1.0 INTRODUCTION

Enbridge Energy, Limited Partnership (Enbridge) submitted an Application for a Presidential Permit to the U.S. Department of State (DOS) for the U.S./Canada border crossing of its proposed Alberta Clipper Project. The application is for construction, operation, and maintenance of the Project, which would consist of a pipeline and associated facilities that would import heavy crude oil1 from Canada.

DOS receives and considers applications for Presidential Permits for such pipelines pursuant to the authority delegated to it by the President of the United States under Executive Order (EO) 13337. DOS has determined that issuance of a Presidential Permit would constitute a major federal action that may have a significant impact upon the environment within the context of the National Environmental Policy Act of 1969 (NEPA). As the lead federal agency for the NEPA environmental review of the proposed Project, DOS prepared this Environmental Impact Statement (EIS) in compliance with the requirements of NEPA and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508) and DOS’ own implementing guidelines (22 CFR 161). This EIS was prepared to meet the following key objectives:

- Identify and assess potential impacts on the natural and human environment that would result from implementation of Enbridge’s proposed Alberta Clipper Project in the United States;
- Describe and evaluate reasonable alternatives to the Alberta Clipper Project in the United States that would avoid or minimize adverse effects to the environment, including the No Action Alternative;
- Identify the DOS-preferred alternative(s); and
- Identify and recommend specific mitigation measures, as appropriate, to minimize environmental impacts.

1.1 PROJECT OVERVIEW

Enbridge is planning to increase its ability to provide additional supplies of heavy crude oil to markets in the United States and Canada, in response to customer requests and marketplace demands. To meet this goal, Enbridge initiated an expansion program to increase petroleum transportation services from the western Canadian sedimentary basin to refineries in Ontario and the American Midwest.

The proposed Alberta Clipper Project would extend from Hardisty, Alberta, Canada, to Superior, Wisconsin and would have the capacity to deliver an average of 450,000 barrels per day (bpd) of crude oil from a supply hub near Hardisty to an existing terminal in Superior. The total length of new pipeline in Canada and the United States would be approximately 1,000 miles. The Canadian portion of the Project would involve construction of approximately 673 miles of new pipeline and associated facilities from Hardisty to the U.S./Canada border near Neche, North Dakota.

In the United States, the Alberta Clipper Project would consist of approximately 326.9 miles of new 36-inch-diameter pipeline and associated facilities that would be installed primarily within or adjacent to the existing Enbridge pipeline corridor from the U.S./Canada border to the existing Enbridge terminal in Superior. The Project also would require new construction at existing pump stations and construction of delivery facilities and mainline valves. For the purposes of this EIS, the 326.9-mile portion of the

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1 When referring specifically to the oil that would be transported by the proposed Project in this EIS, the terms “crude” and “crude oil” are used interchangeably with the term “heavy crude oil.”
pipeline and associated facilities in the United States is considered the Alberta Clipper Project, Alberta Clipper pipeline, or the proposed Project. Enbridge proposes to begin construction activities for the Project in summer 2009, with a planned in-service date of early 2010, subject to receipt of all necessary permits, approvals, and authorizations pursuant to DOS regulations (40 CFR 1500-1508 and 22 CFR 161). This EIS focuses on the Alberta Clipper Project between the U.S./Canada border and the Superior Terminal. The general location of the U.S. portion of the Alberta Clipper Project is depicted in Figure 1.1-1. The Canadian portion of the pipeline system has been approved by the Canadian National Energy Board (CNEB) and other reviewing entities in Canada and is under construction.

Subsequent to the issuance of the draft EIS (DEIS) in December 2008, Enbridge and the Fond du Lac Band of Lake Superior Chippewa (FDL) negotiated an agreement for the proposed Project to cross the FDL Reservation along the existing Enbridge pipeline corridor. The route traversing the FDL Reservation was identified as the environmentally preferred alternative in the DEIS. As a result of this agreement, the currently proposed Project described throughout this EIS incorporated the route traversing the FDL Reservation as the preferred alternative.

In a separate but connected action to the proposed Alberta Clipper Project, Enbridge is proposing to construct, operate, and maintain the Superior Terminal Expansion Project. This project would consist of five new 250,000-barrel storage tanks and associated piping and facilities at the existing Enbridge terminal in Superior, Wisconsin. The Superior Terminal Expansion Project is not part of the Presidential Permit Application submitted by Enbridge to DOS because the terminal would be permitted separately from the Alberta Clipper Project by the U.S. Army Corps of Engineers (COE) and the State of Wisconsin. DOS has no authority to permit the terminal facilities. However, the potential impacts of construction and operation of that facility are discussed in this EIS. Information on the design, construction, and operation of the connected action is presented in Section 2.9.

1.2 PROJECT PURPOSE AND NEED

1.2.1 Purpose and Need

The overall purpose of the Alberta Clipper Project is to transport additional crude oil into the United States and eastern Canada from existing Enbridge facilities in western Canada to meet the demands of refineries and markets in those areas. Enbridge has proposed the Project to (1) meet the increased demand for heavy crude oil by refiners in the United States and offset the decreasing domestic crude oil supply from some regions of the United States that have traditionally served refineries in U.S. Petroleum Administration for Defense District II (PADD II – the U.S. Midwest); (2) reduce U.S. dependence on oil obtained from outside of North America by increasing access to more stable and secure Canadian crude oil supplies; and (3) meet demonstrated shipper interest in an overall Enbridge system expansion.

To meet the anticipated demand, the proposed Alberta Clipper Project would provide approximately 450,000 bpd of heavy crude oil capacity. The capacity provided by the Project would provide independent utility to Enbridge and its customers for the transport of crude oil to the existing Enbridge terminal in Superior, Wisconsin. From there, crude oil can be delivered to refineries throughout PADD II and eastern Canada, as well as to other regions in the United States through interconnected existing pipeline systems. Enbridge would not own the oil and would not determine its destination.
FIGURE 1.1-1
GENERAL
PROJECT LOCATION

Legend
- Alberta Clipper Pipeline
- Superior Terminal Expansion Project
- Chippewa National Forest
- Fond du Lac State Forest
- Fond du Lac Indian Reservation
- Leech Lake Indian Reservation
1.2.2 Crude Oil Supply and Demand

1.2.2.1 U.S. Crude Oil Market Demand

On December 17, 2008, the U.S. Energy Information Administration (EIA) released the reference case for its Annual Energy Outlook 2009 (AEO2009) report (EIA 2009). The AEO2009 report provides EIA’s considerations regarding a wide range of trends and issues that can influence energy markets, including economic trends, the future price for oil, renewable energy usage, and market behavior concerning greenhouse gas emissions. EIA’s forecast reflects the currently tighter constraints on access to low-cost oil supplies and the higher capital costs for energy-related projects; these conditions result in a forecast for the price of light crude oil to exceed $100 per barrel by 2014, and $130 per barrel by 2030 (EIA 2009; all expressed in 2007 dollars). The forecast in AEO2009 also incorporates a rapid growth in renewable sources of liquid fuels, a sharp increase in the sale of higher-efficiency vehicle technologies such as hybrid and diesel, and a significant decrease in sales of sport utility vehicles.

The AEO2009 also assessed how investment in energy projects or conservation of energy is affected by concerns over greenhouse gas (GHG) emissions and noted that energy companies currently are operating in an uncertain environment with respect to the potential impact of energy-related GHG emissions. Even without the enactment of federal laws and policies limiting GHG emissions, regulators and the investment community are beginning to push energy companies to shift their investments toward the use of technologies that emit less GHG. In addition, AEO2009 includes an assessment of the extent to which energy asset companies are considering GHG emissions in their investment evaluation process by adding a cost to some plants, particularly those that involve GHG-intensive technologies.

To reflect the extent to which those companies are considering or implementing technologies that reduce the emissions of GHG in the design of new assets, the AEO2009 reference case adds a 3-percent increase in the cost of capital when evaluating investments in GHG-intensive technologies. In previous annual reports, EIA’s reference cases did not incorporate such an adjustment.

Despite the adjustments made to the forecast presented in AEO2009 and efforts to increase use of renewable energy resources, EIA (2009) projected that the domestic demand for liquid fuels would grow slightly and oil consumption would remain constant over the forecast period.

Further, the EIA projects that the balance between domestic supply and demand will require the “unconventional” oil supply from Canada, which is predominately heavy crude from reserves in western Canada, to grow from approximately 1.5 million bpd in 2008 to over 4.3 million bpd by 2030. This increase in heavy crude imports is consistent with the observation that many U.S. refineries have been, or are in the process of being, retrofitted to accommodate heavy crude in order to remain cost-competitive with overseas suppliers of refined petroleum products.

In summary, U.S. refiners have upgraded their refineries to process heavy crude oil, much of which is obtained from relatively unstable and insecure foreign sources (see Section 1.2.2.2). The crude oil that the Alberta Clipper Project would assist in delivering to U.S. refiners would replace or supplement a portion of that existing supply of heavy crude oil. Additional information on refinery needs and operations related to the proposed Project is presented in Section 4.14.3.12.

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2 On page 40 of the AEO2009 Early Release Summary Reference Case Tables, the EIA reports the combination of the unconventional production from Canada and Mexico as a single value labeled “Other North America.” Unconventional production from Mexico today is negligible, and there is little future unconventional development projected for Mexico; thus, the Other North America supply volume is almost entirely Canadian.
1.2.2.2 World Oil Supply

After the world economy recovers from the current recession, global oil production and demand is expected to return to a tightly balanced situation, with the real price of oil rising over the long term and global consumption of liquid fuels increasing at about 1 percent per year (EIA 2009).

