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July 31, 2013

To: David Navecky
Office of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, D.C. 20423-0012

From: Brian Lindamood, Alaska Railroad Corporation

Subject: Port MacKenzie Rail Extension (STB Docket No. FD 35095)
Quarterly Report No. 5, April 2013 through June 2013

This quarterly progress report is submitted in accordance with Mitigation Measure #98 of the November 21, 2011 Surface Transportation Board (STB) final decision (Docket No. FD 35095) authorizing the Alaska Railroad Corporation (ARRC) to construct and operate approximately 35 miles of new rail line connecting Port MacKenzie to ARRC's existing main line near Houston, Alaska. This is the second quarterly report for 2013, covering the period from April 2013 through June 2013.

PROJECT PROGRESS

Key activities/milestones conducted during the reporting period are summarized below.

General

- Maintained a Community Liaison and Project Office in Big Lake, Alaska (**Mitigation Measure No. 57, 65, 81, 90**):
Cliff Williams, Community Liaison (Segments 2-8)
David Kabella, Community Liaison (Segment 1)
Port MacKenzie Rail Extension Project
129000 West Creek Frontage Road, Suite 100
Wasilla, Alaska 99623
Phone: 907.892.6000
Email: pmre@akrr.com
- Maintained and updated project website with current information: <http://www.portmacrail.com/> (**Mitigation Measure No. 72**)
- On January 23, 2013 the 9th Circuit Court of Appeals published a final decision on the Alaska Survival, Sierra Club, and Cook Inlet Keeper vs. STB (Case No. 12-70218) Petition. The petition for review of the STB's Record of Decision was denied.
- On October 5, 2012, Cook Inlet Keeper, Sierra Club, and Alaska Survival filed a legal challenge in the U.S. District Court for the District of Alaska against the U.S. Army Corps of Engineers (USACE) for issuing a Section 404 permit (POA 2007-1586) for the Port MacKenzie Rail

Extension Project. On February 11, 2013 the Alaska District Court published an order denying the motion for preliminary injunction on construction (Case No. 3:12-cv-0205-RRB). Following an appeal by the plaintiffs of that order to the 9th Circuit Court of Appeals, the 9th Circuit published a decision on February 26, 2013 that further denied the motion for preliminary injunction on construction under emergency conditions following a review of the Alaska District Courts February 11 order. The 9th circuit will hold oral argument on the matter on August 15th, 2013, in Anchorage.

- To date, construction contracts have been awarded for Segments 1, 3, 4 and 6. Construction for segments 1, 3 and 6 are underway. Segment 4 is anticipated to start construction by August 1, 2013.
- All necessary project right-of-way for Segment 1, 3, and 6 has been secured. Right-of-way negotiations for Segments 2, 4, and 5 are on-going.
- On April 1, 2013, the Alaska Department of Natural Resources Division of Mining, Land and Water issued an Administrative Decision authorizing the issuance of public access easements and land use permits for the project.
- A public open house was held April 24th, 2013 in Houston, Alaska to provide a general project update.
- A ceremonial ground breaking was held at Port MacKenzie June 4th, 2013.
- The project continues to be funded with a new \$25 million with a FY 2014 state capital fund appropriation. This funding will be used to fund the construction of Segment 5 and to procure track materials for Segment 8.

Cultural Resources

- Continued ongoing Section 106 Programmatic Agreement (PA) Working Group meetings with ARRC, MSB, Knik Tribal Council and SHPO (**Mitigation Measure No. 52**).
- Cultural resources field work was completed for Segment 2 during June 2013. No artifacts or sites were found. A field report will be completed and submitted to STB for review during the next quarter.

Permitting (See attached permit list)

- At the request of the Segment 4 Contractor, a Section 404 permit (POA-2007-1586-M2) modification was requested on May 24, 2013 to accommodate 0.1 acres of temporary impacts. This modification also adjusts (down) the total area of impact in wetlands from engineering design refinements. The Modification was subsequently approved in July and is attached.
- The State of Alaska Department of Natural Resources (DNR) issued a final decision regarding land use for the railroad outside the Agricultural District. Construction through those areas commenced in June (**Mitigation Measures No. 3, 20, and 33**).
- After the eagle nest survey was completed in March 2013, a pair of young eagles constructed a nest immediately south of the Segment 6 construction area. ARRC and its constructors have been working closely with USFWS to monitor eagle activity to ensure construction activities do not impact the nest site. ARRC has applied for an eagle nest take permit to remove the nest after the eagles leave this fall (**Mitigation Measure No. 36**).
- Vegetation clearing along Segments 1, 3, and 6 is complete. All clearing were completed prior to the U.S. Fish and Wildlife Services bird nesting window (May 1 to July 15). Clearing for Segment 4 will not start until after July 15, 2013 (**Mitigation Measure No. 35**).

Planned activities – Next Reporting Period

- Continued construction of Segments 1, 3, 4 and 6.

DISCUSSION

- A binder containing copies of all projects permits is available for public review at the ARRC General Office Building, 327 West Ship Creek Avenue, Anchorage, AK 99504.

- ARRC's construction manager, resident engineer, and environmental site officers for Segments 2-8 will be located at the Big Lake Project Office. Segment 1 personnel are located at the Port MacKenzie Ferry Terminal offices.

SCHEDULE

- Segment 1: This 4.7-mile segment begins at the embankment of the Bi-Modal Bulk Facility and related port trackage and proceeds northwest, crossing under the Chugach Power transmission lines (where the ARRC right-of-way will begin) to a quarter mile south of Baker Farm Road, where it turns and heads directly north. It stops shortly after crossing the Baker Farm Creek 3-span bridge at MP (Milepost) K5.48.
 - o Bristol Construction Services (Shane Ferrell, Project Manager) is under contract for Segment 1.
 - o Construction is underway and proceeding on schedule.
 - o Approximately 2.1 million cubic yards of material has been moved to date.
- Segment 6: This segment begins at Miller's Reach Road and ties into the ARRC Mainline near Houston without crossing the Parks Highway. This connection will facilitate the movement of trains both northbound and southbound in a Y configuration. Proposed work involves construction of approximately 1 mile of new track, installation of a new bridge over the Little Susitna River, a fish passage enhancement project at Teddy Creek, and several drainage structures within the existing right-of-way.
 - o Granite Construction (Ira LeSage, Project Manager) is under contract for Segment 6.
 - o Construction activities are proceeding on schedule.
- Segment 3: This 6.4-mile segment begins just north of the intersection of Ayrshire Avenue and Guernsey Road. This segment continues northwest around the northeast end of My Lake, then curves back northeast, crossing the 5-span bridge at the outflow of Diamond Lake and the historic Iditarod Trail 3-span bridge. It intersects the Iditarod Race Trail 3-span bridge at MP K17.95, loop northwest and then northeast before heading straight north across the Susitna Parkway at grade crossing, ending near Papoose Twins Road.
 - o Quality Asphalt Paving (Steve Spidal, Project Manager) is under contract for Segment 3.
 - o Construction activities are proceeding on schedule.
- Segment 4: This 7.4-mile segment begins at Papoose-Twins Road and continues northeasterly, ending northeast of Little Horseshoe Lake.
 - o Bristol Construction was awarded this contract and is anticipated to start between July 15th and August 1st, 2013. Estimated completion of this segment is then end of 2014.
- Segment 5: This 4.5 mile segment connects segments 4 and 6 between little Horseshoe lake and Millers Reach Road. This segment has been funded through a FY2014 state capital appropriation. Solicitation for construction is expected to be advertised late fall 2013, for award around the end of the year.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
1: The Applicant shall design project-related rail line and associated facilities in accordance with engineering criteria related to permafrost, seismic events, and other geologic hazards to comply with applicable design codes. For example, the Applicant shall design the project in accordance with the latest applicable seismic codes taking into account the region's potential for earthquake activity to mitigate potential damage to bridges and tracks. (V)	Review design criteria	Before construction	No permafrost has been found in the project area. Project has been designed to meet applicable standards and recommended practice of various organizations were applicable, to include: AREMA, AASHTO, AKDOT&PF, FEMA, and the Alaska Railroad
2: The Applicant shall be subject to Alaska Department of Environmental Conservation (ADEC) jurisdiction under the Alaska Pollutant Discharge Elimination System (APDES) for storm water discharges resulting from project-related construction activities. Requirements that are commonly part of a Stormwater Pollution Prevention Plan associated with a APDES Stormwater Construction Permit include the following: - Ground disturbance shall be limited to only the areas necessary for project-related construction activities. - During earthmoving activities, topsoil shall be reused wherever practicable and stockpiled for later application during reclamation of disturbed areas. - Appropriate erosion control measures shall be employed to minimize the potential for erosion of soil stockpiles until they are removed and the area is restored. - Disturbed areas shall be restored as soon as practicable after construction ends along a particular stretch of rail line, and the goal of restoration shall be the rapid and permanent reestablishment of native ground cover on disturbed areas to prevent soil erosion. - The bottom and sides of drainage ditches shall be revegetated using natural recruitment from the native seed sources in the stockpiled topsoil or a seed mix free of invasive plant species. - If weather or season precludes the prompt reestablishment of vegetation, temporary erosion control measures shall be implemented. (V)	SWPPP approval by ADEC	Before construction	Each contractor awarded work will be responsible for preparing a SWPPP and submitting it to ADEC. To date, Bristol Construction Services (Segment 1), Quality Asphalt Paving (Segment 3), and Granite Construction (Segment 6) have submitted a SWPPP's to ADEC, along with a notice of intent for coverage under the ACGP. These documents are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK), Big Lake Project Office, and at the construction site.
3: The Applicant shall obtain Federal permits required by section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act from the U.S. Army Corps of Engineers (USACE) prior to initiation of project-related construction activities in wetlands and waterbodies. The Applicant also agrees to obtain necessary state permits and authorizations (e.g., Alaska Department of Fish and Game (ADF&G) Fish Habitat Permit, Alaska Department of Natural Resources (ADNR) Land Use Permit, and an Alaska Department of Environmental Conservation section 401 water quality certification). The Applicant shall incorporate stipulations into construction contract specifications. (V)	Permits issued; stipulations added to contract specifications	Before construction	Permit status list is attached to this report.
4: The Applicant shall avoid and minimize impacts to waters of the U.S., including wetlands, to the extent practicable. The Applicant shall provide compensatory mitigation for unavoidable impacts to wetlands as part of the USACE section 404 permit, to the extent practicable in accordance with the reasonable requirements of the Clean Water Act. (V)	Section 404 Permit is issued	Before construction	A Section 404 permit application (POA-2007-1586) was issued for the project on September 10, 2012; subsequent modifications to that permit have been issued (POA-2007-1586-M1 and M2). A copy of the permit is available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
5: The Applicant shall design and construct the proposed rail line in such a way as to maintain natural water flow and drainage patterns to the extent practicable. This shall include installing bridges or placing equalization culverts through the embankment as necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands. (V)	Review design criteria and Section 404 permit	Before construction	Condition conforms to project design standards and permit requirements. Specifically, as mandated in Special Condition No. 3 of the PMRE Section 404 Permit (POA-2007-1586): <i>Natural wetland drainage and inundation patterns shall be maintained through the incorporation of adequately sized (diameter and length), sloped and spaced culverts and/or bridges. The ARRC shall be responsible for annual monitoring, maintenance, and/or repair, and/or replacement of all culverts and bridges for the life of the project to insure that natural wetland drainages and inundation patterns are maintained. The presence of upslope ponding, erosion, flooding scour, obstruction to aquatic organisms, as a result of failing or poorly installed culverts, shall be evidence of non-compliance with this condition. ARRC shall immediately notify the Corps of any non-compliance with this special condition. Obstruction caused by beaver dams or debris, and their removal does not require notification to the Corps. The notification shall include for Corps review and approval ARRC plans for restoration of the natural drainage.</i>
6: The Applicant shall disturb the smallest area practicable around any streams and, as soon as practicable following project-related construction activities, revegetate disturbed areas using native vegetation.	Review design criteria and Section 404 permit	Before, during, and after construction	Condition conforms to project design standards and permit requirements. Specifically, as mandated in Special Condition No. 5 of the PMRE Section 404 Permit (POA-2007-1586): <i>All riparian areas disturbed during construction, must be restored to pre-project conditions as soon as possible. If construction is not complete prior to the end the same growing season, all disturbed riparian areas shall be stabilized appropriately and effectively, such as with jute matting, to satisfactorily withstand erosion from heavy rain during the fall and the next year's spring breakup. Site shall be restored to pre-project conditions during the growing season following construction (year immediately following disturbance). Revegetation shall be considered successful when percent live cover of native wetland vegetation is similar to adjacent wetlands. Evidence of erosion and sloughing from disturbed areas will be considered non-compliance with this condition.</i>
7: The Applicant shall minimize the number of temporary stream crossings constructed to provide access for contractors, work crews, and heavy equipment to the extent practicable. Where needed, temporary structures shall be placed to avoid overly constricting active channels and shall be removed as soon as practicable after the crossing is no longer needed. (V)	Review design criteria, Section 404, and Title 16 permits	Before and during construction	Condition conforms to project design standards and permit requirements

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
8: The Applicant shall coordinate with the Matanuska-Susitna Borough (MSB) Floodplain Administrator to ensure that new project-related stream and floodplain crossings are appropriately designed. For crossings within the mapped 100-year floodplain, drainage crossing structures shall be designed to pass a 100-year flood. (V)	Permit Issued	Before construction	A MSB Floodplain Development Permit has been issued for the Project. The permit was extended by MSB until June 21, 2014. A copy of the permit is available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
9: The Applicant shall evaluate project-related construction water needs in relation to stream flow rates and groundwater recharge rates, as appropriate, and shall minimize effects on surface water and groundwater. Water withdrawals shall be subject to prior written approval by the ADNDR Division of Mining, Land and Water, and also from the ADF&G Division of Habitat for withdrawals from fish-bearing waters. (V)	Permit Issued	Before construction	Temporary Water Use Permits have been authorized for the project. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
10: For all project-related crossings of fish-bearing waters that incorporate bridges or culverts, the Applicant shall design, construct, and maintain the conveyance structures in accordance with the National Marine Fisheries Service (NMFS) 2008 publication, "Anadromous Salmonid Passage Facility Design" (National Marine Fisheries Service. 2008. Anadromous Salmonid Passage Facility Design. NMFS, Northwest Region, Portland, Oregon) or equivalent and reasonable requirements. (V)	Review design criteria and Title 16 permits	Before construction	All ADF&G Title 16 Fish Habitat permits have been acquired and are in accordance with this measure. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
11: The Applicant shall time project-related construction in anadromous streams to minimize adverse effects to salmon during critical life stages when practicable. The Applicant shall incorporate timing windows (i.e., those time periods when salmon are least vulnerable to disturbances) as specified by the ADF&G Division of Habitat, into construction contract specifications for in-stream work. The Applicant shall design and construct stream crossings so as not to impede fish passage or impair the hydrologic functioning of the water body. (V)	Review design criteria and Title 16 permits	Before construction	All ADF&G Title 16 Fish Habitat permits have been acquired. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
12: When project-related activities, such as culvert and bridge construction, require work in stream beds, the Applicant shall conduct activities, to the extent practicable, during either summer or winter low-flow conditions. (V)	Review Title 16 permits	During construction	All ADF&G Title 16 Fish Habitat permits have been acquired and are in accordance with this measure. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
13: The Applicant shall design, construct, and operate the rail line and associated facilities, including bridge abutments, to maintain existing water patterns and flow conditions and provide long-term hydrologic stability by conforming to natural stream gradients and stream channel alignment and avoiding altered subsurface flow to the extent practicable. Project-related supporting structures (e.g., bridge piers) shall be designed to minimize scour and increased flow velocity, to the extent practicable.	Review design criteria	Before construction	Condition conforms to project design standards and permit requirements. Specifically, as mandated in Special Condition No. 3 of the PMRE Section 404 Permit (POA-2007-1586): <i>Natural wetland drainage and inundation patterns shall be maintained through the incorporation of adequately sized (diameter and length), sloped and spaced culverts and/or bridges. The ARRC shall be responsible for annual monitoring, maintenance, and/or repair, and/or replacement of all culverts and bridges for the life of the project to insure that natural wetland drainages and inundation patterns are maintained. The presence of upslope ponding, erosion, flooding scour, obstruction to aquatic organisms, as a result of failing or poorly installed culverts, shall be evidence of non-compliance with this condition. ARRC shall immediately notify the Corps of any non-compliance with this special condition. Obstruction caused by beaver dams or debris, and their removal does not require notification to the Corps. The notification shall include for Corps review and approval ARRC plans for restoration of the natural drainage.</i>
14: Prior to project-related construction, the Applicant shall complete jurisdictional delineations of wetlands and other surface waters that are subject to section 404 of the Clean Water Act for all associated facilities proposed outside of the right-of-way.	Review 2010 Wetland Report	Before construction	Permit-level wetland and waterbody delineations are complete and have been submitted to the USACE. This 2010 delineation served as the basis for the Section 404 permit (POA-2007-1586), issued for the project on September 10, 2012.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
15: The Applicant shall implement all reasonable best management practices imposed by the USACE under section 404 of the Clean Water Act to minimize project-related impacts to waters of the U.S., including wetlands. Standard best management practices are specified in the USACE Alaska District's Nationwide Permits General Best Management Practice Guide (U.S. Army Corps of Engineers, 2007. "Nationwide Permits: General Best Management Practice." Alaska District, Regulatory Program. Online at: http://www.poa.usace.army.mil/reg/NWPs.htm) and could include the following: • Containing sediment and turbidity at the work site by installing diversion or containment structures. • Disposing of dredge spoils or unusable excavated material not used as backfill at upland disposal sites in a manner that minimizes impacts to wetlands. • Revegetating wetlands as soon as possible, preferably in the same growing season, by systematically removing vegetation, storing it in a manner to retain viability, and replacing it after construction to restore the site. • Using fill materials that is free from fine material. • Stockpiling topsoil and organic surface material, such as root mats, separately from overburden and returning it to the surface of the restored site. • Dispersing the load of heavy equipment such that the bearing strength of the soil (the maximum load the soil can sustain) would not be exceeded. Suitable methods could include, but are not limited to, working in frozen or dry ground conditions, employing mats when working in wetlands or mudflats, and using tracked rather than wheeled vehicles. • Using techniques such as brush layering, brush matting, live siltation (a revegetation technique used to trap sediment), jute matting, and coir logs to stabilize soil and reestablish native vegetation	Permit Issued	Before, during, and after construction	A Section 404 permit (POA-2007-1586) was issued for the project on September 10, 2012. The permit complies with this measure. A copy of the permit is available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
16: Prior to initiating project-related construction activities, the Applicant shall mark all stream channels and existing culvert locations in the project construction area before snowfall obscures their location to avoid damage to these areas.	Review design criteria, Section 404, and Title 16 permits	Before and during construction	This measure has been completed for Segments 1, 3, and 6.
17: During project-related design, the Applicant shall align road and track crossings of water bodies perpendicular or near perpendicular to water bodies, where practicable, to minimize crossing length and potential bank disturbance.	Review design criteria, Section 404, and Title 16 permits	Before construction	Condition conforms to project design
18: During project-related construction, the Applicant shall remove all project-related construction debris (including construction materials, soil, or woody debris) from water bodies, including wetlands, as soon as practicable during the open-water period, or prior to break-up for debris on top of or within ice or snow crossings.	Review contract specifications	Before, during, and after construction	Condition conforms to contract stipulations and permit requirements
19: The Applicant shall construct project-related water crossings in a manner that minimizes disturbances to stream beds, stream banks, and flow. Measures to meet these goals could include installing bridge piers during the winter, and initially constructing permanent project-related crossing structures, when practicable, to avoid the need to construct both temporary and permanent crossing structures.	Review design criteria, Section 404, and Title 16 permits	Before and during construction	Condition conforms to project design

