

EXHIBIT G

PROJECT MAPS

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G. PROJECT MAPS

Loup River Public Power District (Loup Power District or the District) is applying for a new license for the Loup River Hydroelectric Project (FERC Project No. 1256) (Project). The Project Boundary maps, prepared in accordance with the requirements of 18 CFR §4.41(h), are provided in Appendix G-1. An overview of these maps is provided in Section G.1. In addition, the District proposes minor modifications to the Project Boundary based on issues identified while preparing these maps, as discussed in Section G.2. Specifically, and as more fully discussed below, the District is proposing to remove three areas of land from the Project Boundary that are not necessary for Project operations and to add three areas of land to the Project Boundary that are related to requirements of the existing license (and anticipated new license). The District owns all property associated with the defined Project Boundary.

G.1 MAP OVERVIEW

The Project Boundary maps show the Project vicinity, location, and Project Boundary in sufficient detail to provide a full understanding of the Project's location and extent. There are no Federal lands within the Project Boundary. The Project components shown in each sheet of the Project Boundary maps are identified in Table G-1.

Table G-1. Project Boundary Maps

Map Sheet	Project Component(s) Shown
G-1	Diversion Weir, Intake Gate Structure, Sluice Gate Structure, Settling Basin, North and South Sand Management Areas, Skimming Weir
G-2	Settling Basin, Skimming Weir, Upper Power Canal
G-3	Upper Power Canal, Beaver Creek Siphon, Railroad Siphon
G-4	Upper Power Canal, Railroad Siphon
G-5	Upper Power Canal, Looking Glass Creek Siphon
G-6	Upper Power Canal, Monroe Powerhouse, Lower Power Canal, Dry/Cherry Creek Siphon
G-7	Lower Power Canal, 916 Siphon
G-8	Lower Power Canal, Oconee Siphon
G-9	Lower Power Canal
G-10	Lower Power Canal, Sawtooth Weir, Lake Babcock
G-11	Lower Power Canal, Sawtooth Weir, Lake Babcock, Lake North, Intake Canal
G-12	Intake Canal, Powerhouse Inlet Structure, Penstocks, Columbus Powerhouse, Tailrace Canal

Map Sheet	Project Component(s) Shown
G-13	Tailrace Canal
G-14	Tailrace Canal, Lost Creek Siphon, Outlet Weir

G.2 PROJECT BOUNDARY MODIFICATIONS

In association with this Project relicensing, the District is proposing minor modifications to the existing Project Boundary to remove three areas of land that are not necessary for Project operations and to add three areas of land that are related to requirements of the existing license (and anticipated new license). Figures showing these areas are provided in Appendix G-2. The District has evaluated the proposed modifications and, as described more fully below, determined that removal of the three areas would in no way inhibit or conflict with Project operations or maintenance, or other Project purposes such as flowage, recreation, shoreline control, or protection of environmental resources. Further, as described below, the addition of the three areas to the Project Boundary is consistent with the existing license (and anticipated new license) requirements.

G.2.1 Preferred Sands' Operational Location Removal

The District proposes that a 36.1-acre area that measures 7,857 feet by 200 feet and is located south of and immediately adjacent to the Nebraska Central Railroad line in Sections 31 and 32, Township 17 North, Range 4 West, be removed from the Project Boundary (see Appendix G-1, Sheet G-1, and Appendix G-2, Figure G-1). The entirety of this area is located north of the North Sand Management Area dike and is currently used by Preferred Sands for its sand processing operation. This area is not necessary for continued Project operation, and its removal would in no way inhibit Project operations or maintenance. Furthermore, the following considerations support the District's determination that removal of this area would not inhibit Project operations:

- Power Generation – The area contains no Project facilities or structures associated with power generation.
- Flowage – The area contains no Project facilities or structures associated with hydraulic conveyance or Project flowage requirements.
- Recreation – The area contains no developed recreation opportunities. Furthermore, the area is located within the restricted access area of the Project Headworks and would never be proposed for recreational use. Removal of this area would in no way diminish the District's ability to fulfill the recreation requirements of its operating license, nor would it impact planned recreation opportunities included in the District's Draft

Recreation Management Plan (see Exhibit E, Appendix E-4), developed in association with Project relicensing.

