boundary layer wedge of low flow speeds. The roughness of the armor rock creates a wedge-shaped zone within which the flow speed will be less than 0.5 ft/second. A typical salmon fry of 25-45 mm length will be able to swim against this current and would have ample opportunities for rest and shelter within the numerous crevices of the armor rock (HHEKA 2009). This boundary zone at maximum tidal flows (i.e., spring flood) will extend 43 ft from the shoreline to a depth of about 22 feet (Appendix IV, HHEKA).</p> <p>The calculations in the HHEKA Report all refer to an 8,200 ft bridge. Analysis of actual velocity measurements showed that 96% of the total flow in Knik Arm passed through the 8,200 foot gap. The 9,200 foot bridge will have a larger area to pass the Knik Arm flows and therefore have lower tidal velocities.</p>

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ADF&G	Cumulative effects	The proposed bridge project would intensify and accelerate development and recreational activities in the southwestern Mat-Su Borough. The potential indirect impacts to anadromous fish habitat as a result of increased access and development are long-term and significant. The public notice and mitigation measures listed in Attachment D: Mitigation Statement does not address the adverse impacts to fish habitat from increased access and development which will result from construction of the bridge. The mitigation measures in the FEIS (section 4.8.8.2.2) include a commitment by Federal Highway Association and KABATA to fund a new staff position in the Mat-Su Borough to help facilitate the planning and permitting process and also a commitment of additional funds to be used for priority work associated with plan development. The ADF&G recommends that the U.S. Army Corps of Engineers consider and incorporate these potential impacts to anadromous fish habitat from increased access and development and require the applicant to develop mitigation measures similar to those outlined in the FEIS to avoid, minimize, and mitigate for adverse impacts to anadromous fish habitat.	KABATA has no authority or ability to control cumulative effects. These cumulative effects are described in the <i>DEIS</i> , the <i>FEIS</i> , and in <i>Cumulative Effects Technical Report</i> . KABATA is not required to mitigate for unforeseeable cumulative impacts. They have, however, agreed to fund a new Mat-Su Borough staff person for two-years to aid in planning and \$70,000 for other priority work identified by the Mat-Su Borough and other agencies to facilitate orderly land use and economic development.
ADF&G	Terrestrial mammals	The project description also includes an underpass for an existing power line easement trail at Lake Lorraine. This underpass should be designed to accommodate moose and other wildlife. ADF&G biologists should be consulted prior to developing final design for fencing and retaining walls and the underpass crossing at Lake Lorraine.	ADF&G biologists will be consulted during design of the underpass crossing near Lake Lorraine.
ADF&G	Terrestrial mammals	The mitigation measures listed in the FEIS to minimize impacts to terrestrial mammals include a commitment of \$50,000 from KABATA to fund additional study of moose in the Point MacKenzie area. We recommend KABATA works closely with ADF&G biologists to design a study to evaluate seasonal movement patterns, late winter distribution, and important calving areas in the Point MacKenzie area. The development of appropriate mitigation measures for road construction and increased traffic will depend, in part, on results from additional wildlife studies in the Mat-Su Borough.	The <i>Roadway Moose Mitigation</i> Study has been completed by the Alaska Moose Federation and can be found in Appendix C. An Adaptive Management Plan will be developed in consultation with ADF&G to determine appropriate terrestrial mammal monitoring and mitigation activities. For additional moose mitigation measures see Section 2.7 of the Mitigation Statement of the <i>Section 404 Permit Application</i> .
ADF&G	Cumulative impacts	The Susitna Flats and the Goose Bay State Game Refuges are located in the southwestern Mat-Su Borough and very near the proposed access corridor for the Knik Arm Crossing. While the proposed Mat-Su approach road is not directly within the refuges, there are potential project impacts to both fish and wildlife resources and public use of the refuges. Increased traffic, residential development, and increased public recreational use in the southwestern Mat-Su Borough will likely affect wildlife movements, important seasonal use areas, and sport hunting and fishing activities. We recommend the final permit decision consider impacts to the resources and public use of the Susitna Flats and Goose Bay State Game Refuges.	The cumulative effects of increased traffic, residential development, and increased public recreation use are described in detail in the <i>DEIS</i> , the <i>FEIS</i> , and in <i>Cumulative Effects Technical Report</i> . KABATA commitments to avoid, minimize, and mitigate for project impacts are described in Attachment D of the Section 404 Permit Application and in the <i>ROD</i> .
MOA - AWMP	Water Quality	As an enforceable policy of the AWMP, the following should be included as a condition in the final Corps permit: Replicate the water quality functions of wetlands lost in the port area to the maximum extent possible to ensure continued filtration of contaminants from both groundwater and surface water sources.	This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply. Existing surface water quality functions will be replicated as per the recommendation of the Department of Environmental Conservation Water Quality Standards Anti-degradation policy (18 AAC 70.015).
MOA - AWMP	Hazardous Material	As an enforceable policy of the AWMP, the following should be included as a condition in the final Corps permit: Conduct toxicology studies for project areas in the port and Ship Creek rail yard requiring excavation. Determine potential mitigation efforts to abate any toxic substances discovered during investigations.	This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.
MOA - AWMP	Hydrology	As an enforceable policy of the AWMP, the following should be included as a condition in the final Corps permit: Conduct a Hydrogeological Analysis by a certified hydrogeologist, to the applicable standards of the municipal Department of Public Works, to determine potential fill impacts to neighboring properties. Provide mitigation for any potential flooding impacts.	This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.
MOA - AWMP	Visual Resources	A Ship Creek Waterfront Land Use Plan (1991) recommendation relevant to KAC: Ship Creek should be a focal point for the area. Goal #5, Objective #3 states the need to “protect the integrity of views and vistas” (page 35). The potential to mitigate viewshed and aesthetic impacts of the Ship Creek bridge and road connection spans over the watershed should be explored.	This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.