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
20: During project-related construction, the Applicant shall perform all off-road travel and clearing in a manner that maintains existing surface and subsurface hydrology and water quality, to the extent practicable. Project-related off-road construction activities beyond the 200-foot right-of-way shall be approved by the land owner. Project-related wintertime off-road travel beyond the right-of-way shall be limited to areas where snow and ice depth are sufficient to protect the ground surface and vegetation. Summertime off-road travel beyond the right-of-way shall occur only if it can be accomplished without damaging vegetation or the ground surface, including stream banks that may be crossed.	Review design criteria, ADNR overland land use permit, Section 404, and Title 16 permits	Before and during construction	Condition conforms to stipulations under the ADNR overland land use permit, Section 404 permit and ADF&G Title 16 Fish Habitat permits. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
21: The Applicant shall design, construct, and use winter roads in performing project-related construction so as to avoid degradation of water quality and to protect the road bed from significant rutting, ground disturbance, or thermal erosion of permafrost areas.	None at this time	Before and during construction	The measure has been adhered to during project development. Additional approval will be sought as winter roads are necessary.
22: The Applicant shall not mine gravel required for project-related construction within the limits of ordinary high water of water bodies unless otherwise authorized by the ADNR, Division of Mining, Land, and Water, and the ADF&G. The Applicant also shall consult with the USACE prior to conducting these activities. Mine-site development and restoration within the limits of ordinary high water of waterbodies shall be performed in accordance with the reasonable requirements of the ADNR, ADF&G, and USACE.	None at this time	Before construction	Project will not mine gravel in water bodies.
23: The Applicant shall abandon project-related geotechnical boreholes in compliance with the reasonable requirements of ADEC requirements (Alaska Administrative Code 18 § 80.015(e), Well protection, source water protection, and well decommissioning).	Review geotechnical reports and permit conditions	Before, during, and after construction	Condition conforms to geotechnical drilling standards, contract specifications, and permit stipulations
24: The Applicant shall follow all applicable Federal regulations and standard protocols for transporting hazardous substances and other deleterious compounds to minimize the potential for a spill occurrence.	SWPPP approval by ADEC	Before construction	Each contractor awarded work will be responsible for preparing a SWPPP and submitting it to ADEC. To date, Bristol Construction Services (Segment 1), Quality Asphalt Paving (Segment 3), and Granite Construction (Segment 6) have submitted a SWPPP's to ADEC, along with a notice of intent for coverage under the ACGP. These documents are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK), Big Lake Project Office, and at the construction site.
25: The Applicant shall comply with the reasonable requirements of the ADEC in the design, construction, operation, and maintenance of project-related tank storage facilities.	None at this time	Before and during construction	Any storage tanks required by contractors during construction will be permitted according to this measure.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
26: The Applicant shall direct the operators of project-related construction vehicles not to drive in or cross streams other than at crossing points reasonably established by the ADEC and USACE and, in the case of fish-bearing streams, the ADF&G.	Review contract specifications, Section 404, and Title 16 permits	Before and during construction	Required under the projects ADF&G Title 16 Fish Habitat permits. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
27: During project-related construction, the Applicant shall minimize to the extent practicable, the duration and extent of activity at temporary construction facilities, such as staging areas, and provide surface treatments to minimize soil compaction (e.g., break up compacted soils during reclamation to promote infiltration) and promote vegetation regrowth after the facilities are no longer needed to support construction.	Review contract specifications, Section 404, and Title 16 permits	During and after construction	Required under the projects ADF&G Title 16 Fish Habitat permits. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
28: The Applicant shall ensure that all project-related culverts and bridges are sufficiently clear of debris to avoid blockages to free-fish passage (where applicable), stream-flow alteration, and increased flooding. The Applicant shall inspect all project-related bridges and culverts semi-annually (or more frequently, as seasonal flows dictate) for debris accumulation and remove and properly dispose of debris promptly.	Review inspection reports as necessary	After construction	ARRC will conduct routine maintenance inspections of all culverts and bridges once installed
29: The Applicant shall use contaminant-free embankment and surface materials in project-related construction.	Review design criteria	During construction	Condition conforms to project design standards
30: The Applicant shall return all project-related stream crossing points to their preconstruction contours to the extent practicable.	Review contract specifications, Section 404, and Title 16 permits	During and after construction	Required under the projects ADF&G Title 16 Fish Habitat permits. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
31: During project-related construction, the Applicant shall use temporary barricades, fencing, and/or flagging in sensitive habitats to contain project-related impacts to the construction area. The Applicant shall locate staging areas in previously disturbed sites to the extent practicable, rather than in sensitive habitat areas.	Review contract specifications, Section 404, and Title 16 permits	During construction	Required under the Section 404 permit and ADF&G Title 16 Fish Habitat permits. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK). Specifically, as mandated in Special Condition No. 7 of the PMRE Section 404 Permit (POA-2007-1586): <i>The limits of clearing, within wetlands, shall be staked and flagged on the ground prior to any work. No ground disturbing activities shall occur in WOUS, including wetlands, beyond limits of clearing or temporary impacts identified on project plans.</i>
32: The Applicant shall restrict its project-related workers from (1) hunting or fishing while stationed at work camps; (2) harassing wildlife, including winter or calving concentrations of moose (cows with yearling calves can be particularly defensive); (3) approaching known occupied bear dens; and (4) feeding wildlife. (V)	Review contract specifications	During construction	This measure will be included in the construction contract specifications.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
33: The Applicant shall obtain project-related state permits and authorizations, including the ADF&G Fish Habitat Permit. (V)	Permit Issued	Before construction	All ADF&G Title 16 Fish Habitat permits have been acquired. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK). A DNR Land Use permit was issued on April 1, 2013.
34: The Applicant shall implement Essential Fish Habitat (EFH) conservation measures as agreed upon with the NMFS during the EFH consultation process for this project. (V)	Permit Issued	Before and during construction	Completed under the Section 404 permit decision and consultation process.
35: The Applicant shall clear vegetation in preparation for project-related construction before or after the typical migratory bird nesting season as identified by the U.S. Fish and Wildlife Service (USFWS) (typically May 1 to July 15), to the extent possible to ensure compliance with the Migratory Bird Treaty Act. If clearing is required during the nesting season, the Applicant shall conduct a nest survey and consult with the USFWS, prior to clearing the vegetation, to identify additional appropriate compliance measures. (V)	Review contract specifications	During construction	Clearing for Segment 1 was completed during early April 2012, outside of U.S. Fish and Wildlife's (USFWS) recommended time period from avoiding vegetation clearing (May 1-July 15). Clearing for Segment 3 and 6 was completed prior to the USFWS bird nesting window in 2013. ARRC will continue to work with the contractors and set bid dates to try and avoid the bird nesting window; however, as the funding schedule for the project is largely unknown, an exact construction schedule cannot be set and certain project activities may interfere with the bird nesting window. ARRC recognizes this and is ready take the necessary precautions to avoid impacts to nesting birds.
36: During the bald eagle nesting season (typically March through August), the Applicant and its contractor(s) shall use their best efforts to avoid bald eagle disturbance during project-related construction. Nests shall be protected in accordance with USFWS guidelines.	Review contract specifications	During construction	A raptor nest survey was conducted for the entire project alignment on March 15, 2013 by an ARRC consultant. No raptor nests were identified along the proposed rail line. Subsequently, a pair of eagles constructed a new nest immediately adjacent to Segment 6. ARRC is working with USFWS to monitor the nest to ensure that construction activities in the area do not disturb the nest. An eagle nest take permit has been applied for and is being processed by USFWS; a permit decision is pending.
37: Subject to consultation with the ADF&G and ADNR, the Applicant shall work with adjacent land managers to develop alternative preferred habitat away from the proposed rail line and construct a widened embankment to allow moose a place to retreat on one side when a train passes in an effort to reduce the potential for moose strikes. (V)	None at this time	After construction	Ongoing consultation with State and Federal resource agencies is underway.
38: The Applicant shall use appropriate methods to handle, store, and dispose of waste generated during project-related construction activities. Food and garbage shall be secured and disposed in a manner to prevent bears from gaining access to such materials and in accordance with applicable and reasonable Federal, state, and local regulations.	Review Plan	During construction	A Bear Interaction Plan has been submitted to STB, DNR, and ADF&G. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
39: In conjunction with developing a final engineering design for the project, the Applicant shall consult with the USFWS and the ADF&G to locate project-related facilities to minimize the size and degree of impacts to highly sensitive habitat areas. Disturbed areas shall be restored in accordance with a reclamation plan developed by the Applicant in cooperation with the USFWS, ADF&G, and/or other appropriate agency staff. The Applicant shall submit the reclamation plan for areas to be disturbed by project construction to the Surface Transportation Board's (Board) Office of Environmental Analysis (OEA), USFWS, and ADF&G. The reclamation plan shall be developed in conjunction with final engineering design and clearly designate: (1) areas to be reclaimed; (2) reclamation materials, methods, and timing; and (3) monitoring schedule and contingency plans.	Review Plan and reclamation activities as necessary	During and after construction	A Reclamation Plan has been submitted to STB, DNR, USFWS, and ADF&G. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.
40: To reduce potential collision and electrocution impacts to birds resulting from project-related power lines and communication towers, the Applicant shall: • Consult with the U.S. Fish and Wildlife Service for current guidelines on tower siting, marking, and guy lines. • Incorporate standard, raptor-proof designs, as outlined in "Suggested Practice for Avian Protection on Power Lines: The State of the Art in 2006" (Avian Power Line Interaction Committee. 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC, and Sacramento, CA. Online at http://www.aplic.org/), into the design of electrical distribution lines in areas of identified bird concerns to avoid electrocution of eagles, owls, and other smaller raptors, including: • Use of marking techniques such as balls or flappers to increase transmission line visibility, especially in areas where sandhill cranes and bald eagles are likely to roost, forage, or nest. • Maintain a minimum 60-inch separation between conductors and/or grounded hardware and potentially use insulation materials and other applicable measures, depending on line configuration. • Incorporate standard raptor-proof designs (as outlined in "Avian Protection Plan Guidelines." Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service. 2005. Online at http://www.aplic.org) into the design of the electrical distribution lines to reduce bird collisions.	Review design criteria	Before and during construction	New power lines will be placed underground where practicable. Communication towers will be constructed in accordance to the measure.
41: To the extent practicable, the Applicant shall minimize project-related ground disturbance, clearing of established vegetation, and removal of wildlife habitats and riparian vegetation during project-related construction. The Applicant shall also minimize the reestablishment of vegetation near the rail bed that would be attractive to moose.	Review contract specifications, Section 404, and Title 16 permits	During construction	Required under the Section 404 permit, Title 16 Fish Habitat Permits, and agreed upon in the agency consultation process and the Moose Mitigation Plan. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
42: Prior to any project-related construction, the Applicant shall consult with the ADNR and develop and implement a mitigation plan to address the spread and control of nonnative invasive plants during project-related construction. The Applicant shall submit this plan to OEA and ADNR. This plan shall designate appropriate: (1) planned seed mixes; (2) weed prevention and eradication procedures; (3) equipment cleaning protocols; (4) revegetation methods; and (5) protocols for monitoring revegetation.	Review Plan and monitor revegetation as necessary	During and after construction	An Invasive Species Control and Management Plan has been submitted to STB, DNR, USFWS, and ADF&G. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
43: Unless otherwise approved by the Alaska Department of Fish and Game, project-related detonation of explosives within, beneath, or in proximity to fish-bearing waters shall not result in overpressures exceeding 2.7 pounds per square inch unless the waterbody, including its substrate, is frozen solid. Peak particle velocity stemming from explosive detonation shall not exceed 0.5 inch per second during the early stages of egg incubation.	None at this time	During construction	Explosives will not be used in or near water bodies.
44: The Applicant shall comply with the reasonable requirements of Alaska Statutes (Alaska Stat. § 16.05.841, Fishway Required, and Alaska Stat. § 16.05.871, Protection of Fish and Game) regarding project-related winter ice bridge crossings and summer ford crossings of all anadromous and resident fish streams. If necessary for winter ice bridge crossings, natural ice thickness could be augmented (through snow removal and water to increase ice thickness, or other techniques) if site-specific conditions, including water depth, are suitable for a crossing that would protect fish habitat and maintain fish passage.	Review design criteria and Title 16 permits	During construction	All ADF&G Title 16 Fish Habitat permits have been acquired and are in accordance with this measure. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK). Specifically, as mandated in Special Condition No. 4 of the PMRE Section 404 Permit (POA-2007-1586): <i>All culverts and bridges shall be designed, installed, and maintained so they do not interfere with free and unobstructed passage of all life states of fish (both anadromous and resident) present in the stream under reasonably expected flow levels.</i>
45: The Applicant shall not narrow an anadromous waterbody between its mean high water lines for the project, unless authorized in writing by the ADF&G prior to project-related construction.	Review design criteria and Title 16 permits	During construction	All ADF&G Title 16 Fish Habitat permits have been acquired and are in accordance with this measure. Copies of these permits are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
46: The Applicant shall ensure that project-related culverts in fish-bearing waters (as identified at the time of final design) function properly and continue to accommodate fish passage. The Applicant shall inspect all project-related culverts on fish-bearing waters annually for perched, submerged, or other conditions that could prevent fish passage. A wetland scientist, fisheries biologist, or other qualified individual shall perform the inspections. If perched, submerged, or other conditions that prevent fish passage are identified, the Applicant shall notify the ADNR and ADF&G, and develop and implement a correction action plan in consultation with ADNR and ADF&G.	Review inspection reports as necessary	After construction	ARRC will conduct routine maintenance inspections of all culverts and bridges once installed. Specifically, as mandated in Special Condition No. 4 of the PMRE Section 404 Permit (POA-2007-1586): <i>All culverts and bridges shall be designed, installed, and maintained so they do not interfere with free and unobstructed passage of all life states of fish (both anadromous and resident) present in the stream under reasonably expected flow levels.</i>