Capital spending on production projects by the world’s leading oil and gas companies increased from 2000 through 2005; and according to publicly available company plans, will rise further through 2010. However, when adjusted for inflation, investment in 2005 was only 5 percent above that in 2000; the planned upstream investment through 2010 is expected to result in only a slight increase in the global capacity of crude oil production. Further, the attempts to increase capacity could be negatively affected by shortages of skilled personnel and equipment, regulatory delays, cost inflation, and higher decline rates at existing fields (IEA 2006). Investment issues are of particular concern in Mexico (the third largest supplier of crude oil to the United States in 2007 [EIA 2008a]), where capital expenditures by its national oil company are insufficient to offset declines in oil field output (projected to decline 12 percent per year by industry analysts).

In its *World Energy Outlook 2008*, the International Energy Agency (IEA) (2008) provides its most recent comprehensive outlook on long-term energy demand and supply to 2030 by fuel type and by region. The projections were calculated from a large-scale mathematical model designed to reproduce the function of the energy markets either for individual countries or on a regional basis. The results of this analysis, which are described below, incorporate recent economic developments.

In the executive summary of the *World Energy Outlook 2008*, IEA (2008) provided a Reference Scenario that incorporates the effects of the government policies and measures that were enacted or adopted by mid-2008, although many had not yet been fully implemented. Possible, potential, or likely future policy actions were not taken into account. For the Reference Scenario, the IEA assumed that the price of crude oil price would average $100 per barrel in real terms over the period from 2008 to 2015, and then rise in a generally linear manner to over $120 per barrel in 2030. IEA further assumed that most of the countries that currently provide some level of oil consumption subsidies would gradually phase out these subsidies. As a result, the Reference Scenario considers, from a historical perspective, a high oil-price environment in which most consumers are fully exposed to the full international cost of oil.

The oil demand through 2030 in the IEA (2008) Reference Scenario reflects a world-wide oil demand growth rate of about 1 percent per year. This includes the projection that China, India, and the Middle East would be responsible for over four-fifths of the global demand growth for oil through 2030 and would increasingly compete with the United States for waterborne crude oil supplies around the world. This indicates that pipeline connections to the reliable Canadian crude oil supply would reduce the degree to which U.S. refiners must compete for waterborne supply in the global markets.

In addition, several of the top suppliers of crude oil to the United States are experiencing political instability and other problems that threaten oil production and export from those countries. For example, Nigerian oil exports have been interrupted intermittently in recent years; on occasion, as much as 70 percent of the country’s output of crude has been shut down due to militant attacks on oil production infrastructure. Venezuela’s production has continually declined since 1998, and President Chavez has repeatedly threatened to divert Venezuela’s exports to markets other than the United States. Armed conflicts in Algeria have affected oil output, and political instability in Ecuador threatens oil production and export. Annual U.S. petroleum imports from Iraq have largely remained at or below pre-war levels (EIA 2008b). Production in some Iraqi fields has remained below its pre-war peak due to damage and insufficient maintenance of the oil production infrastructure (EIA 2007), but the Iraqi government plans
substantial expansion of production in the next 5 years though investment from the international oil industry (Business Week 2009).

It is possible, and perhaps likely, that future climate policy changes will result in reductions in the need for crude oil. The oil market implications of this possibility are quantified in World Energy Outlook 2008 (IEA 2008), which provides two climate policy scenarios: (1) the 450 Policy Scenario, in which GHG stabilizes at 450 parts per million (ppm) carbon dioxide-equivalent (CO₂-equivalent); and (2) the 550 Policy Scenario, in which GHG stabilizes at 550 ppm CO₂-equivalent. Under both climate policy scenarios, the World Energy Outlook 2008 projections indicate that global oil demand would continue to rise, although at lower growth rates than projected under the Reference Scenario. Therefore, if meaningful climate change policies are implemented, oil demand would likely continue to increase, and global competition for supply would increase. Under those conditions, the Alberta Clipper Project would provide U.S. refiners with access to the more stable and secure western Canadian crude oil supplies to meet the increasing demand.

1.2.2.3 Western Canadian Sedimentary Basin Crude Oil Supply

According to the Oil and Gas Journal (Stowers 2006), Canada has 180 billion barrels of proven oil reserves, with 174 billion barrels of those reserves in oil sands located in the Western Canadian Sedimentary Basin. The Energy Resources Conservation Board (ERCB 2008) also estimated that 174 billion barrels of proven reserves are recoverable from Canada’s oil sands. The province of Alberta is now widely accepted as having the second largest recoverable reserves in the world, exceeded only by those in Saudi Arabia.

Total production of crude bitumen and synthetic crude oil from the oil sands increased to 1.9 million bpd in 2007 (ERCB 2008). The latest report on the oil sands from the CNEB stated that as of mid-2006, the number of major mining, upgrading, and thermal in-situ production projects grew to include over 46 existing and proposed projects, encompassing 135 individual project expansion phases in various stages of execution (CNEB 2006). The CNEB’s projected base scenario, in which most but not all announced projects were assumed to go forward, anticipated that production capacity would increase each year to eventually reach about 3 million bpd by 2015. More recent information that reflects the slow down on new major production projects that began in late 2008 is not available from the CNEB. Although the decrease in major new oil sands projects could impact future pipeline expansions out of western Canada, the large-scale oil sands projects that are currently in place appear to have sufficient volumes of crude oil to supply the proposed Alberta Clipper Project.

Crude oil production from the entire Western Canadian Sedimentary Basin, including conventional and nonconventional production such as oil sands, was about 2.4 million bpd in 2007 (CAPP 2008). The CNEB (2006) reported that it expects conventional crude oil production in the basin to decline; because of rapidly growing oil sands production, however, it expects that total production in the basin will rise to 3.9 million bpd by 2015. As described above, the most recent EIA forecast also projects that the unconventional oil supply from Canada will become an increasingly important source of global crude supply over time (EIA 2009).

The Obama Administration considers environmental protection and the development of clean energy to be inextricably linked; the Administration announced its plan to work with the Canadian government to establish a new energy economy that incorporates this policy as a key element of broader economic recovery and reinvestment efforts (White House Office of the Press Secretary 2009). After a meeting in

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3 Proved reserves are estimated quantities that geologic and engineering data demonstrate with reasonable certainty are recoverable under existing economic and operating conditions.
February 2009, President Obama and Canadian Prime Minister Harper established a senior-level U.S.-Canada “Clean Energy Dialogue” that is designed to foster cooperation on several critical science and technology issues related to energy. It is not clear that these efforts will have any significant impact in the short or medium term on the development of heavy crude oil produced by the oil sands projects.

1.2.2.4 Pipeline Capacity from Western Canadian Sedimentary Basin

Nearly all heavy and light crude oil imported from Canada in 2006 came from the Western Canadian Sedimentary Basin (CNEB 2006), and nearly all of it was transported through three major pipeline systems: Enbridge, Kinder Morgan Express, and Kinder Morgan TransMountain. These three pipelines have a maximum transport capacity of about 2.4 million bpd, with about 1.9 million bpd transported from the basin to several U.S. markets, including the Midwest (CAPP 2008). However, the majority of that volume continues to be sold into PADD II, where a large proportion of U.S. refining capacity is located. In recent years, the amount forwarded on to refiners in PADD III (the U.S. Gulf Coast) increased to meet refinery needs in that area as capacity grew and to slightly offset declines in offshore production or waterborne imports. These two districts are directly and indirectly served by the Enbridge system and Kinder Morgan Express, which together have a crude oil capacity—including both heavy and light crudes—of 2.0 million bpd (CAPP 2008).

Almost all of the expected increases in basin production will come from Alberta, with a combination of light and heavy crudes available for shipment to the United States. For the two pipelines that serve PADDs II and III (Enbridge and Kinder Morgan Express), the total capacity of only heavy crude oil is about 1.3 million bpd (CAPP 2007). In 2006, approximately 1.1 million bpd of heavy crude was exported from the basin to the United States through these two pipelines (CAPP 2007).

CAPP (2007) reported that both pipelines had been subject to short-term capacity limitations either directly or indirectly due to downstream bottlenecks. Even with modifications to existing systems and de-bottlenecking efforts that are underway by Enbridge, it is likely that crude oil exports from the basin to the United States will exceed available pipeline capacity in 2009, necessitating construction of a new pipeline to facilitate continued importation of crude oil (CNEB 2006).

With the CNEB’s 2006 projections of an additional 1.5 million bpd of production from the basin by 2015 (CNEB 2006) and assuming that Canada continues to export more than 70 percent of its production to the United States (the current export amount), an additional 1.1 million bpd of heavy crude oil will be flowing from the basin to the United States by 2015. This is approximately consistent with the CAPP (2007) projection of a pipeline capacity shortfall of 1.9 million bpd by 2015.

Some of the capacity shortfall will be met by the 450,000-bpd capacity of the Keystone Pipeline Project (upgradeable to 590,000 bpd), which is currently being constructed by TransCanada. However, the refinery market served by the Keystone Project is largely different from the markets that would be served by the Alberta Clipper Project. An additional portion of the capacity shortfall could be met by the Alberta Clipper Project’s proposed pipeline capacity of 450,000 bpd. The remaining shortfall of 60,000 to 860,000 bpd would necessitate additional pipeline construction and/or expansion, which could include the proposed Keystone XL pipeline from Alberta to the U.S. Gulf Coast. This proposed pipeline would have an initial capacity of 700,000 bpd and an ultimate capacity of 900,000 bpd.

1.3 AGENCY AND TRIBAL PARTICIPATION

DOS, as the lead agency for the EIS, consulted with federal agencies that would issue permits for the proposed Project and with expertise relative to the NEPA environmental review of the Project. Those agencies participated as cooperating agencies in the process (see Section 1.3.2) or provided technical
assistance to the environmental review. Two Indian tribes also provided assistance as cooperating agencies in the environmental review process and had, in effect, federal agency status for the NEPA review. In addition, the two Indian tribes assisted in tribal consultations, as described in Section 1.4. DOS also consulted with state agencies and with tribal natural resource management agencies that have federal regulatory authority over certain actions with the potential to affect tribal lands and resources (see Sections 1.3.2.8 and 1.3.2.9).

