4. WATER RESOURCES

This chapter describes potential direct and indirect impacts to water resources that would result from proposed Port MacKenzie Rail Extension construction and operations. Section 4.1 describes regulations governing water resources, and Sections 4.2, 4.3, 4.4, and 4.5 describe the study area, affected environment (existing conditions), and environmental consequences (impacts) to surface water, groundwater, floodplains, and wetlands, respectively.

4.1 Regulatory Setting

Table 4.1-1 summarizes relevant Federal, state, and local agency water resources laws, regulations, and Executive Orders.

Table 4.1-1
Water Resources Laws, Regulations, and Executive Orders (page 1 of 4)

Agency	Authority	Description
Federal		
U.S. Environmental Protection Agency (USEPA)	Safe Drinking Water Act [42 United States Code (U.S.C.) 300 *et seq.*] – Sole Source Aquifer Protection Program (Section 1424(e))	The Safe Drinking Water Act protects drinking water and its sources (rivers, lakes, reservoirs, springs, and groundwater). Federally funded or partially federally funded projects with the potential to contaminate designated sole-source aquifers require USEPA review. Sole-source aquifers are defined as supplying at least 50 percent of the drinking water consumed for the area overlying the aquifer.
	Section 402, Clean Water Act (22 U.S.C. 1251 *et seq.*) – National Pollutant Discharge Elimination System (NPDES): Point Source and Storm water Discharges	The NPDES program controls discharges into waters of the U.S. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either the USEPA or an authorized state/tribe, contain industry-specific, technology-based, and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. A facility that intends to discharge into the Nation's waters must obtain a permit before initiating a discharge. In 1987, the Clean Water Act was amended to require the USEPA to establish a program to address storm water discharges. In response, the USEPA promulgated the NPDES storm water permit application regulations. Storm water discharge associated with industrial activity means the discharge from any conveyance used for collecting and conveying storm water and is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. These regulations require that facilities with the following storm water discharges apply for an NPDES permit: (1) a discharge associated with industrial activity, (2) a discharge from a large or medium municipal storm sewer system, or (3) a discharge that the USEPA or state/tribe determines to contribute to a violation of a water quality standard or that is a significant contributor of pollutants to waters of the United States. The USEPA is in the process of delegating administration of the NPDES program in Alaska to the Alaska Department of Environmental Conservation. Upon delegation, the USEPA will provide program oversight. See state regulations, Alaska Pollutant Discharge Elimination System, for more information. On October 31, 2008, the USEPA formally approved the Alaska Pollutant Discharge Elimination System Program. Authority over Federal permitting and compliance and enforcement programs will transfer to the Alaska Department of Environmental Conservation

Table 4.1-1
Water Resources Laws, Regulations, and Executive Orders (page 2 of 4)

Agency	Authority	Description
Federal (continued)		
U.S. Environmental Protection Agency (USEPA) (continued)	Water Act (22 U.S.C. 1251 *et seq.*) – National Pollutant Discharge Elimination System (NPDES): Point Source and Storm water Discharges (continued)	(ADEC) over 3 years beginning at program approval. Until authority over a facility transfers to ADEC, the USEPA will remain the permitting, compliance, and enforcement authority for that facility. The USEPA will still regulate storm water discharges from construction activities within Alaska until October 31, 2009. Until which time as the state takes over the storm water program, the construction contractor would apply for coverage under the NPDES Construction General Permit by creating a Storm Water Pollution Prevention Plan and issuing a Notice of Intent to the USEPA prior to commencement of ground-disturbing activities. Once ADEC takes over the program in late 2009, the existing NPDES coverage will serve as an Alaska Pollutant Discharge Elimination System authorization until ADEC reissues their version of general permits. ADEC will then transmit a cover letter to all permit holders to inform them that ADEC has assumed responsibility for permitting, compliance, and enforcement authority over the construction activity.
	Section 404, Clean Water Act: (33 U.S.C. 1251 *et seq.*) – Discharge of Fill Material to Waters of the U.S.	In 1972, Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the U.S. The Rivers and Harbors Act of 1899 defined navigable waters of the U.S. as "those waters that are subject to the ebb and flow of the tides and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce." The Clean Water Act built on this definition and defined waters of the United States to include tributaries to navigable waters, interstate wetlands, wetlands that could affect interstate or foreign commerce, and wetlands adjacent to other waters of the U.S. The USEPA and the U.S. Army Corps of Engineers jointly administer the program. The USEPA provides program oversight. The fundamental rationale of the program is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to the Nation's waters. To comply with Section 404, it is necessary to avoid impacts to wetlands wherever practicable, minimize impacts where impacts are unavoidable, and compensate for impacts in some cases. The USEPA reviews and comments on Section 404 permit applications received by the U.S. Army Corps of Engineers for compliance with Section 404(b)(1) guidelines and other statutes and authorities within its jurisdiction (40 Code of Federal Regulations [CFR] 230).
Federal Emergency Management Agency (FEMA)	National Flood Insurance Act of 1968	The U.S. Congress established the National Flood Insurance Program with passage of the National Flood Insurance Act of 1968. The Flood Insurance Program is a pre-disaster flood mitigation and insurance program designed to reduce the exorbitant costs of disasters. It is a voluntary program that provides a *quid pro quo* approach to floodplain management and makes federally backed flood insurance available to residents and business owners in communities that agree to adopt and adhere to sound flood mitigation measures that guide development in their floodplains. FEMA is responsible for administering the National Flood Insurance Program and programs that provide assistance for mitigating future damages from natural hazards. In addition, FEMA is required by statute to identify and map the Nation's flood-prone areas and to establish flood-risk zones in such areas.