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MOA - AWMP	Hydrology	<p>A Ship Creek Waterfront Land Use Plan (1991) recommendation relevant to KAC:</p> <p>Groundwater seeps from the Government Hill Bluff have been noted in two primary locations which correlate to previous areas of subsidence following earthquakes. Poor drainage is a concern since excess subsurface flows can exacerbate potential ground-failure problems during an earthquake. Geotechnical and groundwater investigations should address this potential for ground failure in the project area.</p>	<p>This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.</p>
MOA - AWMP	Water Quality	<p>A Ship Creek Waterfront Land Use Plan (1991) recommendation relevant to KAC:</p> <p>Water quality issues within the lower Ship Creek watershed must be addressed for new development.</p>	<p>This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.</p>
MOA - AWMP	Cultural Resources	<p>A Ship Creek Waterfront Land Use Plan (1991) recommendation relevant to KAC:</p> <p>The Ship Creek area, particularly Alaska Railroad properties, contains sites of historic relevance: eight buildings dating from 1916 to 1940's era and the Original Anchorage Town Site were identified in the Ship Creek Waterfront Land Use Plan and also noted in a 1989 Ship Creek Architectural Survey. The applicant's review of historic resources in the project area should include recommendations of how to mitigate for direct and indirect impacts to historic buildings. The applicant should contact Kristine Bunnell, MOA Senior Planner, at 343-7993 for further information.</p>	<p>This recommendation pertains to wetlands outlined in the AWMP. The proposed action does not impact any wetlands outlined in the AWMP, including #1 Cattail Pond at Port, #2 Cattail Pond at Port, Ship Creek Floodplain, and Ship Creek Beaver Pond. There is also no surface or subsurface water connection between the wetlands impacted and the wetlands described in the AWMP. The enforceable policies of those wetlands outlined in the AWMP do not apply.</p>
MOA - AWMP	Hydrology	<p>As an enforceable policy of the AWMP, a "Drainage Impact Analysis" (i.e., Hydrogeologic Analysis) shall be supplied by the applicant to the municipal Department of Public Works and Community Development Planning. Information for this analysis includes, but is not limited to:</p> <ul style="list-style-type: none"> a. Estimates of surface and subsurface water movement within and into the subject property. b. Delineation of estimated on-site and off-site drainage impacts of the fill. c. Outline of mitigating factors to offset adverse impacts. d. Soil types, depth to groundwater, and seasonal water table information. e. Existing topographic delineation and general surface drainage patterns. f. Location of permanent and ephemeral water bodies greater than 100 s.f. g. How development within and adjacent to the subject wetland may be affected by groundwater intrusion as a result of the proposal. 	<p>A "Drainage Impact Analysis" will be submitted by the contractor prior to construction.</p>
MOA - AWMP	Hydrology	<p>As an enforceable policy of the AWMP, a "Site Drainage Plan" should be incorporated into the permit to evaluate and reduce the potential for groundwater intrusion and impacts to existing local hydrology. This information may be applicable concerning both construction and full build-out of the project:</p> <ul style="list-style-type: none"> a. Identification of final surface drainage directions. b. Location and types of existing and proposed constructed and natural drainage facilities/features, including sub-drains, culvert size and catch basins, and location of connections and elevations where new drainage features tie into existing storm drains. Also, location and measurements of retained natural drainage features. c. Identification and location of water quality treatment measures and facilities and levels/standards of water quality intended to be achieved with treatment. d. Location and types of necessary dewatering controls (ditches, ditch blocks, etc.) to be used in construction and as part of finished design, to ensure maintenance of remaining wetland hydrology. 	<p>A "Site Drainage Plan" will be submitted by the contractor prior to construction.</p>
MOA - AWMP	Water Quality	<p>As an enforceable policy of the AWMP, a "Water Quality Control Plan" shall be submitted for all wetland construction projects and shall indicate, as necessary:</p> <ul style="list-style-type: none"> 1) Placement of perimeter silt fence or other sediment control devices at the toe of any exposed fills. 2) Identification of the location, size and depth, of storm and construction site water treatment settling ponds. 3) Identification of the location and type(s) of outlet features of water treatment for settling ponds, e.g. filtering swales; 4) Identification of temporary construction and fill slope stabilization measures; <ul style="list-style-type: none"> 4.a. Minimum 2.5:1 slopes of fill which face or abut unfilled wetlands; 4.b. Slope blankets; 4.c. Revegetation plans for exposed fills and slopes, including maintenance, as necessary. 	<p>A "Water Quality Control Plan" will be submitted by the contractor prior to construction.</p>

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MOA - AWMP	Wetlands	<p>As an enforceable policy of the AWMP, a "Site Restoration and Stabilization" should be incorporated into the permit as a condition. The following measures shall be included in any restoration plan submitted by an applicant, where the original wetland is being restored or stabilized.</p> <p>a. Include revegetation plan for areas of disturbance. Shall utilize native species per original condition to maximum extent practicable, and/or match guidelines of the Municipality's Revegetation Guide and ADF&G Streambank Revegetation and Protection Guide, 2005.</p> <p>b. Shall include topsoil placement, as necessary, on poorer soil areas e.g., peat or silt, to insure revegetation.</p> <p>c. Proposed coverage of revegetation plans, e.g., 30 percent after one season, plus appropriate maintenance and replacement scenarios.</p>	A "Site Restoration and Stabilization" will be submitted by the contractor prior to construction.
MOA - AWMP	Wetlands	Equipment shall not be serviced or stored in wetlands, nor shall equipment encroach beyond project area, in accordance with Anchorage Municipal Code, AMC Title 15.40.	<p>The following mitigation measures have been committed to in the Mitigation Statement of the permit application:</p> <ul style="list-style-type: none"> • All construction fueling and servicing operations will be kept a minimum of 100 feet from wetlands and freshwater bodies, except for Knik Arm in-water construction work. • Clearing limits will be clearly marked prior to construction to ensure impacts are confined within the project footprint near water bodies and wetlands and within 20 feet of the footprint in other areas.
MOA - AWMP	Permitting	A flood hazard permit may be required for this project. The applicant should contact Jeff Urbanus, Municipal Floodplain Manager, at 343-8251, for details.	Phase 1 of the KAC Project is not located in a mapped floodplain and does not require a flood hazard permit. Phase 2 may require a flood hazard permit for impacts to the Ship Creek floodplain. Consultation with the MOA Floodplain Manager will occur during permitting for Phase 2.
MOA - AWMP	Approvals/Permitting	Additional municipal approvals and permits may be required dependent on the location and type of construction activity. Project activities that may require municipal permits would include: construction within a municipal Right-of-Way (ROW permit); construction outside of a publicly dedicated ROW (Fill and Grade permit); and stockpiling fill material (Fill and Grade permit). The municipal Development Services Division should be consulted further to determine applicable permits.	As design of the Phase 1 project advances, KABATA and its contractors will coordinate closely with the MOA Development Services Division to obtain all municipal approvals and permits necessary for construction.
MOA - AWMP	Utilities	The applicant should contact the Anchorage Water and Wastewater Utility regarding the location of water and sewer lines and other infrastructure within the project corridor, including the need for obtaining easements, right of entry and locates.	KABATA 's Utilities Coordinator, John Huber, has contacted and is in the process of developing Utility Memorandum Of Agreement (UMOA) with all of the utility companies in the project area, including ACS, ARRC, AWWU, CEA, JBER, Enstar, GCI, MEA, ML&P, and MTA. Once a P3 partner is selected, the P3 partner will work with each utility company to implement the final relocation. If additional right-of-way is needed, above and beyond what will be available, KABATA will work to obtain it.
MOA - AWMP	Permitting	Piers and other bridge structures placed in the Ship Creek corridor should follow setback distances of 25-feet per AWMP and AMC 21.45.210 wherever practicable. Any construction within the ordinary high water of Ship Creek would likely require an Alaska Department of Fish and Game Habitat Permit.	No construction is planned within the Ship Creek corridor as part of the Phase 1 Project which is currently being permitted. However, when Phase 2 is designed and permitted based on future traffic demands, appropriate setback distances from Ship Creek and other waterbodies will be complied with, along with obtaining any necessary permits from the Alaska Department of Fish and Game.
MOA - AWMP	Geotechnical	The municipal Geotechnical Advisory Commission (GAC) is comprised of professional engineers with seismic and structural expertise that review development projects throughout the Municipality. This Commission typically reviews projects for consistency with seismic hazard elements and local amendments of the International Building Code. Since sections of this project are located within high and very high seismic hazard risk zones, it would be appropriate for the GAC to review project plans to ensure that bridge, retaining walls and other seismically-sensitive structures (e.g., the proposed cut-and-cover tunnel in Government Hill) receive an independent level of review. Please coordinate with MOA Senior Planner, Dave Tremont (343-7915), to solicit the Commission's input. It is important to note that findings and recommendations from this Commission could lead to necessary alterations in the design and consequently, possible changes in the Corps' permit. Ideally, the Geotechnical Advisory Commission's review of the project design relative to seismic hazards would occur prior to final project design.	To address earthquake vulnerability, the proposed project will be designed in accordance with national and project-specific seismic design standards, and international building code guidelines, including the AASHTOM LRF Bridge Design Specifications manual. Minimum performance criteria identified in the Seismic Studies Technical Report (prepared for this project) indicate that the proposed bridge would incur no damage and be immediately operational following the 100-year return period earthquake and sustain significant, but repairable damage following a major 1,000-year earthquake. See Section 4.5.3 of the Final EIS for more information.