- Threatened or Endangered Species – The area is not known to possess suitable habitat for threatened or endangered species. It is removed from the North Sand Management Area (recognized as and managed for interior least tern and piping plover habitat) by a dike and lies immediately adjacent to an active rail corridor. Furthermore, removal of the area would in no way alter the Memorandum of Agreement (MOU) entered into by Preferred Sands, the U.S. Fish and Wildlife Service, and the Nebraska Game and Parks Commission. The MOU provides cooperative, proactive management strategies to avoid negative impacts on interior least terns and piping plovers on the North Sand Management Area as a result of sand processing operations.
- Fisheries – The area is wholly terrestrial and separated from the Loup River and Loup Power Canal by a dike. Removal of the area would in no way compromise fishery resources associated with the Project.
- Shoreline – The area is wholly terrestrial and separated from the Loup River and Loup Power Canal by a dike. Removal of the area would in no way compromise shoreline or associated erosion control opportunities.
- Cultural Resources – Based on the Phase I/II Archaeological Inventory and Evaluation conducted for relicensing, this area is not known to contain any historical, archaeological, or culturally significant sites (Carlson and Osborn, August 26, 2010); therefore, its removal would not compromise FERC’s obligations under Section 106 of the National Historic Preservation Act of 1966.

G.2.2 Platte County Drainage District Lost Creek Ditch Flowage Area Removal

The District proposes that 25.2 acres that buffer the Lost Creek Ditch for approximately 5,600 linear feet downstream (south) of the Loup Power Canal and associated 916 Siphon in the southern half of Sections 27 and 34, Township 18 North, Range 2 West, be removed from the Project Boundary (see Appendix G-1, Sheet G-7, and Appendix G-2, Figure G-2). The area proposed for removal is and historically has been owned by the Platte County Drainage District; however, the use of an incorrect boundary linestyle on the District’s March 26, 1981, Exhibit G drawings gave the misleading appearance that this area was included in the Project Boundary. This area was never meant to be included in the Project Boundary. This area is not necessary for continued Project operation and is not owned by the District. Its removal would in no way inhibit Project operations or maintenance. The District would maintain ownership of property sufficient to facilitate necessary maintenance activities to the 916 Siphon and associated Lost Creek downstream of the structure discharge (see Appendix G-1, Sheet 7, and Appendix G-2, Figure G-2). Lastly, the

following considerations support the District’s determination that removal of this area would not inhibit Project operations:

- Power Generation – The area contains no Project facilities or structures associated with power generation.
- Flowage – The area contains no Project facilities or structures associated with hydraulic conveyance or Project flowage requirements.
- Recreation – The area contains no developed recreation opportunities. Furthermore, the area is owned by the Platte County Drainage District to facilitate Lost Creek drainage and consists of a narrow parcel that would never be designated for recreational use. Removal of this area would in no way diminish the District’s ability to fulfill the recreation requirements of its operating license, nor would it impact planned recreation opportunities included in the District’s Draft Recreation Management Plan (see Exhibit E, Appendix E-4), developed in association with Project relicensing.
- Threatened or Endangered Species – In this location, the Lost Creek Ditch is a narrow, channelized drainage feature that is immediately abutted by active agricultural practice. For these reasons, the area proposed for Project Boundary removal does not include suitable habitat for threatened or endangered species.
- Fisheries – Although the area surrounds a waterway that may support fish populations, Lost Creek Ditch is effectively separated from Project fisheries due to its conveyance beneath the Loup Power Canal via the 916 Siphon. Furthermore, removal from the Project Boundary would not alter the City of Columbus’s ongoing ownership of the area and continued use for flowage.
- Shoreline – Lost Creek Ditch is effectively separated from Project waters due to its conveyance beneath the Loup Power Canal via the 916 Siphon. Removal of the area would in no way compromise shoreline of Project waterways or result in heightened sedimentation to said waterways. Furthermore, removal from the Project Boundary would not alter the Platte County Drainage District’s ongoing ownership of the area and continued use for flowage and associated shoreline maintenance.
- Cultural Resources – Although the area proposed for removal was not specifically evaluated for cultural resources in association with Project relicensing, the canal areas in the vicinity were evaluated in the Phase I/II Archaeological Inventory and Evaluation conducted for relicensing (Carlson and Osborn, August 26, 2010). This evaluation did not identify the potential for cultural resources in Sections 27 and 34. Therefore, removal of the area from the Project Boundary would not compromise

FERC’s obligations under Section 106 of the National Historic Preservation Act of 1966 and specific to actual Project lands.

G.2.3 Lake Babcock Park Area Addition

The District proposes that a 5.9-acre expansion of the Project Boundary be added in association with Lake Babcock Park. The area proposed for addition is located in the northwest quarter of Section 36, Township 18 North, Range 1 West (see Appendix G-1, Sheet G-11, and Appendix G-2, Figure G-3) and is owned by the District. It serves a public recreation purpose and is considered part of the District-developed Lake Babcock (Loup) Park.