Table 4.1-1
Water Resources Laws, Regulations, and Executive Orders (page 3 of 4)

Agency	Regulation	Description
Federal (continued)		
U.S. Army Corps of Engineers	Section 404, Clean Water Act (33 U.S.C. 1251 *et seq.*) – Discharge of Fill Material to Waters of the U.S.	The Corps of Engineers is responsible for the day-to-day administration and permit review. Permit review and issuance follows a sequenced process that encourages avoidance of impacts, followed by minimizing impacts, and finally, requiring mitigation for unavoidable impacts to the aquatic environment.
	Section 10 of the Rivers and Harbors Act (33 U.S.C. 403) – Navigable Waters of U.S. Dredge and Fill Permit	Section 10 requires authorization from the Corps of Engineers for the construction of any structure in or over any navigable water of the U.S., the excavation/dredging or deposition of material in this water, or any obstruction or alteration in navigable water. Structure or work outside the limits defined for navigable waters of the U.S. requires a permit if the structure or work affects the course, location, condition, or capacity of the water body.
	Executive Order 11990, *Protection of Wetlands*	The purpose of this Executive Order is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, Federal agencies, in planning their actions, are required to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The order applies to acquisition, management, and disposition of Federal lands and facilities construction and improvement projects undertaken, financed, or assisted by Federal agencies; and Federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities. Wetlands not located on Federal property are still considered under the Executive Order when they are hydrologically connected to a water of the U.S. The Corps of Engineers administers this Executive Order.
	Executive Order 11988, *Floodplain Management*	This Executive Order requires Federal agencies to avoid, to the extent possible, long- and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions: acquiring, managing, and disposing of Federal lands and facilities; providing federally undertaken, financed, or assisted construction and improvements; and conducting Federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.
U.S. Coast Guard	Section 9 of the Rivers and Harbors Act (22 U.S.C. 403) – Bridge Permit	Section 9 requires authorization from the U.S. Army Corps of Engineers to construct any dam or dike in a navigable water of the U.S. Construction of bridges and causeways requires permits under Section 9 from the Coast Guard. Corps of Engineers authorization is required for the discharge of dredged or fill material into waters of the U.S. associated with dams, dikes, bridges, and causeways under Section 404 of the Clean Water Act.

Table 4.1-1
Water Resources Laws, Regulations, and Executive Orders (page 4 of 4)

Agency	Regulation	Description
State		
Alaska Department of Natural Resources (ADNR)	Alaska Coastal Management Act (Alaska Statute 46.40)	The Alaska Coastal Management Program improves stewardship of Alaska's coastal land and water uses, and natural resources and involves local, state, Federal, and applicants in the project approval process. The Program requires that projects in Alaska's coastal zone be reviewed by coastal resource management professionals and found consistent with the statewide standards of the Program.
	Temporary Water Use Permit (Alaska Statute 46.15)	This permit may be issued if the amount of water to be used would be significant, the use would continue for less than 5 consecutive years, and the water to be used is not appropriated.
Alaska Department of Environmental Conservation (ADEC)	Section 401 of the Clean Water Act – Section 401 Certification	Pursuant to Section 401 of the Clean Water Act, the State of Alaska certifies that projects comply with state water quality standards. This is commonly known as the 401 Certification. This review typically results in conditions placed on either or both the Section 404 permit and Coastal Consistency Determination. The U.S. Army Corps of Engineers initiates 401 Certification as part of the 404 permitting process. ADEC issues the certification.
	Antidegradation Policy (18 AAC 70.015(a)(3))	This policy requires that if a high quality water constitutes an outstanding national resource, such as a water of a national or state park or wildlife refuge or a water of exceptional recreational or ecological significance, the quality of that water must be maintained and protected.
	Drinking Water Program (18 Alaska Administrative Code 80)	This program requires public water systems to comply with state drinking water regulations, in accordance with the Federal Safe Drinking Water Act and Amendments, for the public health protection of the residents and visitors to the State of Alaska.
	Alaska Pollution Discharge Elimination System: Point Source and Storm water Discharges	As of October 31, 2008, ADEC is implementing a phased delegation of the USEPA NPDES program. The USEPA is transferring program components to ADEC by EPA in four phases. Storm water, the component applicable to the proposed Port MacKenzie Rail Extension, will be delegated to ADEC in Phase 2 on October 31, 2009. See discussion of the NPDES program under Federal regulations.
Local		
Matanuska-Susitna Borough (MSB)	Flood Plain Development Permit, including both the MSB Flood Hazard Development Permit and the Elevation Certificate (MSB 17.29)	Flood Plain Development Permits apply to development within a federally designated flood hazard area. A Flood Plain Development Permit (issued by MSB) would include both the MSB Flood Hazard Development Permit and the Elevation Certificate. An Alaska registered architect or engineer must certify the Development Permit Applications and either a registered engineer or surveyor must complete the elevation certificate.