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MOA - AWMP	Stormwater	This project is subject to stormwater regulations under the Municipal Separate Storm Sewer System (MS4) permit. The applicant should coordinate with MOA-Watershed Management Services regarding applicable requirements.	The KAC crosses over several MS4 Permit zones including, but not limited to, the following areas: Port of Anchorage, JBER, and the Municipality of Anchorage. The compliance of these separate MS4 permits will be provided during the final design phases of the project and is ultimately driven by location. The project components within the MOA MS4 boundaries will comply with MOA MS4 permit conditions.
MOA - Parks and Rec	Cultural Resources	The Ship Creek area, particularly Alaska Railroad properties, contains sites of historic relevance: eight buildings dating from 1916 to 1940's era and the Original Anchorage Town Site were identified in the Ship Creek Waterfront Land Use Plan and also noted in a 1989 Ship Creek Architectural Survey. The applicant's review of historic resources in the project area should include recommendations of how to mitigate for direct and indirect impacts to historic buildings.	FHWA considered impacts to potential historic properties in the area of potential effect (APE), which was delineated through consultation with SHPO within the Ship Creek area during studies associated with Section 106 review and the EIS conducted for the project. Stephen R. Braund & Associates (SRB&A 2005, 2006), who conducted the Section 106 surveys, identified buildings constructed in 1960 or earlier in the Ship Creek area within the APE. Only 1 building in the Ship Creek area of the APE was recommended eligible by SRB&A (Morrison-Knudsen Construction/Craig Taylor Equipment [ANC-1960]), but it was not found eligible by FHWA and SHPO concurred with FHWA's finding of effect. Based on the Section 106/EIS analysis, there are no Ship Creek area historic properties that will be affected by the proposed action. If the MOA believes that there are additional impacts to historic properties in the Ship Creek area, beyond what was identified in the Section 106 and EIS analysis, the PA provides a process for consulting parties to notify FHWA/KABATA of the impact and revise mitigation measures should it be determined that current mitigation measures identified in the PA are not adequate (Stipulation V, Appendix B).
MOA - Parks and Rec	Cultural Resources, Recreation	This department believes the project should avoid or mitigate to the maximum extent possible, potential impacts to historical, cultural, as well as environmental resources. In particular, the department reiterates interest in mitigating impacts to the park and recreation resources of the community of Government Hill.	The PA and the ROD established mitigation measures for potential effects to historic properties and to Section 4(f) park and recreational resources. If additional impacts, beyond what was identified in the Section 106 and EIS analysis, are known, the PA provides a process for consulting parties to notify FHWA/KABATA of the impact and revise mitigation measures should it be determined that current mitigation measures are not adequate (Stipulation V, Appendix B).
MOA - Parks and Rec	Cultural Resources, Recreation, Accessibility	Phase I of the project includes construction of a cut-and-cover tunnel through the community. Additional information is needed to assess the potential disruption of connectivity and therefore convenient access to Neighborhood Park and recreation resources, and proposed mitigation of such impacts.	PA Stipulation III.K requires the construction contractor to develop a Construction Management Plan for Phase 1 and 2 construction to minimize economic impacts and community disruption (e.g., noise, construction traffic, work schedules, and access to homes, businesses, and schools). FHWA/KABATA will provide a draft plan to Government Hill Community Council and SHPO no later than the 60% design review. Once the project is completed, access will be maintained to parks and recreational resources. The ROD documents mitigation for impacts to parks.
MOA - Parks and Rec	Cultural Resources, Recreation	Phase II would widen this tunnel, and would extend the tunnel through existing dedicated park land, Sunset Park. It should be understood that conveyance of dedicated park land for right-of-way may require a public vote to formally un-dedicate that use for a new non-public park purpose. The Municipality cannot presume the outcome of that vote so the project proponent is encouraged to consider the timing and potential outcomes of such an action relative to final plans for the project.	Sunset Park is impacted and reduced in size, but it will remain a park, so it won't need to be "undedicated". KABATA is compensating the Muni for the loss of park land.
MOA - Parks and Rec	Cultural Resources, Recreation	The Municipality encourages the Corps to assess direct and secondary impacts of this project, including loss of park acreage, park access issues, and traffic affects on trails, on the area's parks and trails resources.	The USACE must evaluate the projects direct and secondary impacts, as well as the proposed compensatory mitigation measures, on the public interest in order to make a permit decision. KABATA's mitigation measures and commitments for parks and recreation are outlined in Part IV. Section 4(f) of the ROD.
MOA - Parks and Rec	Cultural Resources/Community Impacts	The Government Hill Neighborhood Plan (GHNP) is intended to serve as a mitigation tool for the Government Hill Neighborhood in response to the KAC project. The KAC project poses several conflicts with the GHNP. It is not apparent that the mitigation measures put forth in the PA to address these conflicts have been followed. The Community Development Department would like the opportunity to consult directly with FHWA in coordinating the results of the initial GHNP public outreach efforts and all future plan developments to ensure that said mitigation efforts are realized in time to affect the KAC project design and implementation.	The PA was negotiated in meetings that included the Signatories, Invited Signatories, and Consulting Parties to establish mitigation measures for potential effects to historic properties and the community. The GHNP is funded by the project as part of the project mitigation. As such, the GHNP should consider the tunnel, which is also a mitigation measure. A "conflict" shouldn't be possible under this scenario. The Community Development Department has the opportunity to consult directly with FHWA during the Annual Meetings. The GHNP will be complete in time for its inclusion as a Reference Information Document for the Developer. Additional impacts to historic properties, beyond what was identified in the Section 106 and EIS analysis, that are identified by consulting parties as the project progresses can be addressed through the notification and Standard Mitigation Agreement (SMA) process outlined in Stipulation V and Appendix B should it be determined that current mitigation measures are not adequate. FHWA is required to consult and coordinate with the Municipality, SHPO, and the Government Hill Board to consider the GHNP and Government Hill Historic Preservation Plan during implementation of Context Sensitive Mitigation (CSM). CSM will ensure that the project elements required for construction of the project through Government Hill conform contextually to the GHNP.

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MOA - Parks and Rec	Cultural Resources	It is not clear at this time if FHWA has delegated their mitigation responsibilities to another agency.	The PA states (p. 4) that KABATA "shall be responsible to administer and implement the stipulations under the terms of this PA for and as directed by FHWA." As such, KABATA has been granted responsibility for mitigation tasks stipulated in the PA. The KABATA Liaison has been tasked with establishing and coordinating consultation and project status update meetings that would include goals/priorities and progress of mitigation measures (e.g., the GHNP) and recommended changes to current mitigation plans based on evolving information or developments
MOA - Parks and Rec	Cultural Resources	The Community Development Department is providing comments because it does not appear that FHWA has followed the PA process in communicating with the Municipality, the Government Hill Neighborhood, and the State Historic Preservation Office (SHPO) in establishing continuing mitigation measures as outlined in the PA.	FHWA is required to consult and coordinate with the MOA, SHPO, and the Government Hill Board to consider the GHNP and Government Hill Historic Preservation Plan during implementation of Context Sensitive Mitigation (CSM). CSM coordination will begin during design development and will adhere to a community participation protocol developed by FHWA and the Government Hill Community Council Board. FHWA anticipates that this protocol will be developed following selection of a P3 Partner.
