
CONSTRUCTION HISTORY AND PROPOSED CONSTRUCTION SCHEDULE

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C.1 CONSTRUCTION HISTORY

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). Therefore, the requirement of 18 CFR §4.51(d)(1) regarding a tabulated chronology of construction of existing structures and facilities does not apply. Regardless, the District is providing information on the following Project improvements that have been—or are currently being—implemented pursuant to FERC authorization or as general maintenance since issuance of the District’s license in 1982.

- Turbine Rehabilitation – As authorized by FERC in 2003 (105 FERC ¶ 62,235) and 2005 (112 FERC ¶ 62,138), each of the six turbine generating units associated with the Project was rehabilitated and modernized between 2004 and 2007. Confirmation of completion of that work as of June 1, 2007, was submitted to FERC in September 2007. This \$18 million initiative substantially improved overall Project efficiency and made the turbine generating units viable for at least another 50 years of renewable energy operation.
- Major Equipment Replacement – The following major pieces of equipment associated with operation of the Project have been replaced or upgraded since the existing license was issued:
 - Monroe Powerhouse Generator Step-up Transformer – replaced in 1987
 - Monroe Powerhouse Governors – replaced from 1997 to 1999
 - Columbus Powerhouse Unit Transformer 3 – replaced in 1998
 - Monroe Powerhouse Exciter – replaced from 2000 to 2002
 - Columbus Powerhouse Exciter and Governor – replaced from 2000 to 2002
 - Monroe Powerhouse Unit Breakers – replaced from 2002 to 2004
 - Columbus Powerhouse Unit Transformers 1 & 2 – replaced in 2003
 - Columbus Powerhouse Unit Breakers – replaced in 2003
 - Monroe Powerhouse Unit Transformer Circuit Switcher – installed from 2004 to 2008
 - Monroe Powerhouse Generator Protection Panels – replaced from 2004 to 2008

- SCADA System Installation – The supervisory control and data acquisition (SCADA) system was installed in 1993 and allows for automation of certain Project functions; however, in general, the Project remains manually controlled by a qualified operator 24 hours per day, 7 days per week. The SCADA system includes remote sensors at the Headworks, Monroe Powerhouse, and Columbus Powerhouse. Operation of turbine generating units in both powerhouses can be monitored and controlled from the Columbus Powerhouse through the SCADA system. In addition, each turbine generating unit has a manual interface in its respective powerhouse for local control.
- Dredge Replacement – Dredging at the Project is undertaken consistent with Article 21 of the existing license. The District’s original 1937 dredge has reached the end of its economic life and is being replaced by a new hydraulic dredge that is scheduled to enter service in September 2012. The new dredge will be very similar to its predecessor in form and function. However, it will have a more powerful 3,000-horsepower pump and use more energy-efficient variable frequency drive electric motors. The new dredge will also employ modern controls and monitoring systems. A new substation and transformer are also required to meet the energy needs of the new dredge.
- Recreation Improvements – The following major improvements have been made to Project recreation facilities since the existing license was issued:
 - Trail Construction – Constructed three pedestrian/bicycle trails, totaling approximately 7 miles.
 - Shelter Construction – Constructed four park shelters: two at Headworks Park, one at Lake Babcock Park, and one at Lake North Park.
 - Campsite Electrical Upgrade – Upgraded campsite electrical systems to meet applicable code requirements; upgrades have taken place in multiple years, including most recently in 2011.
 - Pit Toilet Construction – Constructed seven concrete pit toilets.
 - OHV Park Establishment – Established the designated off-highway vehicle (OHV) park and associated parking/unloading area and entrance trails.
 - Potable Water Improvements – Replaced hand-pumped park wells with electric/pressurized potable water systems at Headworks Park, Lake Babcock Park, and Lake North Park.

- Sand Volleyball Court Construction – Constructed a sand volleyball court at Lake North Park.
- Playground Equipment Replacement – Replaced obsolete playground equipment, as necessary.
- Lake North Stabilization – Placed sheet pile and swimming ladders along the lake perimeter to deter erosion, maintain the recreational resource, and allow safe and effective entry/exist for swimmers.
- Tailrace Park Access Restriction – Closed both the east and west sides of Tailrace Park to vehicular access in efforts to deter litter, vandalism, and public safety concerns; maintained foot-traffic access.

C.2 PROPOSED CONSTRUCTION SCHEDULE

With the exception of recreation improvements, the District has no plans to construct new Project facilities or add to existing facilities. The planned recreation improvements, included in the District’s Recreation Management Plan (see Exhibit E, Appendix E-5), are summarized as follows:

- Permanent Restroom at Headworks OHV Park – A new permanent restroom would house men’s and women’s double-vaulted waterless toilets that meet Americans with Disabilities Act (ADA) guidelines, but would not include running water or shower facilities. This improvement is scheduled for completion in 2016.
- Wheelchair-accessible Fishing Pier on Lake North – The wheelchair-accessible fishing pier would meet ADA guidelines and would be located along the north shore of Lake North. Preliminary design plans consist of a 12-foot by 24-foot covered structure with railing that would be accessible from Two Lakes Trail via ADA-compliant paths. This improvement is estimated for completion in 2015.
- New Trail Segment – A new 2,000-foot trail segment is planned along the southeast shore of Lake Babcock. This new trail segment is consistent with the Columbus Area Recreational Trails, Inc. (CART) Master Plan and would parallel 18th Avenue from the Intake Canal, north to the dike that separates Lake North from Lake Babcock. The planned trail would expand the existing public trail network by connecting to both the Robert White Trail and the Monastery Trail, both of which were formally dedicated during a CART ribbon-cutting on June 4, 2011. The District plans to complete the trail in 2016 or 2017.

- Playground Improvements – Playground equipment at developed recreation areas is evaluated yearly for replacement and improvements; consistent with current practice, it is anticipated that improvements would be made at one or more playground areas for approximately the first 10 years of the new license period to replace outdated equipment.
- Sand Volleyball Court – The District plans to install a sand volleyball court at Headworks Park in 2015.