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
47: The Applicant, in consultation with the ADF&G, ADNR and other appropriate stakeholders shall evaluate, implement, and monitor various aspects of project-related rail design, maintenance, and operation to document moose mortality from collisions with trains, and to develop a strategy to reduce the moose-train collision mortality rate. The Applicant shall document the strategy in a Moose Mitigation Strategy Plan. A draft of the plan shall be prepared and submitted to ADF&G, ADNR, and OEA for review and comment prior to completing final design and before the start of project-related construction. The strategy could include: • Maintaining vegetation along the right-of-way in primary (e.g., grasses/sedges) or late (e.g., old-growth spruce) successional (developmental) stages. If vegetation is allowed to progress to the secondary successional stage (i.e., shrubs), maintaining it at the shortest possible height, not to exceed 0.5 meter, encouraging shrubs of non-preferred moose browse species (e.g., alder, dwarf birch), and minimizing re-growth of willow, paper birch, and aspen. • Mowing vegetation in late summer before energy stores are transferred to the roots. • In winter, plowing snow back from the track to the outer edge of the trackside clearing to allow moose easy access away from the tracks when a train approaches. • Developing a plan in conjunction with the ADF&G to catalog all strikes (not just confirmed or suspected deaths) in a timely manner that shall include, but is not necessarily limited to: precise location (latitude and longitude), date and time; weather and other environmental conditions at the time and location of strike; and attributes associated with the train, such as horn use, speed, and track characteristics. • Designing, constructing, and operating all aspects of the rail line to minimize significant alteration of moose and other wildlife movement and migration patterns.	Plan is submitted and approved	Before, during, and after construction	A Moose Mitigation Strategy Plan has been submitted to STB, DNR, USFWS, and ADF&G. ARRC is attempting to schedule a follow-up meeting during Spring 2013 to solicit comments and finalize the plan.
48: The Applicant shall prepare and implement a bear interaction plan to minimize conflicts between bears and humans. In consultation with the ADF&G, the Applicant shall develop appropriate educational programs and management plans when project-related construction and operation plans are being prepared.	Review plan	During construction	A Bear Interaction Plan has been submitted to STB, DNR, and ADF&G. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.
49: The Applicant shall not conduct project-related construction and land clearing activities within 0.5 mile of known occupied bear dens, unless alternative mitigation measures are approved by the ADF&G. The Applicant shall obtain a list of known den sites from the ADF&G Division of Wildlife Conservation prior to commencement of any project-related construction activities and shall report occupied dens encountered.	If a bear den is discovered or identified, ARRC will comply with this condition	During construction	ADF&G has been contacted. No mapped bear dens occur within the project corridor. ADF&G does not maintain a database of bear dens but will be consulted annually.
50: Prior to initiating project-related construction activities, the Applicant shall consult with the local offices of the Natural Resource Conservation Service and the Palmer Plant Center to develop an appropriate plan for restoration and revegetation of disturbed areas (including appropriate seed mix specifications). This would apply to areas that cannot be revegetated using natural recruitment from the native seed sources in the stockpiled topsoil. Development of the plan shall include consideration of the use of a variety of native grasses and wildflowers appropriate to the surrounding habitat to provide visual interest in areas where vegetation height must be limited due to safety or maintenance considerations.	Review plan	During construction	A Reclamation Plan has been submitted to STB, DNR, USFWS, and ADF&G. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
51: The Applicant shall develop protocols to inform and prepare project-related construction supervisors of the importance of protecting archaeological resources, graves, and other cultural resources and how to recognize and treat the resources. (V)	Verify training has taken place	During construction	This measure is a requirement under the Programmatic Agreement with SHPO. Developed a training curriculum that was provided to contractors and conducted training. A recent training was held for contractors on March 14, 2013.
52: The Applicant shall comply with the Programmatic Agreement developed through the section 106 process under the National Historic Preservation Act. (V)	Verify PA has been complied with	Before, during, and after construction	Section 106 PA compliance is currently taking place
53: To minimize fugitive dust emissions created during project-related construction activities, the Applicant shall implement appropriate fugitive dust suppression controls, such as spraying water or other established measures. The Applicant shall also operate water trucks on haul roads as necessary to reduce dust. (V)	Approved Erosion and Sediment Control Plan, review contract specifications	During construction	Each contractor awarded work will be responsible for preparing a SWPPP and submitting it to ADEC. To date, Bristol Construction Services (Segment 1), Quality Asphalt Paving (Segment 3), and Granite Construction (Segment 6) have submitted a SWPPP's to ADEC, along with a notice of intent for coverage under the ACGP. These documents are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK), Big Lake Project Office, and at the construction site.
54: To limit project-related construction emissions, the Applicant shall work with its contractor(s) to ensure that construction equipment is properly maintained and that required pollution-control devices are in working condition. (V)	Review contract specifications	During construction	Condition conforms to contract specifications
55: The Applicant shall work with its construction contractor(s) to minimize, to the extent practicable, project-related construction noise disturbances near residential areas. Construction and maintenance vehicles shall be in good working order with properly functioning mufflers to control noise. (V)	Review contract specifications	During construction	Condition conforms to contract specifications
56: The Applicant shall consult with affected communities regarding its planned construction schedule to minimize, to the extent practicable, project-related construction noise and vibration disturbances in residential areas during evenings and weekends. (V)	Review contract specifications	During construction	Condition conforms to contract specifications
57: Prior to initiating construction activities, the Applicant shall establish a Community Liaison to consult with affected communities, landowners, and agencies. Among other responsibilities, the Community Liaison shall assist communities or other entities with the process of establishing quiet zones, if requested.(V)	Interview the community liaison	During construction	Community Liaison has contacted all of the appropriate parties for Segment 1, 3, and 6. No quiet zones were identified or requested for these segments.
58: The Applicant shall not conduct pile driving associated with bridge construction on the Mac East Variant Segment during nighttime hours.	Review contract specifications	During construction	Condition conforms to contract specifications
59: The Applicant shall not conduct construction activities in the vicinity of West Holstein Avenue on the Mac East Variant Segment during nighttime hours.	Review contract specifications	During construction	Condition conforms to contract specifications

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
60: The Applicant shall establish a Diagnostic Team comprised of Applicant staff, community members, representatives of the Alaska Department of Transportation and Public Facilities (ADOT&PF) and other appropriate entities regarding project-related roadway/rail line crossings, in consultation with Federal Railroad Administration safety officials. This process shall result in appropriate safety measures for every roadway/rail line crossing. (V)	None at this time	After construction	To be completed prior to track construction.
61: The Applicant shall coordinate with Federal, state and local emergency management officials in the project area. The Applicant shall provide, upon request, applicable hazardous-materials training and/or project-related information to enhance readiness. The Applicant shall incorporate the proposed rail line into its existing emergency response process and shall update its Oil Spill Contingency Plan to include the proposed rail line. (V)	None at this time	After construction	To be completed at a later date; likely following completion of construction
62: During construction of project-related tracks across existing roads, the Applicant shall notify road users of temporary road closings and other construction-related activities. The Applicant shall provide for detours and associated signage, as appropriate, or maintain at least one open lane of traffic at all times to allow for the quick passage of emergency and other vehicles. The Applicant shall display signs providing the name, address, and telephone number of a contact person onsite to assist the public in obtaining immediate responses to questions and concerns about project activities. (V)	Review contract specifications	During construction	Access will be provided during construction and in accordance with this measure. A Project Office (12900 West Creek Frontage Rd; Wasilla, AK), website (www.portmacrail.com), and hotline (907-892-6000) are available for the public to access information.
63: To the extent practicable, the Applicant shall confine all project-related construction traffic to project-specific roads within the right-of-way or established public roads. Where traffic cannot be confined to these roads, the Applicant shall make necessary arrangements with landowners to gain access. The Applicant shall remove and restore upon completion of project-related construction any temporary access roads constructed outside the rail line right-of-way unless otherwise agreed to with the landowners. (V)	Review contract specifications	During construction	Access will be provided during construction and in accordance with this measure. A Project Office (12900 West Creek Frontage Rd; Wasilla, AK), website (www.portmacrail.com), and hotline (907-892-6000) are available for the public to access information.
64: The Applicant shall consult with appropriate state and local transportation agencies to determine the final design and other details of project-related grade crossings and warning devices. (V)	Review contract specifications	Before construction	Crossings are designed in accordance with ARRC, and DOT&PF guidelines.
65: Before the start of project-related operations, the Applicant shall contact appropriate local, state, and Federal emergency response organizations and shall provide them with information concerning the proposed operations, schedules, and any site hazards or restrictions that could impact responders. (V)	Interview the community liaison	During construction	The Community Liaison has contacted the emergency response organizations.
66: The Applicant shall obtain a section 9 Bridge Permit from the U.S. Coast Guard for construction of project-related bridges over navigable rivers. (V)	Section 9 permit issued	Before construction	The (lack of) response by USCG to ARRC's letter dated 4/25/12 implies concurrence that the determination that the Little Susitna River crossing is within scope of 33CFR Section 115.70, Advanced Approval of Bridges for a Section 9 Bridge Permit. USCG has the permit application upon which they can act, but it is not required for the commencement of construction. There have been no changes to this permit position during last quarter.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
67: In coordination with the U.S. Coast Guard, the Applicant shall provide adequate clearances for navigation of recreational boats on navigable rivers. (V)	Section 9 permit issued	Before construction	Clearance provided by the new bridge proposed on the Little Susitna River exceeds the existing clearance of the bridge immediately downstream.
68: In conjunction with final engineering design, the Applicant shall consult with the ADNR and the ADF&G and develop and implement a plan to ensure that project-related bridges and culverts placed on navigable or public waters are designed and installed to accommodate: (1) navigation by recreational boat users in a manner that shall not impede existing uses, to the extent practicable, and (2) public access and use of the statutory easements as established by the reasonable requirements of Alaska Statute (Alaska Stat. § 38.05.127, Access to Navigable or Public Water). The Applicant shall submit the plan to OEA, ADNR, and ADF&G.	Review plan	Before construction	A Maintenance of Navigable and Public Waterway Rights Plan has been submitted to STB and DNR. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.
69: The Applicant shall develop a spill prevention, control, and countermeasure plan for petroleum products and/or response plan for hazardous materials, as required by applicable Federal and state regulations, prior to initiating any project-related construction activities. These plans shall address methods for preventing discharges and spill control, and containment and cleanup should a release occur. Plans shall include a requirement to conduct weekly inspections of equipment for any fuel, lube oil, hydraulic, or antifreeze leaks. The plan shall provide that, if leaks are found, the Applicant shall require the contractor(s) to immediately remove the equipment from service and repair or replace it. (V)	SWPPP approval by ADEC	Before construction	Each contractor awarded work will be responsible for preparing a SPCC plan as required by and in accordance with state and federal regulations. The SPCC plan is available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK).
70: As part of the APDES Stormwater Construction Permit and Stormwater Pollution Prevention Plan, the Applicant shall: - Restore land used for temporary staging areas during project-related construction to natural conditions if occurring on undeveloped ADNR land or to its former uses if occurring on private land. - Restore public land areas that were directly disturbed by project-related construction equipment and not owned by the Applicant (such as temporary access roads, haul roads, and crane pads) to their original condition, as reasonable and practicable, upon completion of construction. - In business and industrial areas, store project-related equipment and materials in established storage areas or on the Applicant's property. The Applicant shall prohibit parking of equipment or vehicles, or storage of materials along driveways or in parking lots, unless agreed to by the property owner. - Prohibit project-related construction vehicles, equipment, and workers from accessing work areas by crossing business or agricultural areas, including parking areas or driveways, without advance notice to or permission from the owner. (V)	SWPPP approval by ADEC	Before construction	Each contractor awarded work will be responsible for preparing a SWPPP and submitting it to ADEC. To date, Bristol Construction Services (Segment 1), Quality Asphalt Paving (Segment 3), and Granite Construction (Segment 6) have submitted a SWPPP's to ADEC, along with a notice of intent for coverage under the ACGP. These documents are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK), Big Lake Project Office, and at the construction site.
71: For each of the public grade crossings on the rail line, the Applicant shall provide permanent signs prominently displaying both a toll-free telephone number and a unique grade crossing identification number in compliance with Federal Highway Administration regulations (23 Code of Federal Regulations part 655). The Applicant's personnel shall answer the toll-free number 24 hours a day. (V)	Interview the community liaison	During construction	Signage at each crossing will be provided. A Project Office (12900 West Creek Frontage Rd; Wasilla, AK), website (www.portmacrail.com), and hotline (907-892-6000) are available for the public to access further information.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
72: The Applicant shall continue its ongoing community outreach efforts by maintaining a Web site about the project throughout the construction period of the rail line. (V)	Interview the community liaison	During construction	The Project website (www.portmacrail.com) and ARRC website (www.alaskarailroad.com) is active and will be updated during the duration of construction.
73: In the event of any damage caused by project-related construction activities, the Applicant shall work with affected landowners to appropriately redress any damage to each landowner's property. (V)	Interview the community liaison	During construction	If warranted, this measure will be employed.
74: The Applicant shall work with affected businesses or farms to appropriately address project-related construction activity issues affecting any business or farm. (V)	Interview the community liaison	During construction	If warranted, this measure will be employed.
75: To the extent practicable, the Applicant shall ensure that entrances and exits for businesses are not obstructed by project-related construction activities, except as required to move equipment. (V)	Interview the community liaison	During construction	If warranted, this measure will be employed.
76: During construction of the crossings over navigable rivers, some short-term temporary restrictions of watercraft traffic could occur for safety purposes. In that event, the Applicant shall install warning devices to notify boaters of project-related bridge construction activities. The Applicant also shall display signs providing the name, address, and telephone number of a contact person onsite to help waterway users obtain immediate responses to questions and concerns about project activities. (V)	Interview the community liaison	During construction	Signage at each crossing will be provided. A Project Office (12900 West Creek Frontage Rd; Wasilla, AK), website (www.portmacrail.com), and hotline (907-892-6000) are available for the public to access further information.
77: The Applicant shall make reasonable efforts to minimize disruptions to utilities by scheduling project-related construction work and outages to low-use periods. The Applicant shall notify residents and other utility customers in advance of project-related construction activities requiring temporary service interruptions. (V)	Interview the community liaison	During construction	If warranted, this measure will be employed.
78: The Applicant shall make reasonable efforts to identify all utilities that are reasonably expected to be materially affected by the project-related construction within the right-of-way or that cross the right-of-way. The Applicant shall consult with utility owners during design and construction so that utilities are protected during project-related construction activities. The Applicant shall notify the owner of each such utility identified prior to project-related construction activities and shall coordinate with the owner to minimize damage to utilities. (V)	Interview the community liaison, review contract specifications	During construction	If warranted, this measure will be employed.
79: The Applicant shall bury all project-related utilities along the 200-foot right-of-way and within the terminal reserve. (V)	Review design criteria	During construction	Project-related utilities will be installed underground.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
80: In accordance with the Applicant's Oil Spill Contingency Plan and Emergency Response Plan, the Applicant shall make the required notifications to the appropriate Federal and state environmental agencies in the event of a reportable hazardous materials release. The Applicant shall work with the appropriate agencies, such as the ADEC, the USEPA, and the USFWS, to respond to, and remediate releases. (V)	SWPPP approval by ADEC	Before construction	Each contractor awarded work will be responsible for preparing a SWPPP and submitting it to ADEC. To date, Bristol Construction Services (Segment 1), Quality Asphalt Paving (Segment 3), and Granite Construction (Segment 6) have submitted a SWPPP's to ADEC, along with a notice of intent for coverage under the ACGP. These documents are available for public review at the ARRC building (327 W, Ship Creek Ave., Anchorage, AK), Big Lake Project Office, and at the construction site.
81: At least one month before initiating construction activities in the area, the Applicant shall provide the information described below regarding project-related construction of the rail line, and other information, as appropriate, to fire departments within the project area, the Federal Emergency Management Agency, and the MSB Emergency Operations Department: • The schedule for construction throughout the project area, including the sequence of construction of public grade crossings and approximate schedule for these activities at each crossing; • A 24-hour emergency telephone number to reach the Applicant in the event of an emergency; • The name and number of the Applicant's project contact, who shall be available to answer questions or attend meetings for the purpose of informing emergency-service providers about the project-related construction and operations; and • Revisions to this information, including changes in construction schedule, as appropriate. (V)	Interview the community liaison	Before construction	The community liaison is currently performing this duty.
82: Prior to project-related construction, the Applicant shall consult with Alaska Department of Natural Resources (ADNR) and other appropriate agencies, including the Alaska Department of Fish and Game (ADF&G), and user groups to develop a plan to ensure construction activities occur during the most appropriate timeframe to limit, to the extent practicable, potential impacts on recreation activities. The plan shall be developed prior to completion of final engineering plans and following consultation with the ADNR, the ADF&G, other appropriate government agencies, and user groups to determine the location of all officially recognized trails that would be crossed by the rail line. The plan shall designate temporary access points if main access routes must be obstructed during project-related construction and include an agreed-upon number and location of access points as determined during consultation with applicable agencies. (V)	Review plan	Before and during construction	To ensure the safety of trail users, there may be periodic, temporary closures or detours to trails during the construction period. Notice would be provided to trail users at each crossing indicating the closures, construction schedule, and alternate access points. It is the intent of ARRC to maintain continued access at all trail crossings during construction; in most cases, having an on-site flag person present to assist trail users in crossing the construction area safely. ARRC and MSB will continue to work with area stakeholders, including the Big Lake Trails Committee, Alaska Department of Natural Resources (ADNR), and the Alaska Department of Fish & Game in an effort to schedule construction activities around seasonal usage of trails. During the construction of each segment, contractors are being required to develop a segment specific Traffic Control Plan. The Plan will identify temporary trail closure dates and provide ARRC with a plan to ensure a crossing opportunity remain available to trail users. Information related to appropriate signage and flag persons will also be submitted as necessary to facilitate safe passage during construction.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
83: The Applicant shall consult with the appropriate management agencies, including the ADNR and the ADF&G to ensure that project-related bridges and culverts are designed, constructed, and maintained to accommodate travel by winter modes of transportation (snow machine, dog sled, etc.) on streams and rivers used for recreational access and subject to the provisions of Alaska Statute (Alaska Stat. § 38.05.127, Access to Navigable or Public Water).	Review plans	Before and during construction	A Maintenance of Navigable and Public Waterway Rights Plan has been submitted to STB and DNR. No comments were received on the plan and ARRC has assumed agency concurrence on the plan until notified otherwise.
84: The Applicant shall consult with resource management agencies, including the ADNR and the ADF&G, appropriate user groups, and property owners regarding the location and design of crossings for trail easements that intersect with the proposed rail line.	Review plan	Before and during construction	Extensive consultation has been completed at the direction of STB and SHPO. Trail crossing design plans are available on the project website. A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
84A: At a minimum, the Applicant shall provide at grade-separated or grade-separated crossings of all officially recognized trails crossed by the proposed rail line. As of the date of the Final EIS, a total of 8 officially recognized trails had been identified that intersect the Mac East- Variant Connector 3 Variant- Houston-Houston South Alternative. This number could change due to various factors including updates to trail plans, route selection, and final engineering. For the purposes of this mitigation measure, the Applicant shall adhere to the definition of an officially recognized trail provided below. “An officially recognized trail is one that is specifically established within currently adopted plans by ADNR and/or MSB, or are established within these plans at the time of construction or right-of-way acquisition by the Applicant or the MSB (whichever occurs first). In addition, an officially recognized trail is used primarily for recreational purposes. The locations of officially recognized trails may or may not be provided for by recorded easements or right-of-way instruments. In some cases, officially recognized trails may be adopted by or mapped in a recognized trail plan, but a recorded easement or right-of-way instrument may not exist. The presence of a recorded easement or right-of-way easement is not sufficient alone to make the property an officially recognized trail.” Based on the Applicant's January 2008 inventory of officially recognized trails, the following recognized trails are crossed by the Mac East Variant- Connector 3 Variant - Houston-Houston South Alternative: • Crooked Lake Trail • Iditarod National Historic Trail • Houston Lake Loop Trail • Flat Lake Connector Trail Based on OEA's analysis, the following additional officially recognized trails are crossed by the Mac East Variant- Connector 3 Variant - Houston-Houston South Alternative: • Big Lake Trail #1 • Big Lake Trail #2 • Big Lake Trail #5 • Big Lake Trail #14	Review plan	Before construction	The Mat-Su Borough is continuing to work with underlying land owners to preserve trail access with permanent land use instruments. A final report will be provided once this process has concluded.