MOA - Planning	Cultural Resources	As proposed, the Knik Arm Crossing (KAC) project poses several potential conflicts with the Government Hill Neighborhood Plan (GHNP), which is under development by the Municipality of Anchorage.	The GHNP is funded by the project as part of the project mitigation. It is the responsibility of the Municipality to ensure that the GHNP considers the construction of the project and that there is no "conflict". CSM coordination will begin during design development and will adhere to a community participation protocol developed by FHWA and the Government Hill Community Council. FHWA anticipates that this protocol will be developed following selection of a P3 Partner.
MOA - Planning	Cultural Resources	It is not apparent to the Community Development Department that the current KAC design, nor the Corps public notice, incorporates these mitigation measures in accordance with the Programmatic Agreement. To maximize the effectiveness of the GHNP (as intended by the PA), the Municipality would like the opportunity to consult directly with FHWA in communicating the results of the initial GHNP public outreach efforts. To ensure that the mitigation protocol as outlined in the PA is followed, open communication and coordination efforts between FHWA, the Municipality, the Government Hill Community Council (GHCC), ACHP, and other consulting parties are essential.	The Municipality has the opportunity to consult directly with FHWA during the Annual Meetings. Additionally, FHWA is required to consult and coordinate with the MOA, SHPO, and the Government Hill Board to consider the GHNP and Government Hill Historic Preservation Plan during implementation of Context Sensitive Mitigation (CSM). CSM coordination will begin during design development and will adhere to a community participation protocol developed by FHWA and the Government Hill Community Council Board. FHWA anticipates that this protocol will be developed following selection of a P3 Partner.
MOA - Planning	Cultural Resources	In order to clarify FHWA protocol, the following information is needed from the project applicant: <ul style="list-style-type: none"> • How the protocol is to be implemented; • What it contains; • The timeline of implementation; and • Whether the role of mitigation accountability has been delegated to KABATA or another agency. 	FHWA is required to consult and coordinate with the MOA, SHPO, and the Government Hill Board to consider the GHNP and Government Hill Historic Preservation Plan during implementation of Context Sensitive Mitigation (CSM). CSM coordination will begin during design development and will adhere to a community participation protocol developed by FHWA and the Government Hill Community Council Board. FHWA anticipates that this protocol will be developed following selection of a P3 Partner.
MOA - Planning	Cultural Resources	Per the PA, KABATA was assigned as an Invited Signatory, to provide a Liaison to work with all Section 106 consulting parties. This position, however, has been vacant since September 2011.	The KABATA Liaison (Edrie Vinson) was hired and employed by KABATA within 6 months of execution of the PA, in consultation with FHWA and SHPO. When Edrie retired in September 2011, Laurie Mulcahy was approved by FHWA and SHPO as a temporary substitute. Edrie was then rehired as a consultant on January 17, 2012 with the approval of FHWA and SHPO.
MOA - Planning	Cultural Resources	The annual meeting to review the Programmatic Agreement should be moved forward in order for FHWA and KABATA to be able to incorporate design goals from the draft Government Hill plan in its RFP process. This is to ensure that the successful design-build consultant will be able to respond to the impacts the project will have on all four neighborhoods identified through the Historic Preservation Planning effort and Government Hill Neighborhood Plan planning effort.	FHWA/KABATA held the 2012 annual meeting on May 1, 2012. The work products of the MOU with the Municipality must be completed by December, 2012. The formal release of the RFP is currently scheduled for Spring 2013. There is sufficient time for the GHNP and HPP to be included in the Reference Information Documents provided to the Developers.

Commenter	Discipline	Comment	Response
MOA - Planning	Cultural Resources	We encourage the Corps of Engineers to review the aforementioned comments regarding conflicts between the proposed KAC project, as represented in the Corps public notice and the Government Hill Neighborhood Plan and the FHWA led mitigation measures outlined in the Programmatic Agreement, before moving forward with issuing the permit for this project. As a result of the public process outlined above, and from findings with the Government Hill Neighborhood Plan, the final KAC project may change substantively from the current proposal. The above process and the neighborhood plan will provide valuable and potentially significant measures to address both primary and secondary impacts from this project and the Corps' findings. Lastly, the mitigation for this neighborhood plan should assure continued viability of this neighborhood and establish that private individuals will maintain the historic resources that are found there, as well as maintain traditional cultural patterns.	The inclusion of the tunnel in the project is the mitigation provided for the Government Hill Community. The GHNP will provide guidance to the contractor in reestablishing connecting streets and other features disrupted by the project, and ensuring that these features fit contextually with the vision developed for the neighborhood through the planning process. The GHNP is not determining the scope or location of the project.
MOA - POA	Hydrology	Please confirm that the bridge profile shown on Sht. 7 of 13 conforms to the "1,000-ft reduction in eastern causeway" simulation described in USACE ERDC/CHL Letter Report 11-11.	The profile shown on Sheet 7 of 13 represents a reduction of 1,000-ft to the entire causeway. The eastern causeway is reduced by 800 feet and the western causeway is reduced by 200 feet. The 800-ft reduction is within the uncertainty of the USACE ERDC/CHL numerical model. The lengthening of the final bridge design was based on a NMFS Biological Opinion Conservation Recommendation and the USACE hydrology physical model, as well as the ERDC numerical model.
MOA - POA	Wetlands	Typical Section I on Sht. 10 of 13: The 109' to 160' dimension is incorrectly drawn from the JBER property line to the center of rail. Instead, this dimension should be drawn from the JBER property line to the Port-side security fence.	The dimensions shown do not indicate property boundaries or right-of-way between JBER and the Port of Anchorage. The dimensions only reflect the distances between design features.