To further facilitate agency participation in the EIS review, DOS invited federal and state agencies and tribes to the scoping meetings (see Section 1.5.1). During preparation of this EIS, DOS also conducted interagency meetings and telephone conference calls with the appropriate federal and state agencies and tribal representatives. The following subsections identify the agencies and tribal entities that worked with DOS in developing the EIS, and describe the basic expertise and responsibilities of those agencies:

- Lead Agency – U.S. Department of State (Section 1.3.1);
- Cooperating Agencies (Section 1.3.2);
- Assisting Agencies (Section 1.3.3); and
- State Agencies (Section 1.3.4).

### 1.3.1 Lead Agency – U.S. Department of State

For some proposed cross-border infrastructure projects, such as oil pipelines, DOS is responsible for issuance of Presidential Permits; DOS is therefore the lead federal agency for the environmental review of the proposed Alberta Clipper Project. In this capacity, DOS is responsible for ensuring compliance with NEPA and with Section 106 of the National Historic Preservation Act (NHPA), and for initiating informal consultation with the U.S. Fish and Wildlife Service (FWS) under Section 7 of the Endangered Species Act (ESA) to determine the likelihood of effects on federally-listed species. In addition, DOS has coordinated with the cooperating and assisting agencies to ensure compliance with the following:

- EO 11988 – Floodplain Management;
- EO 11990 – Protection of Wetlands;
- EO 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
- EO 13007 – Indian Sacred Sites;
- EO 13112 – Invasive Species;
- EO 13175 – Consultation and Coordination with Indian Tribal Governments;
- EO 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds;
- EO 13212 – Actions to Expedite Energy-Related Projects;
- Native American Graves and Repatriation Act; and
- The Farmland Protection Policy Act, administered by the Natural Resources Conservation Service (NRCS), concerning potential effects to prime and unique agricultural lands.

EOs 11423, 12847, and 13337 govern the DOS issuance of Presidential Permits that authorize construction of pipelines carrying petroleum, petroleum products, and other liquids across U.S.
international borders. Within DOS, the Bureau of Economic and Business Affairs, Office of International Energy and Commodity Policy, receives and processes Presidential Permit applications. Upon receipt of a Presidential Permit application for a cross-border pipeline, DOS is required to request the views of the Secretary of Defense, the Attorney General, the Secretary of the Interior, the Secretary of Commerce, the Secretary of Transportation, the Secretary of Energy, the Secretary of Homeland Security, the Administrator of the U.S. Environmental Protection Agency (EPA), and such other government department and agency heads as the Secretary of State deems appropriate. DOS must consider the project to be in the national interest to issue a Presidential Permit.

1.3.2 Cooperating Agencies

Seven federal agencies and two Indian tribes formally agreed in writing to assist DOS as cooperating agencies in preparing this EIS. A summary of each agency’s expertise and review responsibilities is presented in the following sections:

- U.S. Environmental Protection Agency (Section 1.3.2.1);
- U.S. Army Corps of Engineers (Section 1.3.2.2);
- U.S. Fish and Wildlife Service (Section 1.3.2.3);
- U.S. Forest Service (Section 1.3.2.4);
- Natural Resources Conservation Service (Section 1.3.2.5);
- Farm Service Agency (Section 1.3.2.6)
- Bureau of Indian Affairs (Section 1.3.2.7);
- Fond du Lac Band of Lake Superior Chippewa (Section 1.3.2.8); and
- Leech Lake Band of Ojibwe Indians (Section 1.3.2.9).

1.3.2.1 U.S. Environmental Protection Agency

Under Section 402 of the Clean Water Act (CWA), EPA has jurisdiction over the discharge of pollutants from a point source into waters of the United States. Administration of permit programs for point-source discharges that require a National Pollutant Discharge Elimination System (NPDES) Permit has been delegated to the states affected by the Alberta Clipper Project. EPA maintains oversight of the delegated authority. Regulated discharges include, but are not limited to, sanitary and domestic wastewater, gravel pit and construction dewatering, hydrostatic test water, and storm water. If a Section 402 permit is needed within the Leech Lake Reservation (LLR) or FDL Reservation, EPA would be the permitting authority. In addition, EPA has authorization for issuing or denying CWA Section 401 water quality certification within the LLR. The FDL has CWA Section 401 water quality certification responsibility within the FDL Reservation.

EPA and the COE jointly administer Section 404 of the CWA. EPA reviews and comments on applications to the COE for Section 404 permits (see Section 1.3.2.2), including review of and comments on compliance with the Section 404(b)(1) guidelines and other statutes and authorities within its jurisdiction.

Under Section 309 of the Clean Air Act (CAA), EPA has the responsibility to review and comment on the EIS for compliance with CEQ Regulations for Implementing the Procedural Provisions of NEPA.
The proposed Alberta Clipper Project would be located within EPA Regions 5 and 8. Region 5 (Chicago) is the lead for EPA’s involvement as a cooperating agency.

1.3.2.2 U.S. Army Corps of Engineers

Under Section 404 of the CWA, the COE has the authority to issue or deny permits for placement of dredge or fill material in the waters of the United States, including adjacent wetlands. Under Section 10 of the Rivers and Harbors Act, the COE regulates work and placement of structures in, on, over, or under navigable waters of the United States. Enbridge would need a Section 404 permit and a Section 10 permit. The St. Paul District of the COE has jurisdiction for the portions of the Project that are proposed to be in Minnesota and Wisconsin, and the Omaha District of the COE has jurisdiction for the portions of the Project that are proposed to be in North Dakota.

1.3.2.3 U.S. Fish and Wildlife Service

FWS is responsible for ensuring compliance with the ESA. Section 7 of the ESA, as amended, states that any project authorized, funded, or conducted by any federal agencies should not “… jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined…to be critical…”. FWS also reviews project plans and provides comments regarding protection of fish and wildlife resources under the provisions of the Fish and Wildlife Coordination Act (FWCA). FWS is responsible for implementation of the provisions of the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act. The FWS Division of Refuges is responsible for managing lands of the national wildlife refuge system. Easements are protected under the National Wildlife Refuge Systems Administration Act.

As the lead federal agency, DOS is responsible for initiating informal consultation with FWS to determine the likelihood of effects on listed species. DOS and the applicant (as a non-federal party) consulted with FWS to determine whether any federally-listed or proposed endangered or threatened species, or their designated critical habitat, occur in the vicinity of the proposed Project.

1.3.2.4 U.S. Forest Service

The U.S. Forest Service (Forest Service) manages public lands in national forests and prepares forest plans for lands under its jurisdiction. The Project would cross one area of national forest under the jurisdiction of the Forest Service: the Chippewa National Forest (CNF). The Forest Service is responsible for reviewing the proposed Project to ensure compliance with the CNF Land and Resource Management Plan, as required by the National Forest Management Act and its implementing regulations.

1.3.2.5 Natural Resources Conservation Service

NRCS administers the Wetlands Reserve Program (WRP), under which it purchases conservation easements and provides cost share to landowners for the purposes of restoring and protecting wetlands. Lands under WRP easement are subject to development and other use restrictions in order to ensure protection of wetland and wildlife conservation values. Enbridge’s proposed route crosses land restricted by two WRP leases.

NRCS also administers the Emergency Watershed Protection (EWP) Program. That program addresses emergency measures, including the purchase of floodplain easements, for runoff retardation and soil erosion prevention. The proposed Project would cross two EWP areas.
In addition, NRCS provides technical assistance to the Farm Service Agency (FSA) for the Conservation Reserve Program (CRP). The CRP provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resources concerns on their lands in an environmentally beneficial and cost-effective manner. NRCS provides assistance on land eligibility determinations, conservation planning, and practice implementation. The proposed route would cross 66 parcels of land enrolled in the CRP.

1.3.2.6 Farm Service Agency

FSA is a unit of the U.S. Department of Agriculture that administers several land conservation programs, including the CRP. These programs provide annual rental payments and cost-share assistance to establish long-term resource conservation measures on eligible farmland. CRP lands are managed jointly with NRCS, as described in Section 1.3.2.5. As mentioned in the NRCS discussion above, the proposed Alberta Clipper route would cross 66 parcels of land enrolled in the CRP.

1.3.2.7 Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) provides review and assistance to lead federal agencies regarding federal trust responsibilities and environmental justice issues. The “federal trust responsibility” refers in general to the legal responsibility to Indian tribes resulting from promises made in treaties, executive orders, and agreements. The primary focus of the federal trust responsibility relates to Indian tribes’ natural resources on reservations, the treaty rights and interests that tribes reserved on off-reservation lands, and the recognition of tribal sovereignty and rights of self-governance. The federal trust responsibility is defined by the specific duties to Indian tribes set forth in applicable treaties, agreements, statutes and regulations. Although the United States does owe a general trust responsibility to Indian tribes, absent a specific duty that has been placed on the government with respect to Indians, this responsibility is discharged by the agency’s compliance with general environmental regulations and statutes not specifically aimed at protecting Indian tribes.

The proposed Project crosses the LLR, which was created by a treaty with the United States Government in 1855. The proposed route also crosses the FDL Reservation, which was created by the Treaty of La Pointe in 1854. The Project also would cross “Ceded Territories,” which consist of approximately 5 million acres largely known as the “Arrowhead” region of Minnesota; in these territories, tribes exercise treaty rights to hunt, fish, and gather. In undertaking this Project, all federal agencies with regulatory responsibilities for this Project will take into consideration any natural resources, treaty rights, and interests of the tribes may have that pertain to these lands affected by this Project.