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Mitigation Measure	Compliance Metric	Timeframe	Status Comments
84B: The Applicant shall design each crossing to accommodate existing trail users as determined at the time of construction, or right-of-way acquisition by the Applicant or MSB (whichever comes first).	Review plan	Before construction	Extensive consultation has been completed at the direction of STB and SHPO. Trail crossing design plans are available on the project website. A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
84C: The Applicant shall provide a sufficient number of at grade or grade-separated trail crossings to ensure that the average distance between trail crossings over the length of the rail line is not greater than 3.0 miles (i.e., length of the new rail line divided by total number of Applicant-supplied, trail crossings). Trail crossings provided by the Applicant to meet this minimum crossing frequency may be collocated with project-related stream and road crossings if the collocated trail reasonably and safely accommodates existing trail users as determined at the time of construction, or right-of-way acquisition by the Applicant or MSB (whichever comes first). Any trails that the Applicant proposes to combine at one grade-separated trail crossing under mitigation measure 91 shall count as one trail in calculating the average crossing distance of 3.0 miles. Each grade-separated trail crossing provided by the Applicant under mitigation measure 92 (i.e., the trails that contribute to the integrity of the Iditarod Sled Dog Historic District) can be included in the calculation of the average crossing distance of 3.0 miles, regardless of officially recognized status.	Review plan	Before construction	Extensive consultation has been completed at the direction of STB and SHPO. Trail crossing design plans are available on the project website. A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
84D: If the applicant proposes to construct an at-grade crossing of any officially recognized trails, the applicant shall submit a report to OEA for review and concurrence prior to the start of project-related construction of the rail segment containing the proposed at-grade crossing. The subject report shall address the following items for each officially recognized trail at which an at-grade crossing is proposed: • Identify each officially recognized trail. • Explain why a grade separated crossing is not feasible or appropriate. Specify engineering constraints or potential environmental impacts of a grade-separated crossing, as applicable. • Specify the safety controls and devices that would be installed or implemented for the proposed at-grade crossing. • Identify the current principal users or user groups of the proposed at-grade crossing, consult with these parties, and summarize their degree of acceptance of the proposed at-grade crossing and its proposed safety measures. • Explain any substantive objections of the parties to an at-grade crossing or its safety measures.	Review and approve plan	Before construction	Extensive consultation has been completed at the direction of STB and SHPO. Trail crossing design plans are available on the project website. A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
85: When project-related construction takes place on state and private land, the Applicant shall consult with the ADNDR Division of Forestry to salvage or dispose of commercial and personal use timber within the right-of-way in accordance with the reasonable requirements of the Alaska Forest Resources and Practices Act (Alaska Stat. § 41.17) and the Susitna Forestry Guidelines.	Review form	Before construction	In a letter dated March 20, 2013 ARRC received notification from the State of Alaska Division of Forestry Office that the project is in compliance with Alaska Division of Forestry – Forest Resources and Practices Act regulations. A Detailed Plan of Operations filing was determined to be unnecessary for the project.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
86: The Applicant shall ensure that field-work contractors engaged in project-related construction are provided with training for the identification of hazardous materials, including unexploded ordnance (UXO) that could be encountered during project-related construction. If unanticipated sources of hazardous or regulated materials, including UXO, or potentially contaminated areas are encountered during project-related construction activities, the Applicant shall immediately notify the ADEC and stop all work in the area until a response plan has been approved by ADEC. Handling, treatment, and disposal of any hazardous materials shall occur in full compliance with all Federal, state, and local requirements.	Review contract specifications	During construction	This measure is included in the construction contract specifications.
87: The Applicant shall conduct project-related right-of-way acquisition in conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 United States Code § 4601), regulations promulgated pursuant to that statute (49 Code of Federal Regulations part 24), and all reasonable terms and conditions of Alaska Statute (Alaska Stat. § 34.60.010 through 34.60.150, Relocation Assistance and Real Property Acquisition Practices).	Interview ARRC and MSB right-of-way staff, confirm compliance	Before construction	Condition conforms to project right-of-way acquisition process.
88: The Applicant shall consult with local airports in the vicinity of new project-related communication towers and the ADOT&PF and the Federal Aviation Administration to ensure that the towers are appropriately sited and that notice has been given to pilots of the construction and location of the new towers.	Review design criteria	Before and during construction	Construction of any towers will be in accordance with this measure.
89: If the USACE completes a full-scale remedial investigation and feasibility study of the nature and extent of contamination or explosive hazards for the former Susitna Gunnery Range, and the USACE's study area encompasses portions of the project-related right-of-way, the Applicant shall observe the findings and recommendations of the study as approved by ADEC.	Review contract specifications	Before and during construction	If warranted, this measure will be employed.
90: Prior to initiation of project-related construction activities, and for a period of 1 year following start-up of operations on the rail line, the Applicant shall establish a Community Liaison to consult with affected communities, businesses, and appropriate agencies; develop cooperative solutions to local concerns; be available for public meetings; and conduct periodic public outreach. The Applicant shall provide the name and phone number of the Community Liaison to mayors and other appropriate local officials in each community through which the proposed rail line passes.	Interview community liaison	Before and during construction	A Project Office was opened in Big Lake, AK in February 2012. Cliff Williams (Segments 2-8; HDR Alaska, Inc.) and David Kabella (Segment 1; Wilson & Co.) have been assigned the duty of staffing the office and being the community liaison. The Project website (www.portmacrail.com) and ARRC website (www.alaskarailroad.com) will be updated with Project news and contact numbers.
91: Project-related construction vehicles, equipment, and workers shall not access work areas by crossing residential properties without the permission of the property owners.	Review contract specifications	Before and during construction	If private property access is necessary, this measure will be employed.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
92: Prior to completing final project design, the Applicant shall prepare a draft report on any officially recognized trails that it proposes to relocate rather than provide grade-separated or at-grade crossings of the trails. The draft report shall address the rationale for the proposed trail relocations; describe potential impacts to existing trail users if the trails are relocated rather than being equipped with grade-separated crossings; and summarize the Applicant's discussions with user groups and other interested parties affected by the proposed relocations. The draft report shall identify all parties consulted with by the Applicant regarding proposed trail relocations. All consulted parties shall be provided a copy of the draft report for review and comment for a period not to exceed 30 calendar days. The Applicant shall prepare a final report and submit the final report to OEA and the parties. In addition to the contents required in the draft report, the final report shall summarize all substantive comments from the parties and the Applicant's comment responses.	Review and approve plan	Before construction	Extensive consultation has been completed at the direction of STB and SHPO. Trail crossing design plans are available on the project website. A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
93: Prior to completing final project design, the Applicant shall prepare a draft report that identifies the location and use of all trails contributing to the Iditarod Dog Sledding Historic District. The draft report shall identify the contributing trails, state of current use for dog sledding (if any), and information on sources and parties consulted pertaining to trail use. OEA and all consulted parties shall be provided a copy of the draft report for review and comment for a period not to exceed 30 calendar days. The Applicant shall prepare a final report and submit the final report to OEA and the parties. In addition to the contents required in the draft report, the final report shall summarize all substantive comments from the parties and the Applicant's comment responses. Based on the final report, all trails that are determined to be contributing to the integrity of the historic district, are in use for dog sledding, and are necessary to maintain the connectivity of the district, shall be provided with grade-separated crossings to allow for continued use.	Review and approve plan	Before construction	A revised IDSHD Summary and Implementation Plan was submitted to STB, SHPO, and other consulting parties on November 21, 2012. The plan is available on the project website.
94: To reduce glare from lighting used during nighttime project-related construction activities, and during operation of the terminal reserve, the Applicant shall require construction contractors to direct lighting onto the immediate area under construction only and to avoid shining lights toward residences, businesses, recreational areas, and down roadway or trail corridors.	Review contract specifications	During construction	This measure is included in the construction contract specifications.
95: To minimize the visual impact of the cleared right-of-way including the terminal reserve for this project, the Applicant shall minimize clearing at road and trail crossings, which could be accomplished by leaving a few larger trees and some smaller trees and shrubs untouched, to reduce visual contrast and mimic natural clearings in the landscape, where practical and consistent with safety and maintenance requirements.	Review design criteria and contract specifications	During construction	Clearing will be limited to only the areas needed to facilitate construction. The entire right-of-way will not be cleared; in general, only the footprint and a small area (~20') outside of the footprint will require clearing.

Mitigation Checklist – Second Quarter 2013 (April to June)

Mitigation Measure	Compliance Metric	Timeframe	Status Comments
96: Where practicable to reduce visual impact in areas of high visibility (such as residential areas, road and trail crossings, and crossings of the Little Susitna River, and the areas surrounding the terminal reserve) without increasing the project footprint and when appropriate given maintenance, access, safety considerations, and natural vegetation patterns, the Applicant shall: - Plant native vegetation along the right-of-way and perimeter of the terminal reserve to reduce the contrast with line, color, and texture. Plant species that are preferred by moose as browse shall be avoided to the extent practicable. - Plant native trees and bushes around the base of bridge supports located on land to reduce the visual prominence of such features and break up the uniform lines, colors, and smooth textures of the bridge supports. A variety of plant types native and indigenous to the project area shall be used to provide multiple layers, seasonality, and reduced susceptibility to disease. Plant species that are preferred by moose as browse shall be avoided to the extent practicable. - In areas with hill cuts, shape slopes to reflect the natural landscape, where practicable, and plant with native materials to provide an amorphous and irregular form and rough texture. - Dispose of excess material in a suitable fill location and not cast on downhill slopes.	Review Reclamation Plan and Invasive Species Control and Management Plan	During and after construction	This measure is being implemented project wide; as described in the Reclamation Plan and Invasive Species Control and Management Plan submitted to STB.
97: If there is a material change in the facts or circumstances upon which the Board relied in imposing specific environmental mitigation conditions, and upon petition by any party who demonstrates such material change, the Board may review the continuing applicability of its final mitigation, if warranted.	Review project design, permits, and contract specifications	Before, during, and after construction	If warranted, this measure will be employed.
98: The Applicant shall submit quarterly reports to the OEA on the progress of, implementation of, and compliance with all Board-imposed mitigation measures. The reporting period for these quarterly reports shall begin on the date of a Board Final Decision authorizing the project until 1 year after the Applicant has completed project-related construction activities. The Applicant shall submit copies of the quarterly reports within 30 days following the end of each quarterly reporting period and distribute the reports to appropriate Federal and state agencies, as specified by OEA.	Review and approve reports	During and after construction	As included in this quarterly submittal.
99: Within 60 days following a Board decision authorizing the project, the Applicant shall prepare and submit an annotated outline of the required quarterly report to the OEA for review and approval.	Review and approve outline	Before construction	A Quarterly Report Annotated Outline has been submitted and approved by STB.
100: The Applicant shall retain a third-party contractor to assist the OEA in the monitoring and enforcement of mitigation measures until 1 year after the Applicant has completed project-related construction.	Confirm with ARRC	Before construction	ARRC has coordinated with STB to retain ICF for this position.

Permit Status – Port MacKenzie Rail Extension Project

Active Permit Reviews									
Segment						Permit Type	Agency Responsible	Date Submitted	Status
1	2	3	4	5	6				
					X	Eagle Nest Take Permit	USFWS	July 2013	A permit application has been submitted and is under review by USFWS.

Acquired Permits									
Segment						Permit Type	Agency Responsible	Date Acquired	Status
1	2	3	4	5	6				
X	X	X	X	X	X	Section 404 Permit	USACE	September 2012	Permit Issued (POA-2007-1586); A modification the permit was applied for in May 2013 at the Segment 3 Contractor's request to facilitate bridge construction. (POA-2007-1586-M2)
X						Title 16 Fish Habitat Permit: Baker Farm Road, MC 4.5	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0286)
		X				Title 16 Fish Habitat Permit: Houston 0.8, Outlet of Diamond Lake	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0287)
			X			Title 16 Fish Habitat Permit: Houston 4.3, Outlet of Crooked Lake	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0288)
			X			Title 16 Fish Habitat Permit: Houston 6.3, Trib. of Little Susitna River	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0289)
				X		Title 16 Fish Habitat Permit: Houston South 1.0, Outflow of Little Horseshoe Lake	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0291)
					X	Title 16 Fish Habitat Permit: Milepost 174.3, Little Susitna River Crossing	ADF&G	July 2011	Permit Issued (Permit #FH 11-IV-0292)
X	X	X	X	X	X	Title 16 Fish Habitat Permit: Temporary Water Use Sites	ADF&G	July 2011	Permit Issued (Permit #s FH 11-IV-0294 through 0302)
			X			Title 16 Fish Habitat Permit: Temporary Water Use of Muleshoe Lake	ADF&G	April 2012	Permit Issued (Permit #FH 12-IV-0161)
					X	Title 16 Fish Habitat Permit: Milepost 175.0, Trib. Little Susitna River	ADF&G	May 2012	Permit Issued (Permit #FH 11-IV-0293)
			X			Title 16 Fish Habitat Permit: K22.2 Papoose Twins Lake Stream	ADF&G	March 2012	Permit Issued (Permit #FH 12-IV-0080)

Acquired Permits									
Segment						Permit Type	Agency Responsible	Date Acquired	Status
1	2	3	4	5	6				
		X	X	X	X	Temporary Water Use Permit: Northern Sources (5)	ADNR-DMLW	May 2012	Permit Issued (TWUP A2011-53)
X	X	X				Temporary Water Use Permit: Southern Sources (5)	ADNR-DMLW	May 2012	Permit Issued (TWUP A2011-54)
					X	Floodplain Development	MSB	June 2011	Permit Issued (FHDP 172920110019)
X						Port Development Permit	MSB	January 2012	Permit Issued (Permit #172320120001)
					X	Section 9 Bridge Permit, Little Susitna River	USCG	March 2011	No longer necessary to start construction as the Little Susitna River crossing is within scope of 33 CFR Section 115.70, Advanced Approval of Bridges for a Section 9 Bridge. USCG may act on permit application at their discretion
X	X	X	X	X		DNR Land Use (ADL 227588); DNR Easements, DNR Authorizations, DNR Permits	ADNR, DMLW	April 2013	Permit issued on April 1, 2013.

initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. When project-related activities, such as culvert and bridge construction, require work in streambeds, ARRC shall conduct activities when stream disturbances would have the least impact to anadromous fish species. The time period for in-stream construction work in the Matanuska-Susitna Borough area is May 15 through July 15. No in-water anadromous fish stream construction activities shall occur outside this time period, unless authorized by the State of Alaska, Department of Fish and Game. Construction work that occurs above the ordinary high water mark area of the stream and does not include in-water construction may be conducted throughout the year.
2. The ARRC is responsible for obtaining any "take" permit required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The ARRC shall contact the appropriate locale office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.
3. Natural wetland drainage and inundation patterns shall be maintained through the incorporation of adequately sized (diameter and length), sloped and spaced culverts and/or bridges. The ARRC shall be responsible for annual monitoring, maintenance, and/or repair, and/or replacement of all culverts and bridges for the life of the project to insure that natural wetland drainages and inundation patterns are maintained. The presence of upslope ponding, erosion, flooding scour, obstruction to aquatic organisms, as a result of failing or poorly installed culverts, shall be evidence of non-compliance with this condition. ARRC shall immediately notify the Corps of any non-compliance with this special condition. Obstruction caused by beaver dams or debris, and their removal does not require notification to the Corps. The notification shall include for Corps review and approval ARRC plans for restoration of the natural drainage.
4. All culverts and bridges shall be designed, installed, and maintained so they do not interfere with free and unobstructed passage of all life stages of fish (both anadromous and resident) present in the stream under reasonably expected flow levels.
5. All riparian areas disturbed during construction, must be restored to pre-project conditions as soon as possible. If construction is not complete prior to the end of the same growing season, all disturbed riparian areas shall be stabilized appropriately and effectively, such as with jute matting, to satisfactorily withstand erosion from heavy rain during the fall and the next year's spring breakup. Site shall be restored to pre-project conditions during the growing season following construction (year immediately following disturbance). Revegetation shall be considered successful when percent live cover of native wetland vegetation is similar to adjacent wetlands. Evidence of erosion and sloughing from disturbed areas will be considered non-compliance with this condition.