Commenter	Discipline	Comment	Response
MOA - POA	Hydrology	<p>While the Port of Anchorage is grateful that KABATA and USACE have evaluated the potential for sedimentation impacts at the Port of Anchorage, we remain concerned that the potential for navigation impacts has not been thoroughly evaluated. It is not clear whether velocity changes are expected at the Port that might impair our customers' ability to navigate to and from existing and future berths. Also, we ask that the Upper Cook Inlet shipping channels be included in the sedimentation and navigation evaluation. Results of these analyses must conclude that the project proposed in this permit application will have no negative impacts to Port of Anchorage shipping or berthing lanes. If impacts are anticipated by this evaluation, the project design must change to account for such impacts.</p>	<p>The 2009 Hydrology and Hydraulic Environment of Knik Arm Study, led by Dr. Jack Colonell, was an exhaustive effort to measure actual conditions in Knik Arm and construct a model based on those measurements. A significant amount of time and resources went in to the study and the results were reviewed and modified with input from experts at the Corps of Engineers and the FHWA. The conclusions of the report are found in the first two bullets of the executive summary on page 1 which state:</p> <ul style="list-style-type: none"> • Hydrodynamic effects of KAC Alternative 1 (Southern Alignment 8,200-Foot Bridge Alternative), while possibly measurable, would be benign. • Sedimentation effects of KAC Alternative 1 would appear mainly as "fillets" on both north and south sides of embankments, and would be insignificant elsewhere. <p>In addition to the pioneering research and modeling effort by Dr. Colonell in 2009, KABATA more recently contracted with the Corps of Engineers to perform an independent, redundant analysis using their physical model of Knik Arm and their recently updated numeric model. In addition to the 8,200-foot bridge, the Corp modeled a 9,200-foot bridge and five other bridge length and position variations. The results from this analysis confirm the earlier study's conclusions that other than the "fillets" expected to form near the bridge abutments, anticipated sedimentation elsewhere in Knik Arm as a result of bridge construction are expected to be insignificant. While a quantitative analysis of sedimentation which accounts for dynamic seabed morphology is theoretically possible, it is not practical to do so. Modeling that could predict when sedimentation would reach equilibrium and the net effect on water depths is not within the current state of hydrodynamic modeling practice. In essence, a study of the sedimentation of the navigational and shipping channels would be an extensive research project.</p> <p>Concurrent to the hydrodynamic modeling activities, KABATA has ongoing permit coordination with the National Marine Fisheries Service (NMFS). Although the 8,200-foot bridge was approved in the project EIS, NMFS has requested the bridge be lengthened 800 feet in order to minimize the fill in critical beluga whale habitat. KABATA has responded by lengthening the bridge to 9,200 feet, which has been modeled by the Corps of Engineers. Bridge abutments have been strategically placed to maximize the rate of flow beneath the structure, with the abutment on the west side moving almost 200' closer to shore. This position closely approximates the "no bridge" baseline condition.</p> <p>To conclude, using the best available science, the proposed 9200-foot bridge will impact the immediate vicinity of the bridge and closely approximates the "no bridge" condition in all other locations within Knik Arm.</p>
MOA - POA	Hydrology	<p>The USACE ERDC/CHL Letter Report 11-11 includes the statement: "... measures need to be in place to minimize bed evolution and morphological changes in the areas of the abutments during construction that will lead to increased sediment loads in the system." (Page 19)</p> <p>The report then offers the following recommendation, which should be included as a permit condition:</p> <p>Construction methods will need to prevent the incremental or progressive construction of the abutments from the bank out. Abutment fills should be placed in full lengths from the bottom to top. In this manner the total area affected by flow concentrations, which cause bed evolution and morphological changes, will be minimized to only the areas near the completed ends of the abutments rather than along the entire length of a progressively filled abutment. (Page 19)</p>	<p>Construction techniques will be used to minimize morphological changes to the sea floor by intermediate footprints. The fill for the roadway approaches is required to be in the "dry" to avoid entrapment of fish. Therefore during low tide cycles two parallel peninsulas will be constructed that represent the outer boundaries of the fill footprint. First, large coarse pit run gravel will be bulldozed into the intertidal zone followed closely behind with heavy filter and armor rock materials. As much coarse fill as possible will need to be placed during times when the tide is out; as the tide comes in and water levels rise, the builder will fill on top of the just placed footprint. This will continue until the entire causeway is built. Once roadway approach construction has commenced it will not stop until the approach is completed in order to minimize the number of tide cycles around the causeway as it is being built.</p> <p>The roadway approaches in the intertidal zone are 0.37 mile long on the west side and 1.95 miles long on the east side. The full length of the roadway approach could not be placed in one tide cycle; therefore it will be done as expeditiously as possible working around the tide cycles.</p>
GHCC	Cultural Resources	FHWA And KABATA Have Not Complied With The Programmatic Agreement	This statement is incorrect.

Commenter	Discipline	Comment	Response
GHCC	Cultural Resources	Unlike the signatories to the PA, GHCC as a Consulting Party who did not sign the PA, was not notified on Nov 15, but instead mailed, & postmarked on Nov 29, 2011. KABATA and FHWA thus failed to provide timely notification regarding this action regarding POA-2005-97.	The PA requires that "federal agencies involved in project activities that are related to the KAC Project may fulfill their Section 106 responsibilities by notifying the ACHP and SHPO in writing of their intentions to comply with the terms of this PA as it applies to their undertaking(s)." GHCC was mailed notification with 2 weeks (including a holiday) of the original mailing from the Corps of Engineers.
GHCC	Cultural Resources	Edrie Vinson, former Environmental Project Manager for FHWA, (directly in charge of overseeing whether or not KABATA's EIS met NEPA requirements, and at least partially responsible for creating the position of KABATA liaison) was reported to have been hired by KABATA as their KABATA Liaison on November 30, 2009 (see http://www.knikarmbridge.com/documents/KABATAPressRelease11302009.pdf), but she never contacted GHCC regarding any of the required notifications and update meetings, etc. The GHCC does not know when Edrie Vinson left employment with KABATA, but during her tenure at KABATA, she failed to comply with the provisions of the PA regarding coordinating with and notification to GHCC. Now position is vacant, see (http://www.knikarmbridge.com/staff.html). KABATA is in non-compliance with the requirements of the PA in that they do not have a KABATA Liaison at the present time (http://www.knikarmbridge.com/staff.html) and (http://www.knikarmbridge.com/contractors.html).	The KABATA Liaison (Edrie Vinson) was hired and employed by KABATA within 6 months of execution of the PA, in consultation with FHWA and SHPO. When Edrie retired in September 2011, Laurie Mulcahy was approved by FHWA and SHPO as a temporary substitute. Edrie was then rehired as a consultant on January 17, 2012 with the approval of FHWA and SHPO
GHCC	Cultural Resources	GHCC has not received any "semi-annual status reports" since the PA was signed in 2008. KABATA failed to comply with the requirements of the PA.	PA Stipulation IX requires that "FHWA and KABATA shall provide status reports to Signatories every six (6) months by the end of January and July through the completion of Phase 1 construction, or for the first five (5) years starting within six months of the publication of the ROD, whichever benchmark occurs sooner." Signatories include FHWA, ACHP, SHPO, and JBER (formerly Elmendorf Air Force Base). GHCC was offered Signatory status, but refused this offer.
GHCC	Cultural Resources	GHCC was not notified either that the KABATA Liaison position had been filled, or that it was vacant since the PA was signed in 2008. KABATA failed to comply with the requirements of the PA.	Staffing the Liaison position has complied with the requirements of the PA.
GHCC	Cultural Resources	While the GHCC appreciates that the Government Hill Neighborhood Plan is currently underway, KABATA and FHWA failed to consult with GHCC during the negotiation of the Memorandum of Understanding (MOU). The MOU was completely negotiated without the consent of the GHCC, despite our having told personnel of the Municipality of Anchorage that we wanted to be involved and consulted, if we were not allowed an actual "seat at the table". KABATA and the MOA failed to comply with the requirements of the PA. We consider this unilateral transfer of our rights under 36 CFR 800 without our knowledge or consent, to be a violation of 36 CFR 800, Section 106 of the National Historic Preservation Act under 16 U.S.C. 470s, and a miscarriage of the National Environmental Policy Act (NEPA) process.	The PA does not provide the GHCC the right to approve the MOU with the Municipality. Through the MOU, the Municipality assumed the responsibility to consult with the GHCC. This consultation is evident in the draft work products produced by the Municipality.
GHCC	Cultural Resources	GHCC has not received any "Documents for Review" since the PA was signed in 2008. It is not known if there have been any "Documents for Review" that have been created.	FHWA/KABATA will notify consulting parties when documents (e.g., plans, specifications, reports, and other documents) are posted on the KABATA website for review (Stipulation IX.E).