1.3.2.8 Fond du Lac Band of Lake Superior Chippewa

FDL is a federally recognized Indian tribe with governmental authority over the FDL Reservation. In addition to its rights as a sovereign nation, FDL retains treaty and federal rights to regulate activities within the reservation that affect the health, safety, and welfare of the FDL. FDL also exercises certain governmental authority over off-reservation land that it ceded to the federal government (see discussion of Ceded Territories in Section 1.3.2.7). FDL has CWA Section 401 water quality certification responsibility within the FDL Reservation if Section 402 or Section 404 permits are required. Further, FDL has authority over activities that occur both on and off the reservation that affect the air and water of the reservation. Specific FDL permitting requirements are listed in Table 1.6-1.

To assist DOS in the NEPA review of the Project, FDL agreed to serve as a cooperating agency under NEPA; as a result, FDL has, in effect, federal agency status for the NEPA review. FDL is assisting DOS
in assessing the portion of the proposed route that would extend across its reservation and through the land near the reservation that was ceded to the federal government in 1854 (Ceded Territories).

1.3.2.9 Leech Lake Band of Ojibwe Indians

The Leech Lake Band of Ojibwe (LLBO) is one of six bands of the Minnesota Chippewa Tribe. Both the Tribe and the LLBO have sovereign nation status. To assist DOS in the NEPA review of the Project, LLBO agreed to serve as a cooperating agency under NEPA; as a result, LLBO has, in effect, federal agency status for the NEPA review.

The proposed route would cross the LLR. LLBO has permitting authority for environmental, archaeological, and cultural resources for the portion of the pipeline that would cross its lands, and assisted DOS in assessing the potential for impacts along that portion of the proposed route. If a Section 402 permit is needed within the LLR, EPA would be the permitting authority. In addition, EPA has authorization for issuing or denying CWA Section 401 water quality certification within the LLR. Specific LLBO permitting requirements are listed in Table 1.6-1.

1.3.3 Assisting Agencies

The following agencies provided technical assistance to DOS in the environmental review process.

1.3.3.1 U.S. Department of Transportation – Office of Pipeline Safety

The U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS) has responsibility for monitoring the operation of liquid hydrocarbon pipeline systems in the United States, in compliance with 49 CFR Part 195, “Transportation of Hazardous Liquids by Pipeline.” OPS also has authority for requirements prescribed in 49 CFR Part 194 for oil spill response plans to reduce the environmental impact of oil discharged from onshore oil pipelines. OPS provided technical expertise to DOS in the assessment of the Alberta Clipper Project and in determination of appropriate mitigating measures.

1.3.3.2 Council on Environmental Quality

CEQ provides guidance to all federal agencies on the NEPA implementation process.

1.3.4 State Agencies

Resource agencies from each of the states crossed by the proposed Alberta Clipper Project have responsibilities for issuing state and local permits. The permits required by the jurisdictions crossed by the proposed corridor are identified in Section 1.6. State agencies participated in the scoping process for the EIS and participated in interagency meetings.

1.4 INDIAN TRIBE CONSULTATION

As the lead federal agency responsible for compliance with Section 106 of the NHPA for the proposed Project, DOS consulted with federally recognized Indian tribes with cultural interests in the Alberta Clipper Project area of potential effect (APE). DOS contacted 46 individual Indian tribes potentially affected by the proposed Project and invited them to consult on the Project. As noted in Section 4.11.3.3, FDL, the LLBO, the Lower Sioux Indian Community, the White Earth Band of Ojibwe, the Spirit Lake Tribe, the Mille Lacs Band of Ojibwe, the Upper Sioux Community, the Forest County Potawami, the Flandreau Santee Sioux, the Bois Forte Band of the Minnesota Chippewa Tribe, the Red Cliff Band of
Lake Superior Chippewa Indians of Wisconsin, the Standing Rock Sioux Tribe, the Ho-Chunk Nation, the Red Lake Band of Chippewa Indians, the Fort Peck Tribes, and the Sisseton-Wahpeton Oyate Sioux Tribe were consulting parties.

In addition to being consulting parties under Section 106 of the NHPA, FDL and the LLBO were cooperating agencies under NEPA, as described in Sections 1.3.2.8 and 1.3.2.9.

1.5 PREPARATION OF THE EIS

This section provides a description of the scoping process that was implemented to develop the DEIS (Section 1.5.1), as well as the public review process for the DEIS and the overall scope of the EIS (Section 1.5.2).

1.5.1 Scoping Process

DOS conducted scoping for two separate types of environmental review documents for the proposed Alberta Clipper Project. On July 27, 2007, DOS issued a Notice of Intent (NOI) to prepare an Environmental Assessment (EA) for the Project. Based on comments received during the 45-day comment period and after consultation with other federal agencies, DOS determined that the proposed Project would require an EIS as a part of the NEPA environmental review. On March 31, 2008, DOS issued an NOI to prepare an EIS. Each NOI informed the public about the proposed action, announced plans for scoping meetings, invited public participation in the scoping process, and solicited public comments for consideration in establishing the scope and content of the EA or EIS. Each NOI was published in the Federal Register (FR) and distributed to the following:

- Landowners along the proposed route;
- Federal agencies;
- Indian tribes;
- State agencies;
- Municipalities and counties;
- Elected officials;
- Non-governmental organizations;
- The media; and
- Interested individuals.

1.5.1.1 Scoping Meetings

In 2007, DOS held 12 scoping meetings in the vicinity of the proposed route to give the public the opportunity to provide comments regarding the scope of the environmental review of the proposed Project. These meetings were held in the following locations:

- Kennedy, Minnesota on August 13, 2007;
- Stephen, Minnesota on August 13, 2007;
- Thief River Falls, Minnesota on August 14, 2007;
- Gully, Minnesota on August 15, 2007;
- Oklee, Minnesota on August 15, 2007;
- Clearbrook, Minnesota on August 16, 2007;
- Bemidji, Minnesota on August 20, 2007 (two meetings were held on this date at this location);
- Cass Lake, Minnesota on August 21, 2007;
- Cohasset, Minnesota on August 21, 2007;
- Floodwood, Minnesota on August 22, 2007; and

After issuing the NOI for the EIS, DOS held a public supplemental scoping meeting in Clearbrook on May 8, 2008, to give the public the opportunity to provide comments regarding the scope of the EIS. DOS also conducted six meetings with federal, state, and tribal officials during the week of May 5, 2008, in Madison, Wisconsin; Superior, Wisconsin; the FDL Reservation; the CNF; the LLR; and St. Paul, Minnesota.

1.5.1.2 Scoping Comments

DOS received verbal, written, and electronic comments during the scoping comment period. All verbal comments formally presented at the meetings were recorded and transcribed. Written comments were received on comment forms provided to the public at the meetings as well as in letters to DOS. All comments received were considered during preparation of the EIS. A summary of key environmental issues identified during the scoping process is presented in Table 1.5.1-1.

<table>
<thead>
<tr>
<th>EIS Section Where Concern is Addressed</th>
<th>Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Future plans for expansion; market for oil; required permits.</td>
</tr>
<tr>
<td>Project Description</td>
<td>Country of origin of the pipe to be used; connected actions; planned expansions; construction of pump stations along the proposed route; construction timing; location of proposed pipelines; potential for winter construction to reduce environmental impacts; construction monitoring plans; potential for company-funded Environmental Inspectors; plans and procedures for pipeline corridor maintenance; identification of the regulatory agencies responsible for ensuring that standards are met; applicability of recent mitigation plans for a similar project (MinnCan); easement acquisition process and regulatory protection; required depth of pipeline burial, particularly beneath agricultural land and roadways, and methods to monitor this depth during operation; duration of operation.</td>
</tr>
<tr>
<td>Alternatives</td>
<td>Collocate the proposed pipeline in existing pipeline corridors to minimize disruption to undisturbed property; route variations that minimize impacts to specific landowners associated with existing buildings and associated gardens, drinking water wells, property valuation by bisecting property, existing access routes, wetlands, and drain tiles underlying agricultural land.</td>
</tr>
<tr>
<td>EIS Section Where Concern is Addressed</td>
<td>Concern</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Geology</td>
<td>Impacts to commercial gravel deposits (current and future).</td>
</tr>
<tr>
<td>Soils and Sediments</td>
<td>Impacts to farming; invasion of non-native species such as noxious weeds and anthrax spores due to soil exposure; mobilization of toxic materials during excavation in the vicinity of the St. Regis Company Superfund Site; need for mitigation measures and plans to restore topsoil and to control erosion and sediment, particularly near waterbodies; need for procedures for restoring soil conditions to avoid flooding and altered water flow; soil settling problems with backfilling in winter; impacts to drainage tiles due to construction; need for tile reconstruction methods; impacts due to loss of topsoil, soil compaction, and rock removal; need for methods to restore pre-construction conditions; need to incorporate mitigation measures into the Agricultural Mitigation Plan.</td>
</tr>
<tr>
<td>Water Resources</td>
<td>Impacts of turbidity and sedimentation from crossing waterbodies; provide waterbody crossing method proposed for each of waterbody, especially impaired waters, outstanding resource value waters, and trout streams; need for procedures to minimize siltation and disturbance of streambanks and streambeds, and to protect water quality during construction and operation; impacts from transferring hydrostatic test water across major drainage divides, including risk of transferring organisms not known to occur in the receiving basin; establish minimum distance of pipeline to wells; need for measures to protect water supplies.</td>
</tr>
<tr>
<td>Vegetation and Wetlands</td>
<td>Impacts to sensitive upland habitats such as old growth forests; impacts from loss of woody vegetation along streambanks and conversion of wood and shrub habitat to grassland; need for mitigation measures for impacts; minimize removal of trees, particularly along riverbanks, including for wild and scenic rivers; magnitude, extent, and duration of impacts to wetlands, including the temporary and permanent loss of quality and function; need requirements for wetland replacement/compensation; impacts to surface flow within with bogs, wetlands, and agricultural land.</td>
</tr>
<tr>
<td>Fish and Wildlife</td>
<td>Potential need for a Biological Assessment for protected species; impacts to Sites of Biodiversity Significance, special habitats, waterfowl and migratory birds, and other fish and wildlife habitat along rivers where clearing is proposed; potential for harmful exposure of wildlife to chemicals or waste products; minimize impacts to trout streams; avoid impacts to sandhill crane nesting sites between Mileposts 1067 and 1068.</td>
</tr>
<tr>
<td>Land Use</td>
<td>Land use restrictions due to Project; impacts on state trails and canoe routes, big-game hunting, and agriculture; impacts on the Conservation Reserve and Conservation Reserve Enhancement Programs; impacts to tribal land; access and agricultural restrictions during construction; compensation for crop production loss; inconvenience to landowners and residents; loss of wind and shelter breaks; need proper restoration and compensation.</td>
</tr>
<tr>
<td>Socioeconomics</td>
<td>Eminent domain process; tax burden on pipeline facilities; impacts to property valuation; impacts to livelihood; impacts to roadway integrity due to boring under roadways.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Impacts to tribal lands and traditional cultural properties, including value of land and sacred sites.</td>
</tr>
</tbody>
</table>
TABLE 1.5.1-1 (continued)
Key Environmental Issues Identified during the
Public Scoping Process for the Alberta Clipper Project