6. All disturbed, stockpile and fill areas shall be stabilized to prevent erosion. Increased water turbidity and accumulation of sediment in drainages, sloughs, and other wetlands shall be evidence of insufficient stabilization.
7. The limits of clearing, within wetlands, shall be staked and flagged on the ground prior to any work. No ground disturbing activities shall occur in WOUS, including wetlands, beyond limits of clearing or temporary impacts identified on project plans.
8. No fill, equipment or construction materials shall be stockpiled or stored on wetlands that do not have DA authorization for those activities, as shown in the project plans.
9. A 100' buffer of uncleared natural vegetation shall be maintained on all sides of bridged crossing, except where clearing is necessary for the construction of crossings. The buffer area shall be staked or flagged to identify the buffer area.
10. To minimize fugitive dust emissions created during project-related construction activities, ARRC shall implement appropriate fugitive dust suppression controls, such as spraying water or other established measures. ARRC shall also operate water trucks on haul roads as necessary to reduce dust. (MM 77)
11. The Programmatic Agreement Among Surface Transportation Board, Advisory Council on Historic Preservation, and Alaska State Historic Preservation Officer Regarding the Alaska Railroad Corporation Construction and Operation of a Rail Line Extension to Port MacKenzie, Alaska Docket No. FD 35095, executed on June 16, 2011 is adopted by the Corps and is hereby incorporated into and made a Special Condition of this permit. This Programmatic Agreement is adopted for the purposes of this permit pursuant to 'Revised Interim Guidance for Implementing Appendix C of 33 CFR Part 325 with the Revised Advisory Council on Historic Preservation Regulations at 36 CFR Part 800,' paragraph 6(b), dated 25 April 2005. Failure to comply with the terms and conditions of this Programmatic Agreement may result in revocation, suspension, or modification of this permit.
12. **Temporary Construction:** The proposed temporary construction methods for the bridge structures have not been finalized by the contractor. Therefore, temporary fills to waterbodies and adjacent wetlands are not authorized under this permit. The contractor must provide a final plan detailing the acres of temporary impact, methods, and structures that will be used in the construction of all project components requiring temporary construction methods, if fill would be discharged in a WOUS. The final plan shall be submitted sixty day before construction activities are planned to begin. The Corps will review the plan to determine if a modification to this authorization is required and if adequate mitigation of impacts to WOUS, including avoidance, minimization and compensation, are included. Impacts to WOUS due to temporary construction methods shall require compensatory mitigation. No temporary construction activities shall occur until the temporary construction plan is authorized by the Corps and any additional compensatory mitigation requirement is fulfilled.

13. **Compensatory Mitigation for Direct Impacts to WOUS:** The following compensatory mitigation shall be required for the proposed project:

Impact Duration	Waters Category/Cowardin Wetland System	Mitigation Ratio	Acres of impacts	Mitigation Bank Credits
Permanent	I (High) - Palustrine	3:1	0.6	1.8
Permanent	II (Moderate) Palustrine	2:1	23.4	46.8
Permanent	III (Moderate) Palustrine	1.5:1	71.8	107.7
Secondary/Temporary		0.1:1	38.5	3.9
		TOTAL:		160.2

For the direct loss of 95.8 acres of WOUS, the ARRC shall purchase 156.3 credits of wetlands as identified in the table above and 3.9 credits for secondary impacts associated with the proposed work zone, for a total of 160.2 credits. Of these credits, 16.92 palustrine credits (i.e., PUB, PEM, PFO) shall be purchased from Pioneer Reserve, LLC,, and 143.28 palustrine credits, shall be purchased from the Su-Knik Mitigation Bank. Documentation from each bank, certifying proof of payment, with Department of the Army (DA) permit number, wetland type and requisite credits identified, shall be submitted to the DA at the address below, within 30 day of the date of this authorization.

DEPARTMENT OF THE ARMY
U.S. Army Engineers District, Alaska
Regulatory Division
PO Box 6898
Elmendorf AFB, Alaska 99506-0898

Special Information:

Any condition incorporated by reference into this permit by General Condition 5, remains a condition of this permit unless expressly modified or deleted, in writing, by the District Engineer or his authorized representative.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Natural Resources

Division of Forestry
Mat-Su Area Office

101 Airport Road
Palmer, Alaska 99645
Main: 907.761.6300
Fax: 907.761.6319

March 20, 2013

Ray Nix
Resource Management Specialist
Matanuska-Susitna Borough
350 E. Dalia Ave.
Palmer, AK 99645

Dear Mr. Nix,

I met with Jeff Shively and Doug Jewel of HDR Alaska during the morning of March 8 to discuss the need to submit Detailed Plans of Operation (DPO) to the Division of Forestry for your operations related to the Port MacKenzie Rail Extension.

According to 11 AAC 95.200 a land use conversion does not require a DPO if the conversion has been authorized by a borough or municipality via a plat approval, building permit, or other authorization for that land use. Zoning is not considered authorization. Therefore, the borough or its operator is not required to submit a DPO for any timber harvest related to this project.

Please understand if the cleared land is not converted to its intended use within five years, you will be required to reforest the land as required in 11 AAC 95.375 to 11 AAC 95.390.

Please call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick Jandreau".

Rick Jandreau
Mat-Su Area Forester

cc: Doug Jewel, HDR Alaska ,Inc
Jeff Shively, HDR Alaska ,Inc

EXHIBIT 1

APPROXIMATE LOCATION EAGLE NEST

[Exhibit removed from public version to avoid disclosure of nest location]

EXHIBIT 2

BALD EAGLE NEST MONITORING FORMS

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 11:10am **Name of Monitor:** Charlene Johnson

Date: 5/7/2013 **End Time:** 11:55am

Tree species²: CW **# Adult Present:** 1 **# Young Present:** 'Unk. Eggs presumed

Time 11:10	Behavioral activity observed (list all that apply) ³ : INC			
	Weather conditions ⁴ :	T: 40	W: SE 5K	C/P: 20%
	Description of ongoing construction events ⁵ : Construction activity occurring >700 Ft away. Rumble of equipment and distant backup signals. Ongoing all day.			
	Notes/Comments: HDR established a marker using orange construction fencing placed in a 10' diameter around the base of the tree cluster the nest is in. A pink ribbon was strung at the 330' radial distance as a marker. Nest construction appears complete by 5/7/2013 when monitoring began. Nest appears about 40' above the ground surface.			

Time 11:20	Behavioral activity observed (list all that apply) ³ : INC			
	Weather conditions ⁴ :	T: 40	W: SE 5K	C/P: 20%
	Description of ongoing construction events ⁵ : As above; monitor approached the nest tree on foot for photographs and observation of the nest construction and condition.			
	Notes/Comments: None			

Time 11:40	Behavioral activity observed (list all that apply) ³ : INC			
	Weather conditions ⁴ :	T: 40	W: SE 5K	C/P: 20%
	Description of ongoing construction events ⁵ : Distant construction activity as noted above.			
	Notes/Comments: Nesting adult remained unmoving on the nest. No further head movement, though the top of the adults head was visible.			

Time 11:55	Behavioral activity observed (list all that apply) ³ : INC			
	Weather conditions ⁴ :	T: 40	W: SE 5K	C/P: 20%
	Description of ongoing construction events ⁵ : Distant construction activity as noted above.			
	Notes/Comments: No additional movement. 2 nd adult still not observed at the site.			



Figure 1: Nest (height reference; 3' orange construction fence).



Figure 2: Nest (300mm lens)



Figure 3: Nest location, proximity to project limits.

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0705 Name of Monitor: Charlene Johnson

Date: 5/8/2013 End Time: 1330

Tree species²: _____ # Adult Present: _____ # Young Present: _____

Time 7:05am	Behavioral activity observed (list all that apply) ³ : 1=INC; 2=TD			
	Weather conditions ⁴ :	T: 28F	W:SE @5k	C/P: 0%
	Description of ongoing construction events ⁵ : Pickup Truck (me) approaching monitoring location appx. 350' from nest location. Construction equipment startup occurring approximately 1000 feet from nest location.			
	Notes/Comments: (1) INC on nest. Head visible. (2) TD on top of dead cottonwood appx 200' from nest tree. Preening.			



Figure 1: Nest; (1) INC. Head visible.



Figure 2: (2) TD.

Time 7:20am	Behavioral activity observed (list all that apply) ³ : 1= INC, 2= TD			
	Weather conditions ⁴ :	T: 28F	W:SE@5k	C/P:0%
	Description of ongoing construction events ⁵ : Deployment of Excavator. Excavator began scraping up the slash pile. Followed by deployment of dozer and dumptruck. Work began on slashpile appx. 600 feet from the nest tree.			
	Notes/Comments: (1) INC on nest. Head visible. W few slight movements of the head, repositioned once. (2) TD (remained). No change in movements. Appeared to look around and toward moving equipment. No vocalizations observed. (Can't really hear them over the equipment noise, but can clearly see their heads and beaks with 300mm lens).			

Time 7:36am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) Flew away from perch (NNW).			
	Weather conditions ⁴ :	T:28F	W:SE5k	C/P:0%
	Description of ongoing construction events ⁵ : Excavator loading dumptrucks of slash material at 600+ ft from nest tree. Dozer moving topsoil into pile at appx 600 ft from nest tree.			
	Notes/Comments: (1) Remained on nest. Looking around. (2) Flew from perch NNW			



Figure 3: (1) Adjusting/Tending to nest.



Figure 4: (2) Left NNW.

Time 7:45am	Behavioral activity observed (list all that apply) ³ :			
	(1) AF (by (2)); then TD			
	(2) Returned to nest, AF (1); NR, then INC			
	Weather conditions ⁴ :	T: 28F	W: SE5k	C/P:0%
Description of ongoing construction events ⁵ :				
Continued loading of slash pile #1.				
Notes/Comments:				
(2) Returned to the nest, flew in a wide circle and then landed on nest. Appeared with food which (1) was observed taking from (2). Some adjustments to the nest were made, then (2) remained on nest and (1) flew to perch tree.				



Figure 5: (2) Returning to nest.

Time 8:10am	Behavioral activity observed (list all that apply) ³ : (1) TD (preening, looking around) (2) INC; Looking around/alert			
	Weather conditions ⁴ :	T: 30F	W: SE5k	C/P:0%
	Description of ongoing construction events ⁵ : Construction events same; Granite Foreman approached nest to take a GPS reading documenting the exact location of the nest tree.			
	Notes/Comments: (2) In nest became very alert to the presence of the foreman approaching the nest tree. Neck strained, though no sounds were observed and (2) did not stand or make any other movements. (1) remained on the perch. No vocalizations were observed, no movement by either adult.			

Time 8:16am	Behavioral activity observed (list all that apply) ³ : (2) INC (1) Flew NNW presumably to hunt			
	Weather conditions ⁴ :	T: 30F	W: SE@5k	C/P: 0%
	Description of ongoing construction events ⁵ : Continued loading and moving slash pile #1			
	Notes/Comments: (1) Flew away. (2) remained on nest. (2) would adjust and appeared to engage in nest repair. Kept look around but no vocalizations were observed.			

Time 9:00am	Behavioral activity observed (list all that apply) ³ : (2) INC/NR; (1) not present			
	Weather conditions ⁴ :	T: 39F	W: SE@5k	C/P: 0%
	Description of ongoing construction events ⁵ : Moved to Slash Pile #2. Requires that dumptruck traffic move along alignment to within 350'			

	of the nest. Movement is kept outside the 330' buffer (outside edge of alignment). Activity includes 1 dumptruck, 1 excavator. 1 dozer is operating on other side of alignment (700+ feet away).
	Notes/Comments: (1) Still not returned (2) INC/NR. Adult head visible, looks around. No vocalization visible.

Time 10:00am	Behavioral activity observed (list all that apply) ³ : (1) Still not present (2) INC			
	Weather conditions ⁴ :	T: 39F	W:SE@5-7k	C/P: 0%
	Description of ongoing construction events ⁵ : Continuing work on slash pile #2 (700 ft from nest tree, but DT route is as close as 350 ft).			
	Notes/Comments: (2) In nest, looking around calmly. No vocalizations observed.			

Time 10:26am	Behavioral activity observed (list all that apply) ³ : (2) INC; (1) away from nest.			
	Weather conditions ⁴ :	T: 42F	W: NNE@3mph	C/P: 0%
	Description of ongoing construction events ⁵ : Equipment moved to Slash pile #3 which is located at the edge of the 330' buffer. Work was maintained on the outside of that buffer.			
	Notes/Comments: (1) Has not returned to the nest or vicinity. (2) Despite movement of equipment closer to the nest tree, the adult incubating does not appear alarmed. (2) is alert on nest, but has not vocalized or stood up during operations at the closer slashpile.			
11:19am	No change in status of activity or behavior. Adult still visible in nest (top of head). Appears calm and mildly alert (not alarmed).			

Time 1140am	Behavioral activity observed (list all that apply) ³ : (2) INC (1) Not present.			
	Weather conditions ⁴ :	T: 43F	W:NNE@8mph	C/P:0%
	Description of ongoing construction events ⁵ : End loading on slash pile #3. Construction moved to and continued (3-4 pieces of equipment) outside the 330' zone, in general >500 ft from nesting area.			
	Notes/Comments: Adult on nest appears alert to activity, but not alarmed. White head visible on nest, minimal movement. (1) has not yet returned.			

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 0705 **Name of Monitor:** Charlene Johnson and Zoe Meade

Date: 5/10/2013 **End Time:** 1630

Tree species²: C **# Adult Present:** 2 **# Young Present:** Unk-Egg(s) presumed

Time 7:09am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
	Weather conditions ⁴ :	T: 43F	W:ENE@3MPH	C/P:<5%
	Description of ongoing construction events ⁵ : Topsoil stripping within 350' of the nest, 1 excavator/1dumptruck (rotating)			
	Notes/Comments: (1) INC On the nest, not very visible; (2) was TD on CW snag ~100' from nest. Departed NE upon my approach.			

Time 7:28am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) still away.			
	Weather conditions ⁴ :	T: 45F	W:ENE@3mph	C/P:<5%
	Description of ongoing construction events ⁵ : No Change			
	Notes/Comments: (1) INC on nest; adjusted position then settled back down.			

Time 7:51am	Behavioral activity observed (list all that apply) ³ : (1) INC/NR (2) still has not returned			
	Weather conditions ⁴ :	T:45F	W:ENE@8MPH	C/P:<5%
	Description of ongoing construction events ⁵ : Continued scraping topsoil. Added a D6R bulldozer to continue scraping.			
	Notes/Comments: (1) Conducted nest repair activity <1 min a few times over a 20 min period. Settled back down into nest in between activity. (2) has not been observed since departure.			

Time 9:00am	Behavioral activity observed (list all that apply) ³ : (1) INC/NR (2) not present			
	Weather conditions ⁴ :	T: 48F	W:ENE@5mph	C/P:<5%
	Description of ongoing construction events ⁵ : Topsoil stripping/loading activities have moved beyond 500' from nest. Dumptrucks continue to travel route on outside of alignment corridor (>330 ft). Maintaining moderate speed, no dust.			
	Notes/Comments: (1) INC and intermittent nest repair activities; No vocalizations no aggression.			

Time 1:25pm	Behavioral activity observed (list all that apply) ³ : (1)INC-TD; (2)TD/INC			
	Weather conditions ⁴ :	T: 58F	W: SSE@3MPH	C/P:20%
	Description of ongoing construction events ⁵ : No activity in or near Nest zone between 11 and 1:20. 1:20 dozer returned to clear a small area right at 330'.			
	Notes/Comments: (1) stood and flew over equipment (appx. 100ft from ground level). (2) returned to nest. (1) elevated flight to a few hundred feet above active area for a few minutes and then disappeared from view. (2) remained on nest unreactive to the construction for the duration of the equipment activity. The behavior of (1) was discussed with Sirena Brownlee, Senior Wildlife Biologist. The behavior exhibited by (1) is may have been reflective of mild concern, however, since (2) returned and resumed incubation of the egg(s) without alarm, the behavior does not appear to have had any adverse effect on tending to the egg(s), and may or may not have been reactive to the activity.			



Figure 1: 1:25pm (2) Resuming incubation after (1) departed the nest.