Commenter	Discipline	Comment	Response
GHCC	Cultural Resources	GHCC has not received any "reviews" since the PA was signed in 2008. KABATA failed to comply with the requirements of the PA.	The PA (Stipulation XIII.A-Amendment) states "The Signatories shall review this PA each January following its execution to consider whether its terms are being properly met to respond to current conditions. The Signatories shall have thirty (30) calendar days to notify FHWA if an amendment should be considered. ... If the review results in a recommendation to amend the PA, the consulting parties shall consult for a minimum of thirty (30) days prior to the proposed amendment to the PA." Consulting parties would only be consulted with if an amendment to the PA is being considered. No amendments to the PA have been considered to date
TOA	404(b)(1)	Inletkeeper maintains that the analyses underlying the Knik Arm Crossing Environmental Impact Statement and Section 4(f) Evaluation ("EIS") fails to support a determination that the proposed action is the LEDPA. The Knik Arm Bridge is not dependent upon access or proximity to or upon siting within wetlands. The Corps states that the purpose of the project is to "further development of transportation systems in the upper Cook Inlet region by providing improved vehicular access and surface transportation connectivity, as well as safety redundancy, between the Matanuska-Susitna region and Municipality of Anchorage with a financially feasible and efficient crossing to meet the needs for" improved regional transportation infrastructure, regional transportation connectivity and safety and transportation system redundancy. This basic purpose can be accomplished without impacting wetlands. Because the project is not water-dependent, "it is reasonable to assume there will generally be a practicable site available upland or in a less vulnerable part of the aquatic ecosystem."	<p>A portion of the purpose of the project calls for a financially feasible and efficient crossing that meets the needs for improved regional transportation infrastructure to meet existing and projected population growth and locally adopted economic development, land use, and transportation plans and as directed by the Alaska State Legislature in AS § 19.75....". The purpose of the project as defined in AS § 19.75.011 is to "develop, stimulate, and advance the economic welfare of the state and further the development of public transportation systems in the vicinity of the Upper Cook Inlet with construction of a bridge to span Knik Arm and connect the Municipality of Anchorage and the Matanuska-Susitna Borough."</p> <p>A bridge over Knik Arm is water dependent and cannot be accomplished without "proximity to or siting within a special aquatic site to fulfill its basic project purpose (40 CFR 230.10)". Therefore the presumptions that practicable alternatives that do not involve wetlands are available and that they have less impact do not apply. However, the project must represent the LEDPA in order to comply with the 404(b)(1) guidelines. Please refer to the applicant's Draft Section 404(b)(1) Evaluation for further information.</p>
TOA	NEPA - Alternatives	Also commenting on the FEIS, the Alaska Railroad Corporation ("ARRC") on page 2 of their February 18, 2008, comments stated that KABATA's comment dismissing commuter rail as an alternate as not being feasible was inappropriate and irrelevant, as ARRC's data indicates that commuter rail is feasible.	KABATA used information obtained from the ARRC that shows commuter rail will need subsidies to cover all operation and maintenance costs. KABATA acknowledges that commuter rail is feasible and lists it as a reasonably foreseeable future action (Table 4-51 of the FEIS) with or without the KAC.
TOA	NEPA - Alternatives	In addition, the U.S. Environmental Protection Agency ("EPA") on page 1 of their February 15, 2008, comments stated that "other alternatives (such as the No Action or the Expandable Ferry Alternatives) appear to be available to provide improved transportation service between Anchorage and the Mat-Su while minimizing environmental and related economic and social impacts. Therefore we rated the document E), Environmental Objections, Insufficient Information." Also on page 1, the EPA states: "The FEIS did not expand the range of alternatives beyond "No Action" and one bridge alternative with approach options. We believe that other alternatives exist that appear reasonable, feasible, and compatible with the current direction of transportation and growth in the Anchorage Bowl, and the Mat-Su Borough. These include the Expanded Ferry Alternative and the Transportation Package Alternative".	THE FEIS and the ROD evaluated the Expanded Ferry System and the Transportation Package alternative and found them to not meet the purpose and need for the project. For more information on the alternatives evaluated, please see Chapter 2 of the FEIS and the ROD.
TOA	Section 404(b)(1)	The EPA on page 2 of their February 15, 2008, comments also stated, "As presented, the range of alternatives may not comply with the Clean Water Act Section 404(b)(1) Guidelines. The range of alternatives must include those that are practicable "in light of the overall project purposes" [40 CFR 230.10(a)(2)]. In addition, the definition of "financially feasibility" is subjective, and does not constrain or change the required evaluation of practicable alternatives."	Additional alternatives were evaluated in the applicant's Draft Section 404(b)(1) Evaluation. Please see the attached letter (Issue 1).
TOA	NEPA - Alternatives	Further, the Corps' Public Notice ("PN") and the EIS do not provide adequate survey or engineering information for the public or government agencies to independently evaluate all practicable alternatives. The public and the Corps need this information to adequately comment on and to make credible decisions on the project alternatives.	Alternative development and the screening process were performed in accordance to the Council on Environmental Quality (CEQ) Regulations.

Commenter	Discipline	Comment	Response
TOA	Section 404(b)(1)	<p>In order to decide whether discharges will cause or contribute to significant degradation of the affected waters, the 404(b)(1) Guidelines require the Corps to determine “the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms.” “In determining compensatory mitigation, the functional values lost by the resource to be impacted must be considered.”</p> <p>The EIS identified the following as some of the environmental consequences of the proposed action:</p> <ul style="list-style-type: none"> • Fill (approximately 90 acres) and siltation from construction runoff and infill which will harm salmon habitat, • Increased fishing pressure on salmon streams in the Point MacKenzie area, • Salmon and other fish movement into deeper waters in Knik Arm which will increase fish predation, • Increased noise and visual disturbances to beluga whales, beluga prey disturbances, and changed flow regimes and ice movements, • Increased sport hunting of moose on the west side of Cook Inlet and increased moose/vehicle accidents, which could disrupt Alaska Native subsistence use of the area, • Increased access to migratory waterfowl (some species are in decline) on the west side of Cook Inlet, and • Increased pollution of Knik Arm from vehicle-related run-off (oil, deicing fluids, etc.), snow-clearing, bridge maintenance, and construction run-off. <p>The FHWA ignores many of the comments submitted by cooperating agencies regarding the inadequate disclosure and analysis of impacts in the draft EIS. Comments on the draft EIS by various federal agencies requested that the FHWA add to the EIS the discussions of impacts found in various reports, appendices, and other documents referenced in the EIS. These agencies include the Corps, EPA, the U.S. Fish and Wildlife Service, the U.S. Marine Mammal Commission, and the National Oceanic and Atmospheric Administration (“NOAA”). The agencies uniformly conclude that the EIS did not adequately discuss, among other things, the impacts of the Bridge on wildlife habitat and populations, and the means by which direct, indirect, and cumulative impacts on these and other resources would occur.</p> <p>However, the FHWA largely ignored their critiques, and the EIS consequently left decision makers and the public without a reasonably thorough discussion of the impacts of the Bridge.</p> <p>Even the resulting disclosure in the FEIS, however, showed that a Bridge would significantly degrade water quality and marine and terrestrial fish and wildlife habitat, leading to long-term and widespread negative impacts to fish populations, wildlife populations, and the environment generally.</p>	<p>Comments on the <i>DEIS</i> were incorporated and addressed in the <i>FEIS</i>. Direct, indirect, and cumulative impacts, as well as mitigation measures for those impacts are described in the <i>FEIS</i> and the <i>ROD</i>. Compensatory mitigation is required only for unavoidable impacts.</p>
TOA	EFH	<p>As discussed in the Draft and Final EIS, there will be multiple impacts to Essential Fish Habitat (“EFH”) due to the proposed Bridge, both short-term and long-term (i.e., permanent loss of approximately 90 acres of intertidal mud flats and changed fish migration pathways). Nine fish species have EFH in the area. Fish (salmon and eulachon) would be forced into deeper waters as a result of the bridge abutments, where they would be subject to greater predation. Short-term construction impacts are likely to be significant, including filling in nearshore habitats which could kill, injure, or isolate fish. Additionally, the noise of construction may harm or affect fish (especially juveniles as they drift with the tides back and forth through the construction zone). Construction impacts may negatively affect several years of salmon runs in Upper Cook Inlet.</p>	<p>Mitigation measures to minimize impacts to EFH are listed in Section 2.3 of the Mitigation Statement included in the <i>Section 404 Permit Application</i>. In addition to those mitigation measures, the bridge has been lengthened by 1,000 feet since the FEIS, reducing impacts to EFH by 16.5 acres. An increased bridge length beyond 9,200 feet is not practicable in consideration of costs, logistics, and technology.</p>