<table>
<thead>
<tr>
<th>EIS Section Where Concern is Addressed</th>
<th>Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality and Noise</td>
<td>Air pollution, including increases in greenhouse gases and heavy metals; air quality impacts to Class I-designated areas.</td>
</tr>
<tr>
<td>Reliability and Safety</td>
<td>Need maintenance procedures for the proposed pipelines and older, existing pipelines; need spill contingency and cleanup plans and an emergency response plan for pipeline rupture; need measures to protect nearby residences; need measures to protect waterways from spills; identify regulatory roles for pipeline safety, including eroding and exposed pipe; need safety issues for crude oil and diluent pipelines.</td>
</tr>
<tr>
<td>Cumulative Impacts</td>
<td>Cumulative impacts associated with clearing areas that do not overlap with an existing corridor (such as temporary work spaces, access roads, and additional widening of corridor), construction and restoration timelines associated with the construction and operation of multiple pipelines, and construction and operation of other future pipelines and/or pipeline facilities.</td>
</tr>
</tbody>
</table>

1.5.2 Review of the DEIS

Section 1.5.2.1 provides a summary of the public review process that was conducted for the DEIS. Section 1.5.2.2 summarizes the scope of the proposed Project and the NEPA review as it relates to DEIS comments received during the public review process.

1.5.2.1 Public Review Process

The DEIS was mailed to interested agencies, individuals, and organizations and was submitted to EPA for formal public notice of availability. DOS posted a notice of availability of the DEIS on its website, and the formal notice of availability for the DEIS was published in the Federal Register on December 5, 2008. Those notices indicated that the DEIS was available and had been mailed to individuals and organizations on the distribution list prepared for the proposed Project; they also described procedures for filing comments on the DEIS. In accordance with CEQ regulations implementing NEPA, the notice of availability and the Federal Register notice established a comment period of at least 45 days, ending on January 30, 2009.

DOS sent a letter dated November 28, 2008, to interested parties announcing the times, dates, and locations of public comment meetings that would be held to receive comments on the DEIS. The letter was also posted on the DOS website for the proposed Project. The public comment meetings were conducted to provide interested groups and individuals the opportunity to present oral and written comments on the DOS analysis of the environmental impacts of the proposed Project as described in the DEIS. The proceedings of the public comment meetings were recorded by a court reporter, and transcripts were prepared. The locations, dates, and times of the public comment meetings are listed below:

- Thief River Falls, Minnesota – December 15, 2008, 6 to 9 p.m.;
- Cass Lake, Minnesota – December 16, 2008, 11 a.m. to 2 p.m.;
Bemidji, Minnesota – December 16, 2008, 6 to 9 p.m.;
Grand Rapids, Minnesota – December 17, 2008, 6 to 9 p.m.;
Carlton, Minnesota – December 18, 2008, 11 a.m. to 2 p.m.; and
Superior, Wisconsin – December 18, 2008, 6 to 9 p.m.

At the request of LLBO and FDL representatives, DOS conducted two additional public comment meetings. DOS sent a letter dated January 9, 2009, to interested parties notifying them of the locations, dates, and times of the additional comment meetings, as indicated below:

Cass Lake, Minnesota – January 21, 2009, 6 to 9 p.m.; and
Cloquet, Minnesota – January 22, 2009, 6 to 9 p.m.

In addition, we received separate written comments on the DEIS throughout the period from issuance of the DEIS to preparation of the final EIS (FEIS). The public comment meeting transcripts and all written comments received on the DEIS are part of the public record for the Project. Comments that we received that specifically addressed the DEIS and our responses to those comments are provided in Appendix A. Written, electronic, and oral comments were given equal weight in the FEIS.

The text of the EIS was revised in response to comments on the DEIS, as appropriate, and because of updated information that became available following issuance of the DEIS.

The FEIS was mailed to the agencies, individuals, and organizations on the mailing list (see Appendix B), including all those who requested a copy. The FEIS also was submitted to EPA for issuance of a formal public notice of availability. In accordance with CEQ’s regulations implementing NEPA, no agency decision on a proposed action may be made until 30 days after EPA publishes a notice of availability of an FEIS.

1.5.2.2 Response to Comments on the Scope of the EIS

We received many comments on the DEIS that reflected an apparent misunderstanding of the scope of the proposed Project and the intent and requirements of NEPA. As stated in detail in Section 2.0, the proposed Project consists of construction and operation of the Alberta Clipper pipeline and expansion of associated pump stations in the United States. In accordance with NEPA guidelines, the proposed Alberta Clipper Project does not include the Southern Lights Program, the Southern Access Expansion Program, the North Dakota System Expansion, other Enbridge Expansion Projects, the overall pipeline infrastructure in the region or the nation, oil sands extraction, refineries, or end use. The other pipeline projects referred to have independent utility because they are not/would not be dependent on construction of the Alberta Clipper pipeline (see Section 1.7 for additional information on those projects). DOS has no authority concerning the Diluent Project because it does not cross the international border, and the potential environmental impacts of the Diluent Project are being reviewed by the appropriate federal and state regulatory agencies. NEPA review of the LSp Project was completed by DOS in 2007 and reported in the EA for that project (Enbridge 2008). The Diluent Project and LSp Project would have independent utility relative to the Alberta Clipper Project. In addition, other completed or proposed Enbridge Expansion Projects (see Section 1.7) have or would have independent utility, do not or would not cross the international border, and have been or would be reviewed by the appropriate federal and state environmental regulatory agencies.

The Alberta Clipper Project EIS was initiated by DOS in response to Enbridge’s application for a Presidential Permit for the Project. Although other Enbridge and non-Enbridge pipelines are considered
in the Cumulative Impacts analysis (Section 4.14) of this EIS, the focus of this NEPA review is on construction and operation of the Alberta Clipper Project; and this NEPA review is not intended to serve as a programmatic EIS covering the pipeline infrastructure of the region or the nation.

As stated in Section 1.2.2, extraction of oil sands in Canada and construction and operation of the Canadian portion of the Alberta Clipper Project are under the jurisdiction of the Canadian government. Canadian governmental agencies reviewed those activities, found them to be in compliance with the relevant environmental laws and regulations, and approved them. As set forth by NEPA, CEQ, and the Executive Orders and CFR regulations authorizing NEPA review by DOS, the activities in Canada are beyond the NEPA authority of DOS and therefore were not evaluated in this EIS.

Similarly, refining of the oil that would be transported by the Alberta Clipper Project is not part of the proposed Project. As stated previously, Enbridge would not own the oil and would not determine its destination or what refined products ultimately would be processed from the oil (such as fuel, plastics, and lubricants). Further, Enbridge would have no control over the end use of the oil. Therefore, neither refining nor end use could reasonably be considered part of the NEPA review of the Alberta Clipper Project, although they are discussed in the Cumulative Impacts analysis of this EIS (Section 4.14.3.12).

Lastly, we received comments on the DEIS stating that the EIS must incorporate future changes in national and international policy, campaign promises, and pending legislation. In accordance with CEQ guidance, the NEPA analysis in this EIS was based on existing federal and state laws, regulations, and policy. The purpose of NEPA in preparing a project-specific EIS is to provide a public disclosure document that takes a hard look at the specific impacts of a proposed project (including alternatives and cumulative impacts) to inform decision makers on the potential environmental impacts in accordance with existing laws and regulations. In accordance with NEPA, this EIS is not intended to dictate national or international policy or to speculate on potential changes to laws or policies that may occur at some undetermined time in the future. Therefore, the EIS for the proposed Alberta Clipper Project does not address such issues. DOS recognizes that the proposed Project, if approved, would need to adhere to all applicable laws that exist at the time of construction and operation.