Figure 2: 2:00pm (2) Incubating

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 0842 **Name of Monitor:** Charlene Johnson

Date: 05/14/2013 **End Time:** 1330

Tree species²: C **# Adult Present:** 2 **# Young Present:** UND (egg(s) presumed)

Time 8:42am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
	Weather conditions ⁴ :	T: 34F	W: Calm	C/P: 80%/No Precip
	Description of ongoing construction events ⁵ : Upon arrival, no construction 330. Grading operations within 600. (Monitoring requested due to planned work within 330)			
	Notes/Comments: (1) INC (visible) (2) TS, standing watch on tree ~15' from nest. As truck approached, stood watch until 8:47 then flew E. Adult (1) still on nest.			



Figure 1: 8:47am (1) on Nest; (2) on Tree



Figure 2: 8:47am; (2) Departing

Time 10:26am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) has not returned.			
	Weather conditions ⁴ :	T:37F	W: SE@5 mph	C/P:80%/ No Precip
	Description of ongoing construction events ⁵ : Construction Activity = operation of a single D8T bulldozer, clearing organic/topsoil/grub material from the ground at >330', but <660'.			
	Notes/Comments: (1) INC on nest, no rxn to equipment operation observed. 10:37 Operations to within 330'. (1) remained settled on nest. 11:00 continued operations within 150 feet of the nest elicited no adverse reaction. (1) head was clearly visible throughout the activity and no vocalizations were observed. Rough video was captured with the nest in background and equipment operating in foreground, to capture the nature of the sound and visual presence of the activity. In general (1) remained with its back to the construction and while looking from side to side, did not turn to face the activity or get up from its position.			



Figure 3: 11:00am (1) INC on nest



Figure 4: 11:00am (1) INC on nest (equipment in foreground)

Time 11:11am	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) not present			
	Weather conditions ⁴ :	T: 38F	W:SE@5 mph	C/P: 80%/No precip.
	Description of ongoing construction events ⁵ : Due to operations (continuing grubbing with a single D8T dozer), I changed my relative position, maintain a direct visual contact with the nesting adult.			
	Notes/Comments: (1) stood up and appeared to turn egg/reposition and then settled back onto nest.			



Figure 5: 11:17 (1) on nest.

Time 12:01	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) Flew by, but did not return to nest.			
	Weather conditions ⁴ :	T: 39F	W:SE@3 pmh	C/P:
	Description of ongoing construction events ⁵ : Continued activity (no change). Consistent forward and backward movement (with mechanical safety back-up alarm) over 100' runs from edge of alignment (nearest nest) to approximate 2/3 alignment (beyond 330')			
	Notes/Comments: (1) Still INC on nest. (2) flew back within immediate territory and settled to TD in a tree about 600' feet from nest, opposite from the alignment			



Figure 6: 12:01pm (1) INC; (2) in tree to left.

Time 12:17	Behavioral activity observed (list all that apply) ³ : (1) Departed nest; (2) Flew in to nest and resumed INC.			
	Weather conditions ⁴ :	T: 39F	W:SE@3 pmh	C/P:
	Description of ongoing construction events ⁵ : Continued activity (no change). Consistent forward and backward movement (with alarm) over 100' runs from edge of alignment (nearest nest) to approximate 2/3 alignment (beyond 330')			
	Notes/Comments: (1) Departed nest/flew off NNE ; (2) flew back to nest and resumed incubation. No further activity on nest. Work continued outside the 330' zone and monitoring discontinued at 1:30pm			



Figure 7: 12:17pm (2) INC on nest

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0705 Name of Monitor: Charlene Johnson

Date: 5/23/2013 End Time: 1005

Tree species²: C # Adult Present: 2 # Young Present: Presumed egg(s)

Time	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
7:05am	Weather conditions ⁴ :	T: 43F	W: ENE @ 3mph	C/P: 50%; precip. prior
	Description of ongoing construction events ⁵ : Scraping and Hauling @ 800 ft from nest. 3 dumptrucks, one excavator and, and one grader (on haul road)			
	Notes/Comments: Monitoring this am because we have not conducted monitoring in a week. No work has been conducted within 300 ft. in approx. 1 week . #1 on nest; #2 on tree 50' away. Preening, watching.			



Figure 1: (1) Incubating

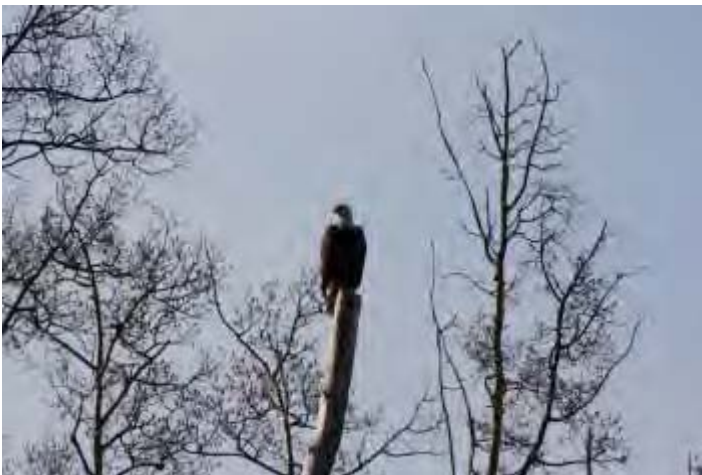


Figure 2: (2) Perched



Figure 3: (2) Preening

Time	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
8:10am	Weather conditions ⁴ :	T: 43F	W: calm	C/P: 30% clouds
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (2) Departed nest area, surveyed territory in flight, then settled into a tree appx. 200 ft from nest on the other side of the grove (facing material storage area). (1) still on nest.			



Figure 4: (1) Relocated to material storage side of grove.

Time	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
8:30am	Weather conditions ⁴ :	T: 43F	W: calm	C/P: 40% cloud cover
	Description of ongoing construction events ⁵ : No change			
	Notes/Comments: (2) Still on material storage side of the grove, perched. (1) stood up, rearranged, rolled			

	egg(s) and then resettled. (1) stood again and rearranged at 9:35. Monitoring ended at 10:05 am.
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Figure 5: (1) Standing.



Figure 6: (1) Rolling eggs

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 0705 **Name of Monitor:** Charlene Johnson

Date: 5/29/2013 **End Time:** 1600

Tree species²: C **# Adult Present:** 2 **# Young Present:** Egg(s)

- Note relocation of monitoring station. A screen tent was set up just outside the 330' perimeter with a camp chair (since a truck to monitor would no longer be reliably available. The location of the station is now on the north end of the material storage area in an area that has been cleared but is not part of the active construction area.
- Charlene Johnson: Monitored 7:05am-8:40am; Zoe Meade: Monitored from 8:30am- 4:00pm
- Photo documentation not completed today due to failed memory card.

Time	Behavioral activity observed (list all that apply) ³ : (1) INC, (2) Not present			
0705 CCJ	Weather conditions ⁴ :	T: 54F	W: Calm	C/P: Clear
	Description of ongoing construction events ⁵ : Startup; dozer at 600-800 feet; dumptrucks and scrapers (material waste/storage area). Anticipate startup of scrapers within 1000 ft. today			
	Notes/Comments: (1) On nest (not readily visible); (2) Not present at arrival.			

Time	Behavioral activity observed (list all that apply) ³ : (1) Departed to post nearby; (2) INC			
0740 CCJ	Weather conditions ⁴ :	T: 54F	W: Calm	C/P: Clear
	Description of ongoing construction events ⁵ : Startup; dozer at 600-1000 feet; dumptrucks and scrapers (material waste/storage area). Anticipate startup of scrapers within 1000 ft. today. Dumping traffic 1-2 loads per 5 minutes.			
	Notes/Comments: (2) Returned to nest and (1) became visible. (1) departed to perch stump within 100 feet. (2) remained visible on nest incubating.			

Time	Behavioral activity observed (list all that apply) ³ : TD(1) INC (2)			
0900 ZM	Weather conditions ⁴ :	T: 62F	W: Calm	C/P: Clear
	Description of ongoing construction events ⁵ : Hauling and surface grading			
	Notes/Comments: (1) Returned to nest; both perched on top of the nest for approx. 1 minute. Eagle (2) departs and (1) remains on nest. Eagle (2) perched on Cottonwood .			

Time 0920 ZM	Behavioral activity observed (list all that apply) ³ : (2) INC			
	Weather conditions ⁴ :	T: 62F	W: Calm	C/P: Clear
	Description of ongoing construction events ⁵ : Continued (No change)			
	Notes/Comments: (2) Still on nest			

Time 0955 ZM	Behavioral activity observed (list all that apply) ³ : (2) TD-INC			
	Weather conditions ⁴ :	T: 62F	W: Light Breeze	C/P: Clear
	Description of ongoing construction events ⁵ : Continued; Activity increasing nearer nest, but still in excess of 500'			
	Notes/Comments: (2) Observed watching construction from nest, but no vocalizations or stressed behavior. Only head visible above nest.			

Time 1040 ZM	Behavioral activity observed (list all that apply) ³ : (2) NR			
	Weather conditions ⁴ :	T: 64F	W: Light Breeze	C/P: Clear
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Briefly outside nest making repairs, rolling egg(s), then back inside nest. Head visible from spotting area, not alarmed by construction activities.			

Time 1210 ZM	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
	Weather conditions ⁴ :	T: 68F	W: Light Wind	C/P: Clear
	Description of ongoing construction events ⁵ : No change			
	Notes/Comments: (1) Returns; both eagles perch on edge of nest for < 1 minute, then (2) departs nest and returns to Cottonwood trunk. (1) remains on nest.			

Time 1300 ZM	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) TD			
	Weather conditions ⁴ :	T: 68F	W: Light Wind	C/P: Clear
	Description of ongoing construction events ⁵ : Construction activity >330; <660 including scraping and hauling			
	Notes/Comments: (2) Leaves post; (1) remains to incubate. Nest repair and egg rolling behavior; head visible from viewing area			

Time 1510 ZM	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) not present			
	Weather conditions ⁴ :	T: 79F	W: Light Wind	C/P: Clear
	Description of ongoing construction events ⁵ : No change			
	Notes/Comments: (1) Still incubating; no movement in 2 hours. Can still see head above edge of nest. Does not appear interested or concerned re: construction activities. (2) still has not returned.			

Time 1540 ZM	Behavioral activity observed (list all that apply) ³ : (1) INC/NR			
	Weather conditions ⁴ :	T: 79F	W: Light Wind	C/P: Clear
	Description of ongoing construction events ⁵ : Construction moving away from nest.			
	Notes/Comments: (1) INC/NR. Shifted position, able to see tail feathers and lower torso. Activity in nest (NR/Egg tending). No sign of (2).			

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 0755 **Name of Monitor:** **Charlene Johnson**

Date: **6/6/2013** **End Time:** 1015

Tree species²: Cottonwood # Adult Present: (1) (2) # Young Present: Egg(s)

Time 0800	Behavioral activity observed (list all that apply) ³ : (1) INC (2) not present at nest/not observed			
	Weather conditions ⁴ :	T: 46F	W: E@6	C/P: clear
	Description of ongoing construction events ⁵ : Hauling, dozing 500-1000 ft. Noise level is low to moderate and relatively even rumble/hum. No dust			
	Notes/Comments: (1) INC low in nest. Top of head barely visible. (2) was not observed at the nest upon arrival.			

Time 0900	Behavioral activity observed (list all that apply) ³ : (1) INC; (2) not present @ nest			
	Weather conditions ⁴ :	T: 56F	W: E@6	C/P: clear
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Stood, moved to edge of nest, preened, then resettled nosing egg(s) in nest. Reestablished position on egg(s).			



Time 1015	Behavioral activity observed (list all that apply) ³ : (1) INC (2) Not present at nest			
	Weather conditions ⁴ :	T: 60F	W:E@6	C/P:Clear
	Description of ongoing construction events ⁵ : No change			
	Notes/Comments: (1) Continues to incubate without interest in construction activity. Ended monitoring at 1015.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0730 Name of Monitor: Charlene Johnson

Date: 06/11/2013 End Time: 1130

Tree species²: Cottonwood # Adult Present: (1) INC # Young Present: Egg(s)

Time 0730	Behavioral activity observed (list all that apply) ³ : (1) INC			
	Weather conditions ⁴ :	T: 54F	W: Calm	C/P: 10%
	Description of ongoing construction events ⁵ : Dumping/Dozing up to 330' in material storage area; excavating hauling <330 on South Wye.			
	Notes/Comments: Upon arrival, (1) was on the nest. (2) was not present in immediate nest area.			

Time 0830	Behavioral activity observed (list all that apply) ³ : (1) INC			
	Weather conditions ⁴ :	T: 61F	W: Calm	C/P: 5%
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Stood up, tended to eggs and resettled.			



Figure 1: (1) INC 0826 am

Time 1100	Behavioral activity observed (list all that apply) ³ : (1) INC			
	Weather conditions ⁴ :	T: 68	W: Calm	C/P: 5%
	Description of ongoing construction events ⁵ : Continued hauling/dozing in material storage area ~ 500 feet away .Activity >500 ft on South Wye.			

Notes/Comments:

(1) Undisturbed on the nest. Lying low. No sight of (2).
--



Figure 2: (1) INC 1122am

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 1445 **Name of Monitor:** Charlene Johnson

Date: 06/17/2013 **End Time:** 1545

Tree species²: Cottonwood **# Adult Present:** 1 **# Young Present:** Unknown; Egg(s) presumed

Time 1445	Behavioral activity observed (list all that apply) ³ : (1) INC			
	Weather conditions ⁴ :	T:74F	W: WNW @10M	C/P: Clear
	Description of ongoing construction events ⁵ : Hauling, dozing, dumping within 600 ft.			
	Notes/Comments: (1) is still incubating, eggs do not appear to have hatched. (2) has not been observed at the nest today.			

Time 1530	Behavioral activity observed (list all that apply) ³ : (1) INC			
	Weather conditions ⁴ :	T:79F	W: WNW@12M	C/P: Clear
	Description of ongoing construction events ⁵ : Hauling, dozing, and dumping within 600'			
	Notes/Comments: (1) Adjusts, tends to egg(s) and resettles a few times during the course of the monitoring event. Never leaves nest. (2) Not observed during the monitoring event.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 15:00 **Name of Monitor:** Zoe Meade

Date: 06-20-13 **End Time:** 17:00

Tree species²: CW **# Adult Present:** 1 **# Young Present:** Egg(s)

Time	Behavioral activity observed (list all that apply) ³ : INC			
15:00	Weather conditions ⁴ :	T: 72	W: 0-5	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Hauling, surfacing/ scraping. Noise minimal due to distance from nest.			
	Notes/Comments: Eagle (1) is on nest. No sign of Eagle (2). Eagle (1) observing construction activities with no sign of stress.			

Time	Behavioral activity observed (list all that apply) ³ : INC-NR			
15:15	Weather conditions ⁴ :	T: 72	W: 0-5	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Continuation of hauling, surfacing/ scraping.			
	Notes/Comments: Eagle (1) mending nest while incubating. No sign of stress.			

Time	Behavioral activity observed (list all that apply) ³ : NR			
15:50	Weather conditions ⁴ :	T: 72	W: 3-5	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Continuation of hauling, surfacing/ scraping.			
	Notes/Comments: Eagle (1) moved from incubating to standing on nest edge becoming fully exposed while making repairs to edge of her nest. While making repairs eagle leaned down into nest leaving her body exposed on edge of nest. Possibly rolling/ shifting position of the eggs.			

Time	Behavioral activity observed (list all that apply) ³ : INC			
16:20	Weather conditions ⁴ :	T: 72	W: 3-5	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Continuation of hauling, surfacing/ scraping.			
	Notes/Comments: Eagle (1) changed incubating positions. Was previously facing east, currently facing west.			

Time	Behavioral activity observed (list all that apply) ³ : INC			
17:00	Weather conditions ⁴ :	T: 72	W: 5-10	C/P: Increasing clouds
	Description of ongoing construction events ⁵ : Grading and dozer. Activities have increased closer to nest, noise volume has also increased.			
	Notes/Comments: Eagle (1) remains facing west while incubating. Appears unaffected by increase in construction activities.			

*No signs of Eagle (2). Activities of Eagle (1) show eaglets have not yet hatched. Eagle (1) remains incubating in nest at time of monitor's departure with no observed stress.

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 14:05 Name of Monitor: Zoe Meade

Date: 06-24-13 End Time: 14:35

Tree species²: _____ 1 # Adult Present: _____ 0 # Young Present: _____

Time	Behavioral activity observed (list all that apply) ³ : INC			
14:05	Weather conditions ⁴ :	T: 74	W: 5-10	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Scraping and surfacing			
	Notes/Comments: Only one eagle observed at nest. Incubating with only head and tail feathers visible.			

Time	Behavioral activity observed (list all that apply) ³ : INC			
14:25	Weather conditions ⁴ :	T: 74	W: 5-10	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Continuation of scraping and surfacing.			
	Notes/Comments: Wind increasing, nest and tree swaying. Eagle (1) occupied watching construction activities. No apparent stress associated with windy conditions, nest movement or construction activities.			