G.2.4 Former Borrow Location Removal

The District proposes that 12.5 acres of land located immediately north of the Columbus Powerhouse and the East 53rd Street bridge crossing of the Loup Power Canal in the southwest quarter of Section 4, Township 17 North, Range 1 East, be removed from the Project Boundary (see Appendix G-1, Sheet G-12, and Appendix G-2, Figure G-4). The area proposed for removal is a former borrow area used to provide necessary borrow material for various Project activities. It is separated from the Loup Power Canal by a county road and has unfortunately been prone to illegal dumping of trash and debris in recent years. As this area is not necessary for continued Project operation and because its removal would in no way inhibit Project operations or maintenance, the District proposes to remove it from the Project Boundary and possibly relinquish ownership to a party that could proactively manage the area and deter illegal dumping. The following considerations support the District’s determination that removal of this area would not inhibit Project operations:

- Power Generation – The area contains no Project facilities or structures associated with power generation.
- Flowage – The area is removed from the Loup Power Canal by a county road and contains no Project facilities or structures associated with hydraulic conveyance or Project flowage requirements.
- Recreation – The area contains no developed recreation opportunities. Furthermore, it is geographically removed from any Project-related developed or primitive recreational opportunities. Removal of this area would in no way diminish the District’s ability to fulfill the recreation requirements of its operating license, nor would it impact planned recreation opportunities included in the District’s Draft Recreation Management Plan (see Exhibit E, Appendix E-4), developed in association with Project relicensing.
- Threatened or Endangered Species – The area does not include suitable habitat for threatened or endangered species. It is removed from waterways and surrounded by developed transportation corridors and active

agricultural activities. For these reasons, removal of this area from the Project Boundary would not affect threatened or endangered species or associated habitat.

- Fisheries – The area contains no surface water connection to the Loup River or Loup Power Canal. Removal of the area would in no way compromise fishery resources associated with the Project.
- Shoreline – The area is separated from the canal by a county road and is not adjacent to Project-related shorelines. Removal of the area would in no way compromise shoreline or associated erosion control opportunities.
- Cultural Resources – Although the area proposed for removal was not specifically evaluated for cultural resources in association with Project relicensing, the canal areas in the vicinity were evaluated in the Phase I/II Archaeological Inventory and Evaluation conducted for relicensing (Carlson and Osborn, August 26, 2010). This evaluation determined that no intact cultural resources exist in the immediately adjacent canal sections. Therefore, removal of the area from the Project Boundary would not compromise FERC’s obligations under Section 106 of the National Historic Preservation Act of 1966 and specific to actual Project lands.

G.2.5 Former Private Cabin Location Addition

The District proposes that a 0.3-acre area that measures 100 feet by 114 feet and that is located approximately 600 feet south of the East 8th Street bridge crossing of the Tailrace Canal in the northeast quarter of Section 26, Township 17 North, Range 1 East, be reincorporated into the Project Boundary (see Appendix G-1, Sheet G-14, and Appendix G-2, Figure G-5). The area proposed for addition formerly housed a cabin leased by the District to a private owner. As a requirement of the District’s existing license (Special Article 30), this area was removed from the Project Boundary. Because the private lease has expired and the District has removed the cabin, the District proposes that this area be reincorporated into the Project Boundary for simplicity and continuity of the boundary along the Tailrace Canal.

G.2.6 Lower Platte River Channel Addition

The District proposes that 7.7 acres located within the channel of the lower Platte River at the Tailrace Canal confluence in the southern half of Section 35, Township 17 North, Range 1 East, be incorporated into the Project Boundary (see Appendix G-1, Sheet G-14, and Appendix G-2, Figure G-6).

Nebraska case law has determined that riparian landownership extends to the center or thread of the stream; as such, the District’s ownership in the vicinity of the Outlet Weir extends to the center of the Platte River (*Stubblefield v. Osborn*, 149 Neb. 566, 31 N.W.2d 547 (1948), as cited in Professional Surveyors Association of Nebraska, “Riparian Rights”). In order to maintain consistency with Nebraska law, the District

proposes that this area be incorporated into the Project Boundary. Furthermore, this additional area is deemed to be relevant to Project operations related to shoreline management.

G.3 REFERENCES

Carlson, Nancy, and Alan Osborn. August 26, 2010. Study 11.0, Section 106 Compliance, Phase I/II Archaeological Inventory and Evaluation. Loup River Hydroelectric Project, FERC Project No. 1256. On file at the Nebraska State Historical Society, Lincoln.

Professional Surveyors Association of Nebraska. “Riparian Rights.” Retrieved on November 5, 2011. <http://www.nebraskasurveyor.com/rip-rts.html>.

APPENDIX G-1

PROJECT BOUNDARY MAPS

Appendix G-1 is available by calling (402) 399-1341