TOA	EFH	<p>NOAA concluded in 2010 that “the proposed bridge with extensive solid fill approaches would adversely affect EFH for salmon.” Based on the information in the EFH Assessment, NOAA concluded that “the No-Action alternative is the best option for the conservation of Upper Cook Inlet salmon runs.” NOAA went on to state that while they agreed with FHWA that the project would adversely affect EFH, they disagreed with FHWA’s reasoning that the direct, indirect and cumulative impacts would be “short term and local.” In addition, NOAA identified particular concern about the loss of habitat from construction of piers and that the piers would impact juvenile salmon by restricting tidal flows and creating velocity barriers.” NOAA concluded that a longer bridge, with less fill, would have less impact on salmon.</p>	<p>Mitigation measures to minimize impacts to EFH are listed in Section 2.3 of the Mitigation Statement included in the <i>Section 404 Permit Application</i>. In addition to those mitigation measures, the bridge has been lengthened by 1,000 feet since the FEIS, reducing impacts to EFH by 16.5 acres. An increased bridge length would beyond 9,200 feet is not practicable in consideration of costs, logistics, and technology.</p>
TOA	EFH	<p>Additionally, the EIS makes clear that extensive habitat degradation and loss would occur as a result of the Bridge. For example, the EIS notes that “[f]ill placed along the Knik Arm shoreline would displace fish and permanently eliminate foraging habitat. Fill placement could adversely impact shoreline EFH used by juvenile salmon for feeding and growing during their adaptation to saltwater environments.”</p>	<p>In the same paragraph that the TOA cites in the FEIS, it goes on to say “However, fillets are expected to form around both bridge approaches. Over time these fillets would create new nearshore habitat in areas that are presently deep water, ultimately resulting in more nearshore habitat than currently exists in the Study Area.”</p>
TOA	EFH	<p>Further loss of habitat is expected, as fillets are anticipated to develop on both sides of the proposed approaches of the Bridge and ultimately cover up an area of approximately 260 acres.</p>	<p>The fillets on both sides of the bridge will not be a loss of habitat. It will remain below the High Tide Line and remain as intertidal, unvegetated habitat.</p>

Commenter	Discipline	Comment	Response
TOA	Wetlands	The FEIS identified three types of wetlands which would be impacted by the project: forested, scrub/shrub, and sedge and grass. The FEIS recognized that there would be direct, long-term impacts on wetlands. Yet, there was minimal discussion of the impacts to wetlands from this project. The lacking and inadequate analysis makes it impossible for the public to provide detailed comments to the Corps regarding impacts to wetlands from the Bridge. Due to the "geographic shift in population" associated with the Bridge, the larger impact to wetlands is attributed to development pressures brought by the Bridge. However, DOI expressed its concerns that the EIS underestimated total wetlands losses to the Bridge. These impacts have not been adequately assessed.	The wetlands and the wetland impacts have been thoroughly evaluated for the KAC. Two wetland field studies have been performed, one in 2005 and one in 2011. Over 100 Wetland Determination Forms have been completed. Wetland functions have been analyzed using the Su-Knik Mitigation Bank Rapid Assessment Method and the Anchorage Debit Credit Methodology. A detailed analysis of the indirect impacts of the KAC on wetlands is described in Section 4.8.2 of the FEIS.
TOA	Water Quality	According to the FEIS, water quality could be adversely affected but without any supporting analysis, the FEIS concludes the pollution-related impacts from the Bridge (stormwater, snowmelt, maintenance-related pollution) would have negligible impacts. Placement of fill could impact water quality but those impacts are not quantified or adequately assessed in the FEIS. The FEIS identified further threats to water quality including, increased watercraft use, wastewater outfalls, additional nonpoint source stormwater outfalls and accidental marine vessel or watercraft fuel spills but, again, fails to quantify or, in any meaningful way, assess these potential impacts.	Mitigation measures to avoid and minimize impacts to surface water resources and water quality are included in Section 2.2 of the Mitigation Statement of the <i>Section 404 Permit Application</i> . Direct, indirect, and cumulative impacts are adequately addressed in the FEIS and the <i>Cumulative Effects Technical Report</i> .
TOA	Water Quality	While the Permit Figures in Attachment C show the use of vegetated swales to help absorb pollutants from the runoff from the roadbed, it is significant that the causeways, bridge, and roadway along the eastern side of Knik Arm do not have those features. Therefore, both nonpoint sources, such as drippings from vehicles, as well as maintenance-related pollution, such as ice melt, will flow directly into Knik Arm. Those impacts must be quantified.	Road pollutants and heavy metals are not expected to be a concern. In <i>Assessing the Impacts of Bridge Deck Runoff Contaminants in Receiving Waters</i> , 2002 the National Cooperative Highway Research Program evaluated several large bridges, including the San Francisco - Oakland Bay Bridge. The NCRHP found that with 274,000 vehicles per day, the Bay Bridge did have some toxicity in its runoff, but in only negligible concentrations after the runoff fell from the bridge and mixed with the receiving waters. Metals were found, but sweeping was determined to be an effective mitigation to reduce pollutant loading. KABATA will sweep the bridge twice a year to minimize the introductions of metals into Knik Arm, in the spring after breakup and again in the fall in accordance with Section 401 requirements.
TOA	Marine Habitat	Direct adverse impacts on marine habitat and wildlife would result from placement of piers in Knik Arm and placement of fill and armor rock on the margins of Knik Arm. The solid-fill embankments of the 8,200 foot-long bridge (a bridge length of the 9,200 feet was not assessed in the EIS) would intercept 34% of the channel width of Knik Arm. Placement of fill on mud flats and along the margins of the subtidal zone would result in a permanent loss of 90 acres, according to the design projections for an 8,200 foot-long bridge. It is unclear how the change in design to a 9,200 foot-long bridge would impact the mud flats and subtidal margin. Such a design was not assessed in the EIS, and must be assessed in a EIS, or a full revision of the EIS	The 9,200-foot bridge was based upon agency recommendations to the FEIS and is identified as the most likely LEDPA in the Applicant's <i>Draft Section 404(b)(1) Evaluation</i> . Additional analysis on the bridge alternatives was performed after the EIS and during Section 7 ESA Consultation. Further design modifications are to be expected through permitting and until a final design has been completed. The 9,200-foot bridge is expected to have less environmental impacts and was developed in direct response to agency mitigation requests.
TOA	Beluga whale	Comments on the EIS by Inletkeeper, NOAA and others identified various shortcomings in the discussion of impacts to Cook Inlet beluga whales. Among the problems identified in these comments, the discussion of impacts to the beluga whale understates the challenges the whale faces and minimizes or ignores information indicating that the Bridge may drive the whale population to extinction.	NOAA has issued a Biological Opinion after Section 7 Consultation that the KAC is not likely to jeopardize the continued existence of the Cook Inlet beluga whale.
TOA	Beluga whale	Despite the inadequate analysis, the EIS recognized that construction activities may result in "avoidance, changes in resting or feeding cycles, displacement from habitat, alertness, masking of sounds and changes in vocal behavior, changes in swimming or diving behavior, altered direction of movement, and physical injury." Pile driving, vessel activity and fill placement all are likely to impact the beluga whale. In addition, indirect impacts from traffic moving along the bridge, increased development along the western shoreline of Knik Arm, increased watercraft use, and increased commercial and industrial growth in the Port MacKenzie District all would pose additional pressure on the species. However, the EIS failed to adequately consider the direct, indirect and cumulative impacts from the Bridge on the beluga whale. Due to the environmental consequences of the proposed action, NOAA continued to support the no-action alternative "as the best option for promoting the recovery of Cook Inlet belugas"	The EIS addressed direct, indirect and cumulative impacts to the beluga whale. The Biological Opinion issued by NMFS also addressed direct, indirect, and cumulative impacts on the beluga whale. The Biological Opinion states that "it is the opinion of NMFS that the implementation of the proposed action, as described in this opinion, is not likely to jeopardize the continued existence of the Cook Inlet beluga whale nor to destroy or adversely modify its proposed critical habitat.