Time	Behavioral activity observed (list all that apply) ³ : INC			
14:35	Weather conditions ⁴ :	T: 74	W: 10-15	C/P: Partly cloudy- no precipitation
	Description of ongoing construction events ⁵ : Continuation of scraping and surfacing.			
	Notes/Comments: No movement during entire observation. Eagle (1) remains in nest. No eaglets observed.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should

be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 1300 Name of Monitor: Charlene Johnson

Date: July 8, 2013 **End Time:** 1830

Tree species²: C # Adult Present: 2 # Young Present: Unknown (Chick(s) presumed)

Time 1300	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 56F	W: Calm	C/P: Cloudy (not raining)
	Description of ongoing construction events ⁵ : Scrapers hauling, dozer (D10) within 330'. Excavator, dumptrucks, additional scrapers, within 660'.			
	Notes/Comments: Eagles last observed by the monitor (during a SWPPP inspection) 7/3/2013- 1 adult INC in nest. Monitoring has not been performed, however, since 6/26/2013 because no work has been conducted within 330' of the nest. Work ceased on 7/3/2013 (COB) and restarted 0700 today (7/8/2013). Both adults were observed roosting together on CW about 50' from nest. Eagles do not appear disturbed by close proximity of work (no vocalizations, no flight). Assuming chick(s) have hatched but cannot confirm from immediate observations. Eagles observed preening, stretching, and calmly looking around. A chirping sound is audible from the vicinity of the nest. The cry is a intermittent, single tone.			



Figure 1: (1) and (2) TD @ 1308.



Figure 2: Proximity of adults to nest (1340)

Time 1345	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T:56F	W: Calm	C/P: Cloudy/No Precip
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Left the nest area; (2) Moved to a roost on a dead CW, continued preening and watching. Chirping chick continues intermittently.			



Figure 3: (2) on Roost (1343)



Figure 4: Proximity (new roost to nest) (1358)

Time 1410	Behavioral activity observed (list all that apply) ³ : Unknown			
	Weather conditions ⁴ :	T: 56F	W: Calm	C/P: Cloudy/ No Rain
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (2) Flew off of its perch to an unknown location (cannot tell if nearby and hidden by leaves). (1) Has not yet returned.			

Time 1450	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 56F	W: SSE@5	C/P: Cloudy/ No Rain
	Description of ongoing construction events ⁵ : Continuing			
	Notes/Comments: An adult flew back toward the nest, then past, low over the wetland south of the project area and roosted in a tree appx. ¼ mile away. Intermittent chirps are audible from the nest. (See also archived video for audio).			

Time 1525	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 52F	E@3mph	C/P: Cloudy, No Rain
	Description of ongoing construction events ⁵ : Continuing			
	Notes/Comments: Intermittent chirping from the nest continues. Have not observed either adult return to the nest since last observation. Intermittent chirps continue for over an hour.			

Time 1725	Behavioral activity observed (list all that apply) ³ : YF (1), TD (2)			
	Weather conditions ⁴ :	T: 57F	W: ENE@6	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Scrapers departed work area (inside 330); 1 D-10 dozer remained active inside 330.			
	Notes/Comments: As shift change occurred, scrapers left the work area (inside 330), but 1 D-10 dozer remained working an area between 500 and 100 ft from nest. Adult (1) returned and perched on edge of nest. Visibility is not ideal, appeared to be feeding young. Chirping from nest continued. Adult remained at nest edge.			
1800	Adult (1) remains on nest edge. A bit active- tending to chick(s). Then resting on edge of nest. Silent work area 1746 - 1825. Second shift began 1800; continues until 0400; work plan to stay on north wye away from eagles.			



Figure 5: Adult (1) returns with food (1728)



Figure 6: Adult (1) resting (1748)

Time 1822	Behavioral activity observed (list all that apply) ³ : Hunting			
	Weather conditions ⁴ :	T: 56F	W: E@6	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : No Activity (between shifts)			
	Notes/Comments: (1) Left the nest, flying east. (2) location unknown. Ended monitoring 1830. No adults present at nest.			



Figure 7: (1) departing to the east (1820)

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0626 Name of Monitor: Charlene Johnson

Date: 7/9/2013 End Time: 1645

Tree species²: CW # Adult Present: # Young Present: at least 1

Time 0626	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 50F	W: Calm	C/P: Cloudy/ Rain ended
	Description of ongoing construction events ⁵ : Dozer D-10 @ 330-600'			
	Notes/Comments: Upon arrival no adults were observed in the vicinity of the nest. Chick(s) audible.			

Time 0655	Behavioral activity observed (list all that apply) ³ : FY, BRO			
	Weather conditions ⁴ :	T: 52F	W: Calm	C/P: Cloudy
	Description of ongoing construction events ⁵ : D-10 Dozer activity continued			
	Notes/Comments: Adult (1) came from north to nest with food. Fed chick(s) and then sat at edge of nest.			



Figure 1: (1) Returns to nest with food (0658)

Time 0722	Behavioral activity observed (list all that apply) ³ : BRO/TD			
	Weather conditions ⁴ :	T: 52F	W: Calm	C/P: Cloudy
	Description of ongoing construction events ⁵ : Full mobilization. 2 Dozers (D-10) and 2 scrapers mobilized within 660; one set operating inside 330. Haul patterns on outside of south wye.			
	Notes/Comments: (1) Remains on outside (nearest south wye) edge of nest.			



Figure 2: (1) Roosting (0725)

Time 0755	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 53F	W: Calm	C/P: Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Active and moving around the nest; Chick clearly audible in the nest over light to moderate construction activity.			



Figure 3: (1) Walking around nest edge; tending to chick(s) (0755)

Time 0833	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 53F	W: Calm	C/P: Cloudy/ Light rain
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Continues to rest, and periodically be active (standing, stretching, preening) and moving around the nest then settles back down; Chick clearly audible in the nest over light to moderate construction activity.			



Figure 4: (1) Tending to chicks (0833)

Time 1015	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 55F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Continues to sit in nest. Moving around slowly; walking along the edge of the nest, picking/repairing nest, then resettling at edge or inside nest. Chick still strongly and intermittently audible. (2) has not been seen yet today .			

Time 1020	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 55F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Scrapers pushed by dozer continue one at a time through grade on south wye. Construction noise low to moderate.			
	Notes/Comments: (1) left nest to perch on CW branch abt. 50' from nest. Expelled. Then sat roosted on branch; occasionally preening. Some occasional vocalizations between adults (1-2 notes variable tones per vocalization). Adult (2) is audible from across mainline (no visual). Vocalizations do not appear aggressive or distressed. Most vocalizations are from nest- single tone, intermittent.			



Figure 5: (1) Flew from nest to nearby branch (1020)



Figure 6: (1) and nest. (1025)

Time 1126	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 53F	W: Calm	C/P: Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: (1) Departs from perch (did not see which direction) just after 1126.			

Time 1250	Behavioral activity observed (list all that apply) ³ : BRO			
	Weather conditions ⁴ :	T: 56F	W: Calm	C/P: Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Upon return from SWPPP inspection. No adults on perch; 1 adult in nest. Unclear if its (1) or (2). Adult is settled in nest.			



Figure 7: Brooding (1257)

Time 1318	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 56F	W: ENE@5	C/P: Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Adult left nest, one wide sweep and then landed on tall CW snag about 100' from nest. Expelled waste, then roosted. Fluffed, stretched, preened, watched construction. Aggravation or distress was not apparent.			



Figure 8: Adult relocated to snag (1317)



Figure 9: Adult on snag (1318)

Time	Behavioral activity observed (list all that apply) ³ : Hunting			
	Weather conditions ⁴ :	T: 63F	W: SSE@6	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued scraper/dozer			
	Notes/Comments: Adult flew off to the south, beyond the river then across trees toward Parks Hwy. No adult in visible attendance of the nest.			
1530				
1543	Same adult flew back over, past nest and settled in a tree 2000+/- feet from nest (visible with 300mm lens), across wetland area. Chicks are still audible.			



Figure 10: Adult relocated south across wetland (1542)



Figure 11: Adult across wetland (1544)

Time 1615	Behavioral activity observed (list all that apply) ³ : Hunting/TD			
	Weather conditions ⁴ :	T: 64F	W: SW@6	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Adult across wetland left perch, did not see in which direction. A few minutes later, adult returned to snag in CW near nest. Eagle resumed preening and watching from snag, unalarmed, but aware of activity. Chicks are still audible from the nest.			

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4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
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Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 1300 Name of Monitor: Charlene Johnson

Date: July 10, 2013 **End Time:** 1800

Tree species²: CW # Adult Present: Unknown # Young Present: 1 or more chicks

Time 1300	Behavioral activity observed (list all that apply) ³ : Not Present			
	Weather conditions ⁴ :	T: 70F	W:W@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Scraper, Dozer, and Hauling within 330'			
	Notes/Comments: Arrived- no adults visibly present. Chick(s) audible- intermittent, strong.			

Time 1415	Behavioral activity observed (list all that apply) ³ : Not present			
	Weather conditions ⁴ :	T: 70F	W:W@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Saw one adult flying north along the tree line on opposite side of main line toward Little Susitna River. Chick(s) continue to be audible.			

Time 1645	Behavioral activity observed (list all that apply) ³ : Not Present in immediate proximity of nest			
	Weather conditions ⁴ :	T: 70F	W: W@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: Spotted two adult eagles flying south over the mainline. Chick(s) continue to be audible.			

Time 1730	Behavioral activity observed (list all that apply) ³ : Not Present			
	Weather conditions ⁴ :	T: 70F	W: W@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Shift change; scrapers cease and return to staging. 1 D-10 Dozer remains >660 ft.			
	Notes/Comments: Continue monitoring until 1800. Adults have not returned and have not been observed near the nest today. Will return prior to shift start up Thursday morning. Chick(s) still audible.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (°F); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0600 Date: July 11, 2013 End Time: 1630

Name of Monitor: **Charlene Johnson**

Tree species²: CW # Adult Present: 2 # Young Present: At least 1 chick

Time 0600	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 59F	W: Calm	C/P: Partly Cloudy; Light rain
	Description of ongoing construction events ⁵ : 1 D-10 Dozer working within 330.			
	Notes/Comments: Adult (1) is perched near construction on CW snag; Adult (2) is perched in live CW abt. 500 feet from nest (outside of the immediate grove). Chicks still audible in nest. Adults do not appear concerned about construction (they are preening, stretching) but are very watchful.			



Figure 1: (1) Sitting on CW snag (0608)



Figure 2: (2) Sitting in live CW (0610)

Time	Behavioral activity observed (list all that apply) ³ : TD			
	Weather conditions ⁴ :	T: 59F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : 1 D-6 dozer and 1 D-10 dozer working grade and alignment within 330'.			
	Notes/Comments:			
0630	(1) Flew off NNE toward Little Susitna River. No distress prior to take off.			
0635	(2) Flew from tree to same snag (1) just left.			
0636	(2) Flew off on same path (1) flew earlier, toward river.			



Figure 3: (1) From snag just before take off (0630)

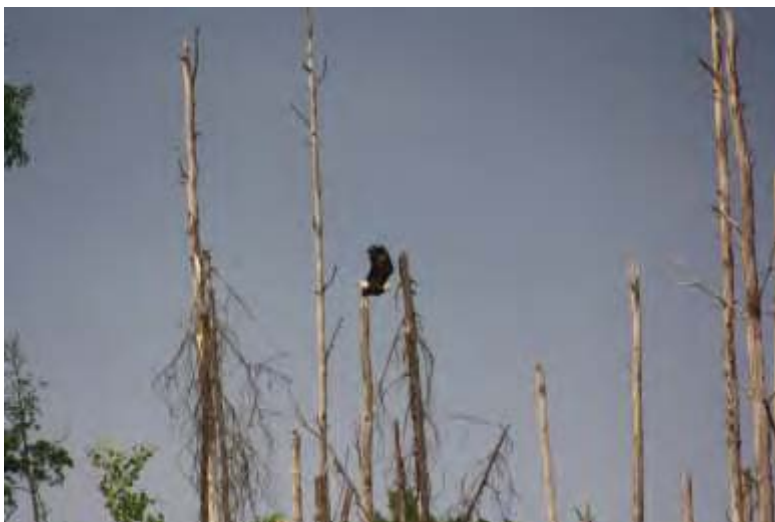


Figure 4: (1) from snag at take off toward river (0630)



Figure 5: (2) From live tree to snag after (1) left (0631)



Figure 6: (2) Just before take off in direction (1) had taken (0633)

Time 0730	Behavioral activity observed (list all that apply) ³ : Hunting			
	Weather conditions ⁴ :	T: 6-F	W: W@3	C/P: Partly cloudy
	Description of ongoing construction events ⁵ : 3 scrapers (in sequence), D-6 and D-10 dozer working within 330. No significant change from yesterday.			
	Notes/Comments: Adults have not returned to the nest. Vocalizations from nest (chick(s)) audible, occasionally complex, but in general single tone, single chirp, intermittent.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

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2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 0615 **Name of Monitor:** Charlene Johnson

Date: 07/12/2013 **End Time:** 1730

Tree species²: CW **# Adult Present:** Unknown

Young Present: At least one Chick

Time 0620	Behavioral activity observed (list all that apply) ³ : Not Present			
	Weather conditions ⁴ :	T: 50F	W: NE@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : One D-10 dozer within 330. The rest of the equipment has not yet mobilized.			
	Notes/Comments: Adults not present at the time monitoring began. Chick(s) audible in nest.			

Time 1046	Behavioral activity observed (list all that apply) ³ : Not Present			
	Weather conditions ⁴ :	T: 61F	W: NE@3	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Scrapers, dozers working within 330' of nest, but at an elevation below the ground level under the nest. Noise level is low-moderate from above.			
	Notes/Comments: Adults have not been visibly present in the near vicinity of the nest. Chick(s) are audible at intermittent intervals.			

(Monitoring ended 1100; resumed 1330)

Time 1330	Behavioral activity observed (list all that apply) ³ : Not Present			
	Weather conditions ⁴ :	T: 73F	W: S@7	C/P: Near clear (10%)
	Description of ongoing construction events ⁵ : Continued scraping/dozing below the ground elevation under the nest; additionally- Dozer moving material around ENE corner of the material storage area (>330; <660).			
	Notes/Comments: Monitoring resumed 1330. Adults not present at site. Chicks still audible from nest.			

Time 1630	Behavioral activity observed (list all that apply) ³ : Not Present at nest; found feeding at River.			
	Weather conditions ⁴ :	T: 74F	W: S@7	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Dozer/Scrapers continuing below the ground elevation under the nest. Dozer on top of MSA has discontinued moving material.			
	Notes/Comments: Took a drive around the construction site and found 2 adults (presumed to be our Eagle (1) and (2) eating salmon together by the Little Susitna River. No other young or mature eagles except these were present, supporting the assumption that these are the Project site eagles.			

	1725: Minimal construction in vicinity. Ended monitoring. Will return tomorrow for a sample period during work within the construction area. Due to erratic schedule of adult presence and feeding at the nest, HDR will conduct monitoring on Sunday when no construction activities will occur to evaluate if the schedule for tending to the nest appears influenced by the construction, since the chick(s) have hatched. Chicks still audible from the nest.
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Figure 1: Adults (1) and (2) feeding at Little Susitna River (1625)

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 **Start Time:** 1100 Name of Monitor: Charlene Johnson

Date: July 13, 2013 **End Time:** 1530

Tree species²: CW # Adult Present: None # Young Present: Unknown

Time	Behavioral activity observed (list all that apply) ³ : Not present at the nest.			
1110	Weather conditions ⁴ :	T: 64F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Scraper, dozers working on south wye within 330'. But below the ground elevation of the nest.			
	Notes/Comments: Adult eagles were observed flying around the main line area near the river at 10:00 am, but have not been seen near the nest today. Chick(s) are not audible.			

Time	Behavioral activity observed (list all that apply) ³ : Not present at the nest			
1530	Weather conditions ⁴ :	T: 67F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Continued			
	Notes/Comments: No adults have been observed anywhere on the project area since this morning. I drove down to the river and did a drive through the project site. Have not heard any sounds from the nest. I did walk down into the cottonwood grove and under the nest to see if I could illicit any sounds or movements, but none were heard.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 0830 Name of Monitor: Charlene Johnson

Date: July 14, 2013 End Time: 1030

Tree species²: CW # Adult Present: None # Young Present: Unknown

Monitoring was conducted today under ambient conditions to follow up to the apparent absence of activity at the nest.

Time 0840	Behavioral activity observed (list all that apply) ³ : Not present at the nest.			
	Weather conditions ⁴ :	T: 60F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : No work is conducted on Sunday, so the job site is completely quiet, except for ambient noise (highway traffic, train, and airplane/helicopter traffic).			
	Notes/Comments: Adult eagles are not visibly present at the site or visible in the vicinity of the project area. Chick(s) are not audible.			

Time 0945	Behavioral activity observed (list all that apply) ³ : Not present at the nest			
	Weather conditions ⁴ :	T: 60F	W: Calm	C/P: Partly Cloudy
	Description of ongoing construction events ⁵ : Only ambient			
	Notes/Comments: No adults have been observed by the monitor anywhere on the project area since Friday evening. As was done yesterday, I drove down to the river and did a drive through the project site. The adult eagles were not seen. I also did not hear any sounds from the nest throughout the duration of the monitoring event.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.

Bald Eagle Nest Monitoring Data Sheet

Nest #: 1 Start Time: 1030 Name of Monitor: Charlene Johnson

Date: July 15, 2013 End Time: 1330

Tree species²: CW # Adult Present: None # Young Present: Unknown

Monitoring was conducted today to confirm inactivity at the nest and check in with construction folks to see if they had any additional information to support presence or absence of nest or eagle activity.