1.6 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

This EIS is intended to fulfill the needs and obligations set forth by NEPA and other relevant laws, regulations, and policies of DOS (the lead agency) and of the cooperating agencies (EPA, COE, FWS, Forest Service, NRCS, FSA, BIA, FDL, and LLBO). Other federal, state, and local agencies with jurisdiction over various aspects of the Alberta Clipper Project participated in the EIS process by providing direct input to DOS (see Sections 1.3.3 and 1.3.4). Table 1.6-1 lists the key federal, tribal, and state permits, licenses, approvals, and consultation requirements for the proposed Project. In addition, Enbridge would obtain permits, licenses, and approvals from county agencies in all three states along the proposed route and from local and regional watershed and conservation districts in Minnesota.
<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit or Consultation Authority</th>
<th>Agency Action</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Department of State (DOS)</td>
<td>Executive Order (EO) 13337</td>
<td>Consider issuance of Presidential Permit for facility on the U.S./Canada border</td>
<td>Review of permit application (submitted 05/07) and NHPA and ESA consultations in progress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and serve as lead agency for environmental review of the proposed action under the National Environmental Protection Act of 1969 (NEPA), Section 106 of the National Historic Preservation Act (NHPA), and Section 7 of the Endangered Species Act (ESA).</td>
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</tr>
<tr>
<td>U.S. Army Corps of Engineers (COE), St. Paul District and Omaha District</td>
<td>Section 10 of the Rivers and Harbors Act of 1899</td>
<td>Consider issuance of permit for placement of structures or work in or under navigable waters of the United States.</td>
<td>Review of permit applications in progress (submitted to St. Paul 11/08 and to Omaha 01/09)</td>
</tr>
<tr>
<td></td>
<td>Section 404 of the Clean Water Act (CWA)</td>
<td>Consider issuance of permit for placement of dredge or fill material into waters of the United States, including in wetlands, and for work in wetlands and establishing compensatory mitigation.</td>
<td>Review of permit applications in progress (submitted to St. Paul 11/08 and to Omaha 01/09)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approval and coordination for disposal of dredge material.</td>
<td>See above</td>
</tr>
<tr>
<td>U.S. Department of the Interior, U.S. Fish and Wildlife Service</td>
<td>Section 7 of the ESA; Migratory Bird Treaty Act (MBTA); Fish and Wildlife Coordination Act</td>
<td>Consult on endangered and threatened species and migratory birds; general consultation regarding conservation of fish and wildlife resources.</td>
<td>Consultation in progress (Section 7 concurrence in 03/09; MBTA initiated 10/08)</td>
</tr>
<tr>
<td>U.S. Department of the Interior, Bureau of Indian Affairs</td>
<td>25 Code of Federal Regulations (CFR) Section 169</td>
<td>Consider issuing a right-of-way grant (easement) across tribal land.</td>
<td>Permit application pending (expected 05/09)</td>
</tr>
</tbody>
</table>
### TABLE 1.6-1 (continued)

**Key Permits, Licenses, Approvals, and Consultation Requirements for the Alberta Clipper Project**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit or Consultation Authority</th>
<th>Agency Action</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal (continued)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Department of Agriculture, U.S. Forest Service, Chippewa National Forest (CNF)</td>
<td>39 CFR Section 219; 16 United States Code (USC) 1601–1604</td>
<td>Review Project for consistency with CNF Land and Resource Management Plan; consider issuance of special use permit; Section 7 ESA and Section 106 NHPA consultations.</td>
<td>Review of special use permit application in progress (submitted 11/06) and Section 7 consultation (initiated 10/08) in progress; CNF environmental assessment completed 04/09</td>
</tr>
<tr>
<td>U.S. Environmental Protection Agency</td>
<td>Section 404 of the CWA (veto power for wetland permits issued by the COE)</td>
<td>Oversee issuance of Section 404 permit.</td>
<td>See COE above</td>
</tr>
<tr>
<td></td>
<td>Section 402 of the CWA, National Pollutant Discharge Elimination System (NPDES) Permit</td>
<td>Review and consider permit for activities associated with pipeline and aboveground facilities construction, including stormwater discharge and hydrostatic test water on Leech Lake reservation and Fond du Lac Reservation.</td>
<td>Review of permit applications in progress (submitted 04/09)</td>
</tr>
<tr>
<td></td>
<td>Clean Air Act (CAA) permits for construction of a stationary source of air pollutant emissions and for operation of the source</td>
<td>Permitting authority delegated to the states of Minnesota and Wisconsin.</td>
<td>See state listings</td>
</tr>
<tr>
<td></td>
<td>Section 401 of the CWA</td>
<td>Consider issuing 401 Water Quality Certification, including in areas within the Leech Lake Reservation.</td>
<td>Review of compliance with Section 401 in progress</td>
</tr>
<tr>
<td>Advisory Council on Historic Preservation</td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>National Park Service</td>
<td>16 USC Section 1271–1287</td>
<td>Consultation on Nationwide Rivers Inventory and Wild and Scenic Rivers.</td>
<td>Consultations initiated 10/07 and completed in 03/08</td>
</tr>
<tr>
<td>Agency</td>
<td>Permit or Consultation Authority</td>
<td>Agency Action</td>
<td>Status</td>
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<td>---------------------------------------------</td>
</tr>
<tr>
<td>Federal (continued)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Department of Energy, U.S</td>
<td>EO 11423 (33 Federal Register [FR] 11741)</td>
<td>DOS is required to request the views of these agencies regarding applications for Presidential Permits.</td>
<td>Reviews in progress</td>
</tr>
<tr>
<td>U.S. Department of Transportation (DOT), Office of Pipeline Safety</td>
<td>49 CFR Part 194</td>
<td>Review and approval of Emergency Preparedness Plan.</td>
<td>Enbridge required to submit a revision to its existing plan within 30 days of adding the Project to its system</td>
</tr>
<tr>
<td>Council on Environmental Quality (CEQ)</td>
<td>NEPA (42 USC Section 4321 et seq.; EO 11514</td>
<td>Coordination of federal programs related to environmental quality, including implementation of NEPA.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Tribal (Sovereign Nations)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leech Lake Band of Ojibwe Indians</td>
<td>Section 7 of the ESA</td>
<td>Coordinate in preparation of Biological Assessment (BA)/Biological Evaluation (BE).</td>
<td>Approved BA/BE in 04/09</td>
</tr>
<tr>
<td></td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties and properties of religious and cultural importance.</td>
<td>Consultations in progress (initiated 08/08)</td>
</tr>
<tr>
<td></td>
<td>Leech Lake Land Use Plan</td>
<td>Consider issuance of land use permit.</td>
<td>Review of permit application in progress (submitted 4/09)</td>
</tr>
<tr>
<td></td>
<td>Leech Lake Open Burning, Burn Barrel, and Fire Prevention Ordinance</td>
<td>Consider need for burning permit.</td>
<td>No permit application anticipated at this time as no burning is proposed on tribal trust or tribal fee lands</td>
</tr>
<tr>
<td>Fond du Lac Band of Lake Superior Chippewa b</td>
<td>Section 7 of the ESA</td>
<td>Review of Section 7 consultation with U.S. Fish and Wildlife Service (FWS).</td>
<td>Review in progress (FWS issued ESA concurrence in 03/09)</td>
</tr>
</tbody>
</table>
## TABLE 1.6-1 (continued)
### Key Permits, Licenses, Approvals, and Consultation Requirements for the Alberta Clipper Project