Commenter	Discipline	Comment	Response
TOA	Anchorage	<p>Anchorage has real potential to mature into a great northern city to match the reputation of our natural surroundings. There is a revitalized downtown, booming redevelopment and remodeling activity across the city, transportation investments like the Connect Anchorage project, and world class trails and recreation opportunities. Anchorage can and should grow more like Vancouver, British Columbia (which has a thriving urban core and relatively limited sprawl), instead of becoming the sprawling “Los Angeles of the North.” Anchorage needs to continue making the right growth choices, as current planning documents recommend.</p> <p>The Bridge is not the right choice. Rather than serving the needs of existing communities, it will create a negative impact on regional transportation networks, public infrastructure, and private investment in Anchorage and the Palmer-Wasilla core area. A bridge will encourage sprawl in the Southwest and West portions of the Mat-Su Borough, depress the level of investment for redeveloping Anchorage, and drain resources away from existing priorities by redirecting development into a new community(s) at Point McKenzie where currently there are few roads, no schools, and no fire departments. This new development only can happen at the expense of Anchorage and the Mat-Su core area.</p> <p>These conclusions are supported by scientists at the Corps and by planners from the Municipality of Anchorage (MOA).</p> <p>The Corps wrote to FHWA that: The population growth charts shown in your document clearly indicate that the overall population of the Matanuska-Susitna Borough will increase approximately the same amount whether or not the bridge is constructed...This data also indicates that if the bridge is not constructed there will be little or no need for greater traffic flow into the Port MacKenzie area, as little growth will take place in this area. The [Preliminary] DEIS supports the addition of a ferry system as it will accommodate non-bridge related growth in the Port McKenzie area far into the foreseeable future. As currently presented the document supports the no-build alternative, as it appears to meet the purpose and need and would be the least environmentally damaging practicable alternative.</p> <p>Interestingly, in the FEIS, KABATA simply removed the portions of Section 4 on page 4-100 that compared “bridge” versus “no bridge” growth rather than responding to these concerns.</p> <p>Similarly, the MOA wrote to KABATA that: The Anchorage 2020 Comprehensive Plan is founded on principles that encourage mixed use, infill, and redevelopment. This approach will continue to encourage investment in Anchorage which is vital for long-term economic health. Anchorage 2020, in conjunction with the [Long Range Transportation Plan] adequately addresses the demand for growth for the next twenty years and identifies the needed infrastructure to support it without a [Knik Arm Crossing]. A KAC is not needed, but will create an opportunity for new and different development than that which has been reflected in the documents being referred.</p> <p>Development in the Port Mackenzie area into an urban type environment encourages sprawl, slows growth in Anchorage, Eagle River-Chugiak, Palmer and Wasilla; shifting development away from existing supporting public infrastructure and public services.</p> <p>Thus, the Bridge would adversely affect development in Anchorage at great expense to the community.</p>	<p>The FHWA, in its ROD, has concluded that the KAC project meets the identified purpose and need for improved regional transportation infrastructure, improved regional connectivity, and for safety and transportation system redundancy.</p>

Commenter	Discipline	Comment	Response
TOA	Mat-Su borough	<p>Anchorage is not the only area that will be negatively impacted by the Bridge, however. In fact, the drain on public and private resources is likely to be even more severe for the Mat-Su Borough ("MSB") if the Bridge is constructed. The MSB highlights similar concerns in its comments on the Preliminary DEIS:</p> <p>[Section 4.4, Economic Impacts] is limited in scope and does not address the important question as to whether or not sufficient long term commercial and industrial activity will occur to offset the costs of public infrastructure needed to support the residential expansion on the Mat-Su side....</p> <p>Residential development typically provides \$.65 to \$.70 in revenue for every dollar in services provided by the local government. Page 4-99 points out that most of the higher value department stores, bank headquarters, home centers, other specialized professional services will remain in Anchorage with only neighborhood commercial activities located on the Mat-Su side. This discussion supports the concern that there may be a net cost to the MSB as a result of the [Knik Arm Crossing].</p> <p>The MSB has been very concerned about its ability to serve the new community(s) that the Bridge will create near Point Mackenzie. The DEIS' population estimates for the area would require six fire stations at a cost of \$3 million each, six elementary schools at a minimum of \$20 million each, two middle schools at \$30 million each, and two high schools at \$45 million each, as well as community centers, parks, swimming pools, and landfills. Other needed infrastructure and service costs include Trooper, police and fire personnel, water and sewer connections, and road maintenance facilities and personnel.</p> <p>The 2006 MSB letter also described the Bridge's impacts on transportation infrastructure in the MSB, including five transportation projects needed to make the connections required by the Bridge, totaling \$315,000,000. While some of those projects have been accomplished, the MSB currently is planning 21 transportation projects requiring over \$397 million; these projects likely would compete for funding with the Bridge and its connections.</p> <p>Currently, the MSB has a tax cap, and there is no longer any statewide municipal revenue sharing. As a result, it would be difficult – if not impossible – for the Borough to afford the costs required by the Bridge.</p> <p>In addition to costs, the MSB community of Palmer would suffer since growth in the Borough will be redirected to the Southwest and West areas. Palmer currently welcomes responsible, planned growth and development and already has infrastructure in place to expand upon. Directing borough-wide growth to Palmer allows the MSB to keep land available for open space, recreation opportunities, water and wildlife protection, and avoids the problems associated with sprawl (including increased fuel consumption from larger homes and greater travel; increased fuel consumption also results in more greenhouse gas generation).</p>	<p>The FHWA, in its ROD, has concluded that the KAC project meets the identified purpose and need for improved regional transportation infrastructure, improved regional connectivity, and for safety and transportation system redundancy.</p>
TOA	NEPA	<p>Rather, the 2006-2007 EIS never provided the appropriate analysis and is, therefore, legally deficient and fatally flawed. The Corps must prepare a supplemental NEPA analysis to correct the deficiencies in the EIS and analyze the Bridge in light of the new information posed by the changes in the project as well as new information, such as the most recent Cook Inlet beluga population estimates, which show further decline.</p>	<p>The KAC EIS provided the appropriate analysis required by the Council on Environmental Quality.</p> <p>Design modifications are to be expected through permitting and until a final design has been completed. Coordination with NMFS is ongoing to ensure that the project will not jeopardize the continued existence of the Cook Inlet beluga whale.</p>
TOA	404(b)(1)	<p>Further, in order to determine the LEDPA, the Corps must consider alternatives not adequately assessed and considered in the EIS.</p>	<p>Additional alternatives have been evaluated in KABATA's <i>Draft Section 404(b)(1) Evaluation</i>.</p>
TOA	Significant Degradation	<p>In addition, the Bridge would significantly degrade waters of the United States and is not in the public's interest. For these reasons, the permit should be denied.</p>	<p>The expected impacts of the KAC project have been thoroughly evaluated throughout the NEPA process. The project's impacts have been avoided and minimized to the maximum extent practicable. Mitigation measures for the project are outlined in Attachment D: Mitigation Statement of the <i>Section 404 Permit Application</i>. The project, which accounts for a small portion of the total area of the Upper Cook Inlet is not expected to result in any significant degradation of wetlands or waters of the U.S.</p>