Time	Behavioral activity observed (list all that apply) ³ : Not present at the nest.			
1040	Weather conditions ⁴ :	T: 57F	W: Calm	C/P: Mostly Cloudy
	Description of ongoing construction events ⁵ : Dozing material stockpile on south side of the nest and scraping/dozing on north side of the nest (below the ground elevation); both within 330'.			
	Notes/Comments: Adult eagles are not present at the site or visible in the vicinity of the project area. Chick(s) are still not audible. Checked with Superintendent and both day and night inspectors. No reports of eagles seen since Saturday morning.			

Time	Behavioral activity observed (list all that apply) ³ : Not present at the nest			
1300	Weather conditions ⁴ :	T: 67F	W: Calm	C/P: Mostly Cloudy
	Description of ongoing construction events ⁵ : No Change			
	Notes/Comments: Drove back down, through the project site and to the river. Eagles were not observed anywhere on the project site nor were chick(s) heard in the nest.			

Instruction for completing the Bald Eagle Nest Monitoring Data Sheet

1. Insert the nest identification number, date for which the monitoring is occurring, Start time is the time at which monitoring is initiated, and end time is when the daily monitoring is completed.
2. Tree type is either S = spruce, C = cottonwood, B = Birch.
3. Record all behavior events observed during the monitoring period. The following abbreviations should be used.

CT = courtship; MAT = breeding/mating; NR = nest repair; INC = incubating; BRO = brooding; AF = adult feeding; YF = young being fed; TD = territory defense; STD/DV going from incubation to standing associated with distress calls; FL/DV = flushing with distress calls; DC = distress calls not associated with standing or flushing; PF = premature fledging. A monitoring event that observed nest repair, courtship and adult feeding may be recorded as NR-CT-AF. Any other behavior can be listed or described. Any abnormal behavior should be noted and described in the notes section if more space is required.

4. Enter the current weather conditions for each observation period in the appropriate place. On the data report, T = Temperature (EF); W = Wind speed & direction; C = Cloud Cover (%); P = Precipitation.
5. Record all ongoing construction/project activities that occur during the monitoring period.



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
ANCHORAGE FIELD OFFICE CEPOA-RD-SA
1600 A STREET SUITE 110
ANCHORAGE, ALASKA 99501-5146

July 18, 2013

Regulatory Division
POA-2007-1586-M2

Alaska Railroad Corporation
Mr. Brian Lindamood
Post Office Box 107500
Anchorage, Alaska 99510-7500

Dear Mr. Lindamood

Enclosed is the signed Department of the Army (DA) permit modification, file number POA-2007-1586-M2, Knik Arm. This is the second permit modification of the original permit. Also enclosed is a Notice of Authorization that should be posted in a prominent location near the authorized work.

Your request to construct a pile supported 95-foot long temporary work bridge (Segment 1) over an unnamed stream to support the construction of the authorized permanent bridge would not require the discharge of fill material outside the originally authorized fill footprint. Therefore, this segment would not require additional authorization from the Corps.

If changes to the plans or location of the work are necessary for any reason, plans must be submitted to us immediately. Federal law requires approval of any changes before construction begins. Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Also enclosed is a Notification of Administrative Appeals Options and Process and Request for Appeal form regarding this DA Permit Modification (see section labeled "Initial Proffered Permit").

Please contact me via email at Steve.D.Lindamood@usace.army.mil, by mail at the address above, by phone at (907) 753-2796, or toll free from within Alaska at (800) 478-2712, if you have questions.

Sincerely,

Steve Lindamood
Project Manager

Enclosures



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
ANCHORAGE FIELD OFFICE CEPOA-RD-SA
1600 A STREET SUITE 110
ANCHORAGE, ALASKA 99501-5146

July 18, 2013

Regulatory Division
POA-2007-1586-M2

DEPARTMENT OF THE ARMY
PERMIT MODIFICATION

Department of the Army permit number POA-2007-1586, Knik Arm, was issued to the Alaska Railroad Corporation (ARRC) on September 10, 2012, authorizing the discharge of 1,619,587 cubic yards (cy) of fill materials into 95.8 acres of waters of the U.S., including wetlands, as part of the construction of a 35.8-mile rail line, Port MacKenzie Rail Extension Project.

The first permit modification, POA-2007-1586-M1, Knik Arm, was issued on January 28, 2013, which authorized an amendment to Special Condition No. 13 to allow the ARRC to purchase 16.92 palustrine credits from the Great Land Trust instead of Pioneer Reserve, LLC.

This is the 2nd modification of the original permit. The permit is hereby modified as follows:

"The ARRC is authorized to temporarily discharge up to 250 cy of Type A material and 300 cy of Class I rip-rap into approximately 0.11-acre of wetlands to construct a 40-foot long temporary work bridge over the Diamond Lake Outlet (Segment 3) to support the construction of the originally authorized project. The temporary fill shall be completely removed within 12-months from the issuance of this modification (see Special Condition No. 1). No fill materials shall be placed below the ordinary high water mark (OHWM) of the stream for the construction of the temporary bridge".

The work will be performed in accordance with the enclosed plans, sheets 1-4, dated June 13, 2013, which are incorporated in and made a part of this Permit Modification.

The overall project site starts at Latitude 61.2791° N., Longitude 149.9419° W. and ends at Latitude 61.6258° N., Longitude 149.8232° W.; from Port MacKenzie to the Alaska Railroad Corporations (ARRC) existing main line just south of Houston, Alaska. Segment 3 is located at Latitude 61.4638° N., Longitude 149.9419° W.

In accordance with your request, General Condition No. 1 of the permit is hereby amended to read as follows:

The time limit for completing the work authorized ends on **September 30, 2017**. If you find that you need more time to complete the authorized activity, please submit your request for a time extension to the Corps of Engineers for consideration at least one month before permit expiration.

The following conditions apply to this permit modification:

1. All temporary fills shall remain in place no more than 12 months from the date of this modification and shall be removed in their entirety. Filter fabric shall be placed prior to filling for separation from native substrates and to assure fill material removal at end of temporary use. All disturbed wetlands shall be restored. Any planting shall occur no later than June 15 of the following growing season; additional planting shall occur if vegetation does not establish to at least 50% cover by July 15 and 75% cover by August 15 of the second growing season. Where practicable, vegetation from the existing wetlands shall be removed during excavation, to the extent suitable, saved and used for revegetation. Local, native species shall be given priority in revegetation where existing vegetation cannot be re-utilized.
2. The applicant shall submit "as-built" drawings within 90-days upon the completion of project showing the final footprint of the PMRE project to include a summation and the categorization of all impacts to waters of the U.S., including wetlands.

All other conditions under which the subject authorization was made remain in full force and effect.

This authorization and the enclosed modified plans should be attached to the original permit. Also enclosed is a Notice of Authorization that should be posted in a prominent location near the authorized work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

A handwritten signature in blue ink, appearing to read 'SL', followed by a large, loopy circular flourish.

Steve Lindamood
Project Manager



**This notice of authorization must be
conspicuously displayed at the site of work.**

United States Army Corps of Engineers
KNIK ARM

A permit to: TO TEMPORARILY DISCHARGE UP TO 250 CY OF TYPE A
MATERIAL AND 300 CY OF CLASS I RIP-RAP INTO APPROXIMATELY
0.11-ACRE OF WETLANDS TO CONSTRUCT A 40-FOOT LONG TEMPORARY
WORK BRIDGE

at: THE DIAMOND LAKE OUTLET; LATITUDE 61.2791° N., LONGITUDE
149.9419° W

has been issued to: ALASKA RAILROAD CORPORATION

on: July 18, 2013 and expires on: JULY 31, 2014

Address of Permittee: PO Box 107500, Anchorage, Alaska 99510-7500

Permit Number:

POA-2007-1586-M2


FOR: *District Commander*
Steve Lindamood
Project Manager
REGULATORY DIVISION

Modification No. 2
Project Location

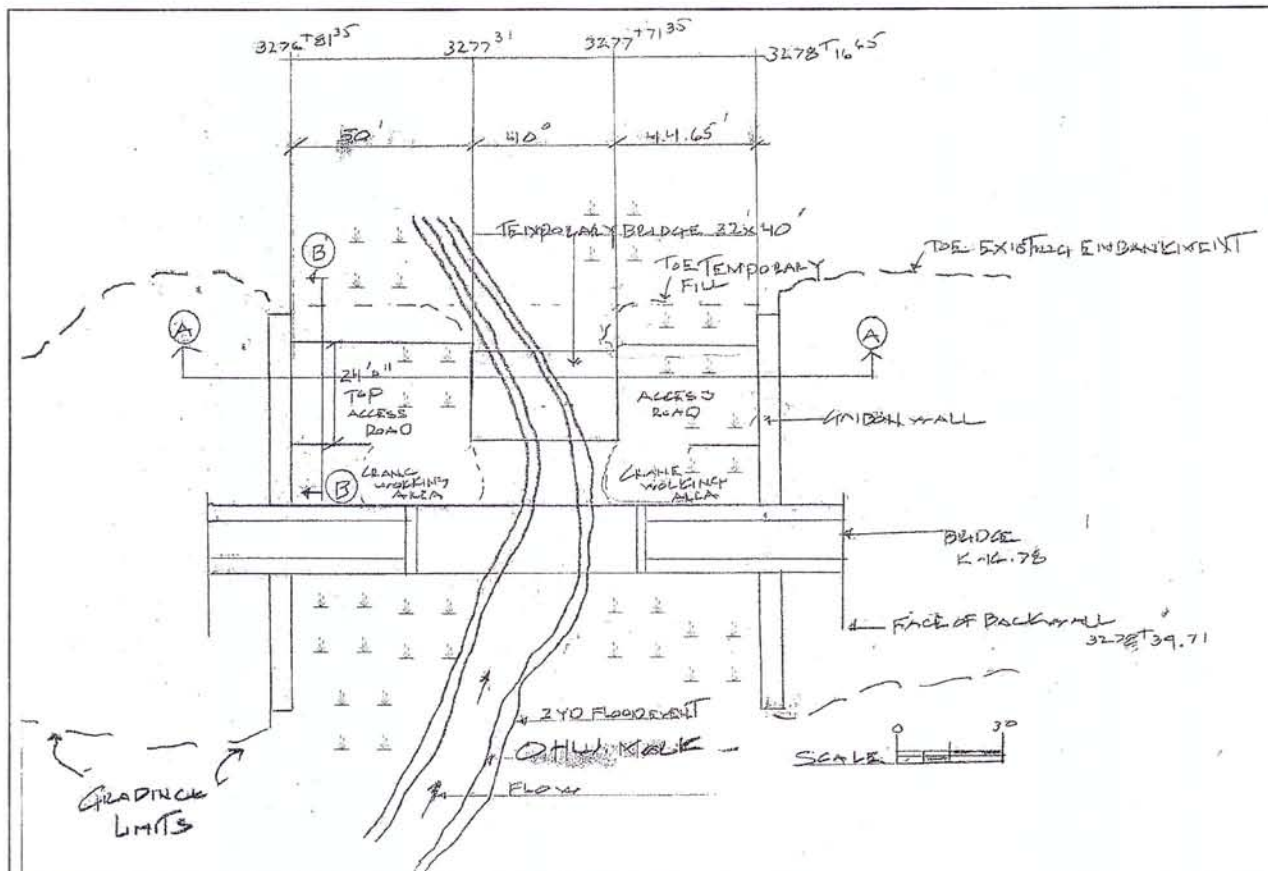
ARRC Segment 3

Anchorage

1

POA-2007-1586-M2
Alaska Railroad Corporation
Port MacKenzie Rail Extension
Diamond Lake Outlet
Date: 06/13/2013
Sheet 1 of 4

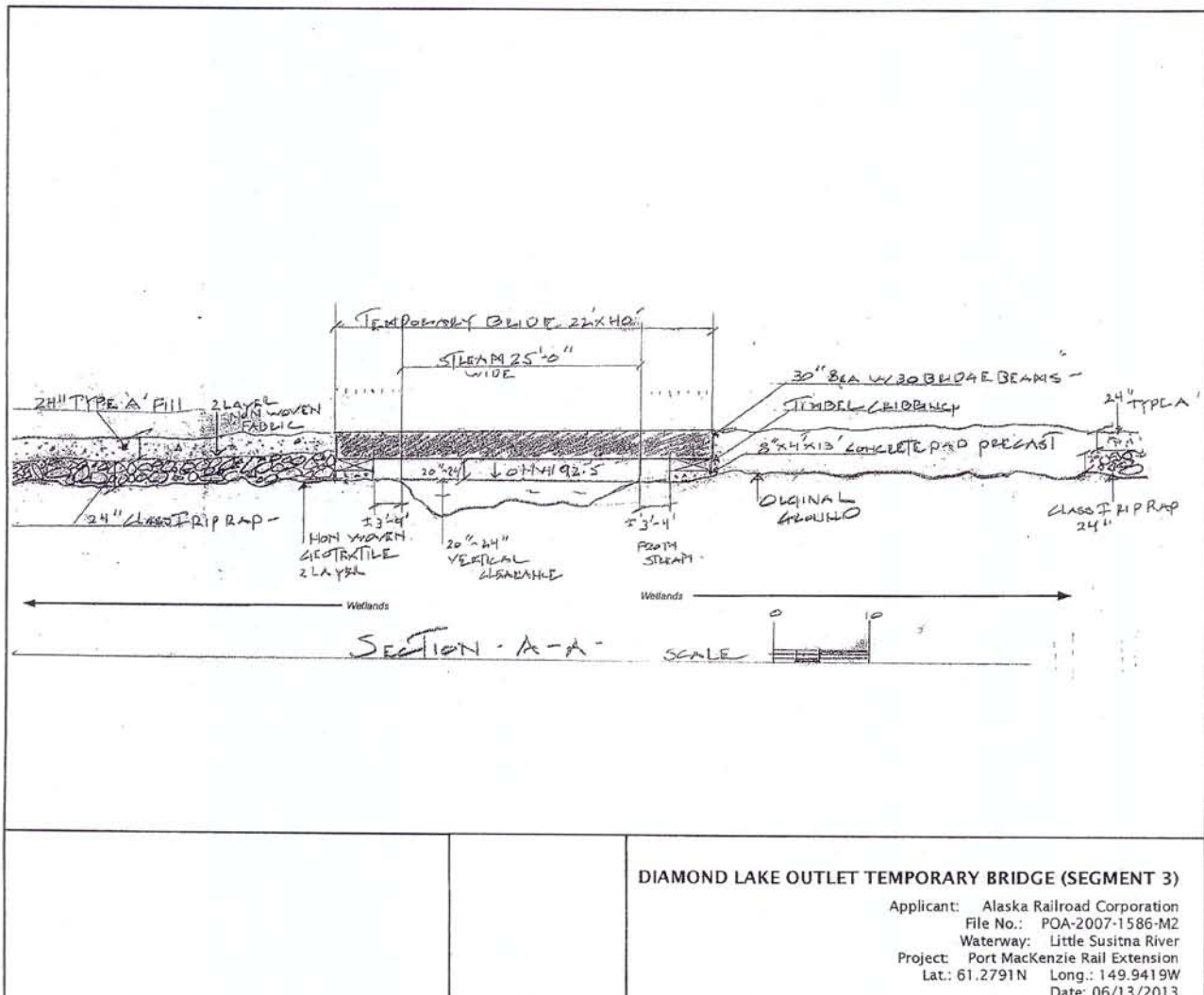
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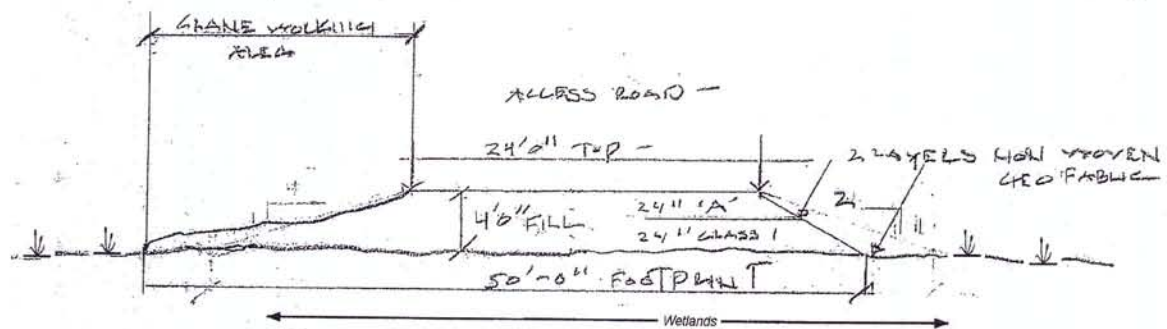


Wetlands

DIAMOND LAKE OUTLET TEMPORARY BRIDGE (SEGMENT 3)

Applicant: Alaska Railroad Corporation
 File No.: POA-2007-1586-M2
 Waterway: Little Susitna River
 Project: Port MacKenzie Rail Extension
 Lat.: 61.2791N Long.: 149.9419W
 Date: 06/13/2013





FILL TYPE A' 95' X AVE 25' X 2' = 250 CY
 CLASS I RIP RAP 95' X AVE 4' X 2' = 300 CY

SECTION B-B SCALE 0 10

Wetlands		DIAMOND LAKE OUTLET TEMPORARY BRIDGE (SEGMENT 3) Applicant: Alaska Railroad Corporation File No.: POA-2007-1586-M2 Waterway: Little Susitna River Project: Port MacKenzie Rail Extension Lat.: 61.2791N Long.: 149.9419W Date: 06/13/2013
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