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit or Consultation Authority</th>
<th>Agency Action</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tribal (Sovereign Nations) (continued)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fond du Lac Band of Lake Superior Chippewa[^b] (continued)</td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties and properties of religious and cultural importance.</td>
<td>Consultations in progress</td>
</tr>
<tr>
<td></td>
<td>FDL Wetlands Protection and Management Ordinance 03/06</td>
<td>Review and consider applications for Wetland Activity Permits.</td>
<td>Review of permit application in progress (submitted 04/09)</td>
</tr>
<tr>
<td></td>
<td>Section 401 of the CWA, FDL Water Quality Certification Standards, Ordinance 01/06</td>
<td>Consider issuing 401 Water Quality Certificate and Tribal Water Quality Certification for areas within the FDL Reservation.</td>
<td>Review of permit application in progress (submitted 04/09)</td>
</tr>
<tr>
<td></td>
<td>Special Use and Shoreland Use under FDL Land Use Ordinance 02/07</td>
<td>Review and consider applications for Conditional Use Permits.</td>
<td>Review of permit application in progress (submitted 04/09)</td>
</tr>
<tr>
<td></td>
<td>FDL Open Burning Restrictions and Permitting Requirements Ordinance 5/93</td>
<td>Review and consider applications for Burning Permits, if appropriate.</td>
<td>Review in progress to assess whether there is need for permit</td>
</tr>
<tr>
<td></td>
<td>FDL Ordinance 5/84 and Secretarial Order 3215.</td>
<td>Consider issuance of Timber Cutting Permit based on results of timber surveys.</td>
<td>Surveys pending</td>
</tr>
<tr>
<td><strong>State of North Dakota</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Dakota State Historical Preservation Office</td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties; consultation on activities potentially affecting cultural resources.</td>
<td>SHPO concurred with determinations. Consultation continuing</td>
</tr>
<tr>
<td>Public Service Commission</td>
<td>North Dakota Administrative Code Chapter 69-06-08</td>
<td>Consider issuance of a Certificate of Corridor Compatibility and Route Permit.</td>
<td>Certificate of Corridor Compatibility and Route Permit issued 12/07</td>
</tr>
<tr>
<td>Agency</td>
<td>Permit or Consultation Authority</td>
<td>Agency Action</td>
<td>Status</td>
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</tr>
<tr>
<td><strong>State of North Dakota (continued)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Health (NDDH), Division of Water Quality</td>
<td>NDDH Rules, Chapters 33-16-01 and 61-28.</td>
<td>Consider issuance of NPDES Permits for temporary dewatering, hydrotest water discharge, trench and well point dewatering discharge (NDG0700), and construction stormwater discharge (NDR10-000).</td>
<td>Permit applications pending (expected in 05/09)</td>
</tr>
<tr>
<td>North Dakota State Water Commission</td>
<td>Temporary Water Use Permit</td>
<td>Consider issuance of a Temporary Water Use Permit and water appropriations for hydrostatic testing.</td>
<td>Permit application pending (expected in 05/09)</td>
</tr>
<tr>
<td>North Dakota Attorney General 2005-L-01; North Dakota Sovereign Land Management Plan</td>
<td></td>
<td>Consider issuance of Sovereign Land Use Permit.</td>
<td>Review of permit application in progress (submitted 04/09)</td>
</tr>
<tr>
<td>Department of Game and Fish</td>
<td>Section 7 of the ESA</td>
<td>Endangered and threatened species consultation.</td>
<td>Consultations completed 12/07</td>
</tr>
<tr>
<td><strong>State of Minnesota</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Utilities Commission</td>
<td>Minnesota Statutes (MS) Section 216B.243; Minnesota Rules (MR) Chapter 7853</td>
<td>Consider issuance of Certificate of Need.</td>
<td>Certificate of need issued 12/08</td>
</tr>
<tr>
<td></td>
<td>MS 216G.02, Subdivision 3; MR Chapter 7852.1900</td>
<td>Consider issuance of Route Permit.</td>
<td>Route permit issued 12/08 except in vicinity of FDL Reservation (which was approved in 04/09)</td>
</tr>
<tr>
<td>Agency</td>
<td>Permit or Consultation Authority</td>
<td>Agency Action</td>
<td>Status</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>----------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>State of Minnesota (continued)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollution Control Agency</td>
<td>MS 115.03 and 116.07; MR 7001; MR 7050.0224, Subpart 1; Section 401 of the CWA</td>
<td>Consider issuance of Section 401 water quality certification for portions of the Project outside of Indian reservation lands. Consider water quality standards for wild rice plant species – exceedance of standards for Class 4 waters.</td>
<td>Review of permit applications in progress (submitted 11/08)</td>
</tr>
<tr>
<td></td>
<td>Section 402 of the CWA</td>
<td>Consider issuance of NPDES and State Disposal System (SDS) individual permits for construction, stormwater discharge, and hydrostatic test discharge along pipeline right-of-way; and in off right-of-way areas.</td>
<td>Review of permit applications in progress for right-of-way (submitted 02/09); and off right-of-way (submitted 09/08)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review Stormwater Pollution Prevention Plan (SWPP).</td>
<td>SWPP pending (expected in 05/09)</td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>MS 84.415; MR Chapter 6135</td>
<td>Consider issuance of license to cross public waters.</td>
<td>Review of permit application in progress (submitted 01/09)</td>
</tr>
<tr>
<td></td>
<td>MS 84.415; MR Chapter 6135</td>
<td>Consider issuance of license to cross public lands.</td>
<td>Review of permit application in progress (submitted 01/09)</td>
</tr>
<tr>
<td></td>
<td>MS 103G; MR Chapter 6115.0600 – 6115.0810</td>
<td>Consider issuance of water appropriation permit.</td>
<td>Permit application pending (expected in 05/09)</td>
</tr>
<tr>
<td></td>
<td>MS 84.0895; MR 6134; MR 6212.1800 – 6212.2300</td>
<td>State-protected species consultation.</td>
<td>Consultation in progress (initiated 12/08)</td>
</tr>
<tr>
<td>State Historic Preservation Office</td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties.</td>
<td>Consultation in progress</td>
</tr>
<tr>
<td><strong>State of Wisconsin</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Natural Resources (WDNR), Office of Energy and Environmental Analysis</td>
<td>Wisconsin Statutes Chapter 30; NR 299</td>
<td>Consider issuance of permits for wetland and waterbody crossings.</td>
<td>Review of permit application in progress (submitted 02/09)</td>
</tr>
<tr>
<td>Agency</td>
<td>Permit or Consultation Authority</td>
<td>Agency Action</td>
<td>Status</td>
</tr>
<tr>
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</tr>
<tr>
<td>State of Wisconsin (continued)</td>
<td>Department of Natural Resources (WDNR), Office of Energy and Environmental Analysis (continued)</td>
<td>Wisconsin Environmental Policy Act (WEPA) (s.1.11, Wisconsin Statutes; NR 150, Wisconsin Administrative Code)</td>
<td>Environmentally sensitive decision-making review.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Section 401 of the CWA; Wisconsin Administrative Code NR 103</td>
<td>Consider issuance of Section 401(^b) and NR 103 water quality certifications.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wisconsin Pollution Discharge Elimination System (WPDES) program, WI-0057681-2</td>
<td>Consider issuance of stormwater general permit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WPDES Hydrostatic Test Water Discharge program, WI-0057681-3</td>
<td>Consider issuance of hydrostatic test water discharge general permit.</td>
</tr>
<tr>
<td></td>
<td>WDNR, Northern Region</td>
<td>Wisconsin Statutes Chapter 29.604; Wisconsin Administrative Code NR 27</td>
<td>State-protected species consultation and consider issuance of incidental take of state threatened or endangered species.</td>
</tr>
<tr>
<td></td>
<td>Wisconsin Historical Society (State Historic Preservation Office)</td>
<td>Section 106 of the NHPA</td>
<td>Review and comment on the effects of the Project on historic properties.</td>
</tr>
</tbody>
</table>

\(^a\) Enbridge also submitted a “Summary of Construction Methods and Procedures Used to Cross Wetlands and Waterbodies” to the COE on 02/09 and provided the COE with additional information, as requested, on minimization of impacts.

\(^b\) Possible actions under Section 401 are to issue a permit, issue a permit with conditions, deny a permit, or waive Section 401 certification.
1.7 OTHER ENBRIDGE PROJECTS AND PROPOSALS

As stated on its website (http://www.enbridge-expansion.com/expansion/), Enbridge has been expanding its capacity in response to growing demand from refineries in the U.S. Midwest and beyond for increased heavy and light crude oil supply from western Canada. The Enbridge Expansion Projects are designed to increase petroleum transportation services from the crude oil supply in the Western Canadian Sedimentary Basin to refineries in the Midwest; these include projects that have recently been completed and others that are in various stages of development. Each project has been or will be proposed separately, and each has either undergone or will undergo a separate environmental review. Some of the projects have been approved and are in operation, some have been approved and are under construction, some are in the final stages of review and approval, and others are on hold or have otherwise not been formally proposed.

None of the projects are directly associated with or dependent on the Alberta Clipper Project, and each one has independent utility. Further, the projects do not meet the definitions of connected actions presented in the CEQ guidelines for implementation of NEPA presented in 40 CFR 1508.25(a1):

“...they [connected actions] are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a large action and depend on the larger action for their justification.”

Because DOS does not consider the Enbridge Expansion Projects to be connected actions, they are not addressed in the resource sections of this EIS. Further, DOS does not have any permitting authority associated with the projects. However, information on the cumulative impacts of the appropriate Enbridge Expansion Projects is presented in Section 4.14 (Cumulative Impacts), and the following subsections provide summary information on the projects:

- Southern Lights Program (Section 1.7.1);
- North Dakota System Expansion Phase 6 (Section 1.7.2);
- Southern Access Expansion Program (Section 1.7.3); and
- Previously Announced and Potential Projects (Section 1.7.4).

Enbridge has proposed a separate project, the Superior Terminal Expansion Project, which DOS has determined is a connected action, as described in Sections 1.1 and 2.9. The connected action is discussed in the impact analyses presented throughout Section 4.0 of this EIS.

1.7.1 Southern Lights Program

The Southern Lights Program includes three projects: the Southern Lights Diluent Project, the Southern Lights Reversal Project, and the Southern Lights LSr Project. The U.S. portions of these projects are depicted in Figure 1.7.1-1 and are summarized below.
ALBERTA CLIPPER PROJECT

FIGURE 1.7.1-1
SOUTHERN LIGHTS AND SOUTHERN ACCESS PROJECTS
1.7.1.1 Southern Lights Diluent Project

Crude oil produced in western Canada is generally too heavy and viscous to transport via pipeline. To allow transport of heavy crude oil from Canada to the United States via pipeline, lighter hydrocarbons (diluents) need to be blended into the crude oil before introducing it into the pipeline.

Enbridge’s Southern Lights Diluent Project, combined with the Southern Lights Reversal Project (see Section 1.7.1.2), is proposed to transport diluent from the United States to Canada for use in blending with heavy crude oil prior to transportation of the crude oil by pipeline. The current diluent supplies available for use in the Alberta oil sands from within Canada and from the northern United States are insufficient to meet the demands for the dilution of heavy crude oil. Although forecasts for production of heavy crude oil from Alberta have recently showed slower growth, the long-term forecasts for Canadian crude, and thus the need for diluent, remain high (see Section 1.2.2). Enbridge has estimated that up to 2.3 million bpd of production from Alberta’s oil sands will require the use of diluent to make it suitable for pipeline transport, with up to 316,000 bpd of diluent needed by 2015. The Southern Lights Diluent Project is designed to transport up to 180,000 bpd and can meet a portion of that need. Portions of the Alberta heavy crude oil that will be diluted with the diluent from the Southern Lights Diluent Project will be transported to other regions in North America via existing Enbridge pipelines and other existing, planned, and proposed pipelines.

In granting certificates of need for the Alberta Clipper and Diluent Project pipelines, the Minnesota Public Utilities Commission (MPUC) recognized that the Diluent Project is distinct from the Alberta Clipper Project. The Alberta Clipper Project was approved based on the project’s ability to fulfill energy needs with the heavy crude oil to be transported through that pipeline. MPUC determined that the Southern Lights Diluent Project would satisfy the public need and made the following statement:

“The Southern Lights Diluent project will return diluent to Canadian crude producers to allow them to produce the appropriate grade of crude oil for delivery to refiners, strengthening the commercial linkages between Western Canadian crude producers and refiners in the Midwest. If the Southern Lights Diluent project is not constructed, this linkage to the Midwestern refinery market will not established. Conceivably, this might prompt Canadian crude oil producers to look to other markets, where the commercial arrangements are more favorable, for the disposition of crude oil supplies.”4

The portion of the Diluent Project in the United States consists of approximately 669 miles of new pipeline from Manhattan, Illinois to the existing Enbridge terminal in Clearbrook, Minnesota where it would be connected to the proposed Southern Lights Reversal Project (see Section 1.7.1.2). The Diluent Project consists of three stages. Stages 1 and 2 were constructed in 2007 and 2008, respectively, and extend from Manhattan, Illinois to Superior, Wisconsin. Both stages consist of 20-inch-diameter pipeline with a total length of 484 miles.

Stage 3, which would extend from Superior to Clearbrook, is currently being reviewed by the COE, the Minnesota Department of Natural Resources (MDNR), and the Wisconsin Department of Natural Resources (WDNR). This stage of the Diluent Project would consist of construction of a 183-mile-long, 20-inch-diameter pipeline from the existing Enbridge terminal in Superior to the existing Enbridge terminal in Clearbrook. This portion of the pipeline would be installed primarily within or adjacent to the

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4 See MPUC Docket No. PL9/CN-07-465 (Certificate of Need) and MPUC Docket No. PL9/PPL-07-361 (Route); Summary of Testimony at the Public Hearings, Findings of Fact, Conclusions and Recommendations of Administrative Law Judge Lipman (issued July 17, 2008) and affirmed by the MPUC on December 29, 2008, at page 49.
existing Enbridge pipeline corridor and would be constructed at the same time as the Alberta Clipper Project, if both projects receive all required permits, licenses, and approvals and are constructed. One new pump unit would be installed at the existing Clearbrook Terminal as a part of the Diluent Project.

The Diluent Project would also include the construction and operation of a new pump station at the Superior Terminal, which would include three mainline pumps on a concrete foundation. The locations of other pump stations and mainline valves along the Diluent Project route were selected based on operational needs and were designed in accordance with applicable regulations. The project includes the installation of mainline valves near major rivers, other environmentally sensitive areas, population centers, and pump stations to increase protection in those areas.

1.7.1.2 Southern Lights Reversal Project

Enbridge is proposing to (1) reverse the flow of its existing 18-inch-diameter crude oil pipeline between its Clearbrook Terminal and Hardisty, Alberta, Canada; and (2) transport diluent in that pipeline. The Reversal Project does not involve new pipeline construction but includes upgrades to existing pump stations and installation of additional mainline block valves. This project is currently permitted, including an existing Presidential Permit for the border crossing. The U.S. portion of the Reversal Project extends from Clearbrook to the U.S./Canada border near Neche, North Dakota. Aboveground components include installation of new pumping units within the existing Enbridge pump station site at Clearbrook, reversal of station piping for existing pumping units at the existing Viking Pump Station, and new mainline valves.

The previous use and capacity of the pipeline used for the Reversal Project (Enbridge Line 13) will be replaced by the Southern Lights LSr Project, as described in Section 1.7.1.3. Enbridge anticipates completing the Reversal Project by the middle of 2010.

1.7.1.3 Southern Lights LSr Project

The Southern Lights LSr Project is a petroleum pipeline and associated facilities between Cromer, Manitoba, Canada, and Clearbrook, Minnesota. The project received all necessary permits, was constructed, and began operation in April 2009. The LSr Project has the capacity to deliver 186,000 bpd of petroleum (primarily light, sour crude oil) from a supply hub near Cromer, Manitoba to the existing Enbridge terminal in Clearbrook. The LSr pipeline also increases the capacity for delivering light crude oil from Cromer and provides additional capacity to transport light crude oil when the parallel 18-inch line is reversed, as described above.

The LSr Project includes approximately 136 miles of new 20-inch-diameter pipeline from the U.S./Canada border near Neche to the existing Enbridge terminal in Clearbrook and was constructed primarily within or adjacent to the existing Enbridge right-of-way. In addition, the project includes installation of mainline valves along the pipeline route and at major waterbody crossings, modifications at two existing pump stations (Donaldson and Plummer, Minnesota), and construction of delivery facilities.

As proposed, the Alberta Clipper Project pipeline would be constructed adjacent to the proposed alignment of the Southern Lights LSr Project pipeline along the majority of its route from Neche to Clearbrook. Impacts associated with construction of the LSr Project are described in the EA for that project (Enbridge 2008) and have been considered in the assessment of cumulative impacts presented in Section 4.14.
1.7.2 North Dakota Expansion Phase 6

Enbridge owns and operates a 950-mile-long underground petroleum pipeline system (North Dakota Pipeline System) that extends from eastern Montana through North Dakota and western Minnesota, ending at the existing Enbridge terminal and pump station at Clearbrook. The system gathers crude oil from production areas in the Williston Basin in western North Dakota and eastern Montana and transports that crude to the Clearbrook Terminal, where it interconnects with the Minnesota Pipeline System and the Enbridge Lakehead System.

Enbridge has previously expanded this system and has proposed an additional expansion (North Dakota System Expansion Phase 6). The Phase 6 Expansion Project would consist of installation of one new storage tank (at the Beaver Lodge Tank Farm in North Dakota) and modifications to 12 pump stations in North Dakota and three pump stations in Minnesota. The increased storage and pumping capacity would increase the capacity of the existing pipeline by about 51,000 bpd. The increased volumes of crude oil would be transported in the existing pipeline from the Williston Basin to the Enbridge terminal at Clearbrook. From there, connections with the Enbridge Lakehead System and the Minnesota pipeline would allow shipment of the increased volume of oil to refineries in the Midwest and other areas. The expansion would increase the total North Dakota Pipeline System capacity from 110,000 to 161,000 bpd. Enbridge anticipates an in-service date of late 2009.

1.7.3 Southern Access Expansion Program

Enbridge recently expanded and extended its Lakehead System with two Southern Access Projects: the Southern Access Expansion Pipeline Project and the Southern Access Extension Pipeline Project. Figure 1.7.1-1 depicts the general locations of the facilities.

1.7.3.1 Southern Access Expansion Pipeline Project

This project was developed in two stages, both of which have been installed as of spring 2009. Stage 1 is a new 321-mile-long, 42-inch-diameter pipeline from the existing Enbridge terminal at Superior to Enbridge’s existing Delavan pump station near Whitewater, Wisconsin. The project includes new pump stations in Wisconsin and Illinois as well as upgrades to pump stations that are upstream of Superior. This stage added approximately 190,000 bpd of capacity from the Enbridge terminal at Superior to the Chicago area.

Stage 2 is a new 133-mile-long, 42-inch-diameter pipeline from the Delavan pump station to Flanagan, Illinois (near Pontiac, Illinois, southwest of Chicago). At that location, the project connects to Enbridge’s Spearhead System. This stage added 210,000 bpd of capacity. The total Southern Access Expansion Pipeline Project relieved a bottleneck in capacity south of the Superior terminal, adding 400,000 bpd of capacity to the Lakehead System.

1.7.3.2 Southern Access Extension Pipeline Project

Enbridge has proposed to extend its mainline south from Flanagan, Illinois to the hub at Patoka, Illinois. The project would provide a new interconnection to serve refinery markets that do not receive sufficient oil supplies from western Canada through the Enbridge mainline system.

This extension would include a new 170-mile-long, 36-inch-diameter pipeline that would extend south from Flanagan. The initial capacity would be approximately 400,000 bpd, with a potential maximum capacity of 800,000 bpd with future increases in pumping power. From the Pakota hub, oil could be
transported to a variety of markets throughout the Midwest and the U.S. Gulf Coast. Permitting for the project is in progress, with an anticipated in-service date of late 2010.

1.7.4 Previously Announced and Potential Projects

1.7.4.1 Texas Access Pipeline

Enbridge and ExxonMobil Pipeline Company had previously announced preliminary plans for a new pipeline system that would transport crude oil from Patoka, Illinois to the Texas Gulf Coast. In the preliminary plans, the proponents indicated that crude oil transported in the Texas Access Pipeline from Patoka would be produced in the Canadian oil sands region of Alberta. The conceptual plan included a 738-mile-long, 30-inch-diameter pipeline that would transport the oil from Patoka to refineries in Nederland, Texas; and an 88-mile-long, 24-inch-diameter pipeline that would transport crude oil from Nederland to a delivery point in an area east of Houston. The proponents did not receive sufficient interest in the project from shippers to justify the construction costs. Enbridge has stated that, based on current market conditions, the project will not go forward.

1.7.4.2 Vantage Pipeline

In late August 2008, Enbridge and BP Pipelines (North America) announced initial plans for a crude oil pipeline project that would be a more economic alternative to the Texas Access Pipeline. The project would consist of reversing existing pipelines from the Chicago area to Cushing, Oklahoma and building new pipeline segments between Cushing and one or more refinery points along the U.S. Gulf Coast. This project would receive crude oil from the Enbridge system near Chicago, regardless of whether the crude oil was transported through the Alberta Clipper Project. The project is still at the preliminary planning stage, and no decisions have been made regarding the final scope or timing of the project.

1.7.4.3 Enbridge Trailbreaker Expansion Program

Enbridge identified a series of other potential projects that would expand existing capacity. Collectively the projects are considered the Trailbreaker Expansion Program and consist of the following:

- Expansion of capacity east of the existing Enbridge Griffith, Indiana Terminal along existing Line 6A;
- Expansion of service south of Stockbridge, Michigan in a system that provides oil to refineries in Ohio;
- Reversal of Enbridge Line 9 in Canada between Sarnia and Montreal;
- Coordination with a concurrent reversal of an existing pipeline between Montreal and Portland, Maine; and
- Facilitation of tanker transport from Portland, Maine to the U.S. Gulf Coast.

The timing, scope, and commercial support for the expansion program are not certain, and Enbridge has publicly announced that the Trailbreaker Program is on hold.

1.8 REFERENCES


CAPP. See Canadian Association of Petroleum Producers.

CNEB. See Canadian National Energy Board.

EIA. See Energy Information Agency.

Enbridge. See Enbridge, Inc.


ERCB. See Energy Resources Conservation Board.


MDNR. See Minnesota Department of Natural Resources.

Minnesota Department of Natural Resources. 2008. The DNR Data Deli. Available online at: http://deli.dnr.state.mn.us/.


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