APPENDIX A
CONTACTS FOR RESOURCE AGENCIES
AND NON-GOVERNMENTAL ORGANIZATIONS

FERC – Chicago Regional Office

- John Zygaj
  Regional Engineer
  Federal Energy Regulatory Commission
  Office of Energy Projects – Division of Dam Safety and Inspections
  230 South Dearborn Street, Suite 3130
  Chicago, Illinois, 60604
  (312) 596-4437
  john.zygaj@ferc.gov

Kansas Dept. of Wildlife, Parks and Tourism

- Robin Jennison
  Secretary, Kansas Department of Wildlife, Parks and Tourism
  Office of the Secretary
  1020 S. Kansas Avenue, Ste. 200
  Topeka, Kansas 66612-1327
  785-296-2281

- Jason Luginbill
  Chief, Ecological Services Section
  Kansas Department of Wildlife, Parks and Tourism
  1020 S. Kansas Avenue, St. 200
  785-296-6026

US Fish and Wildlife Service

- Vernon Tabor
  Kansas Ecological Field Office
  315 Houston Street, Suite E
  Manhattan, Kansas 66502
  785-539-3474
  vernon_tabor@fws.gov

- Heather Witlaw
  Kansas Ecological Field Office
  315 Houston Street, Suite E
  Manhattan, Kansas 66502
  785-539-3474
  heather_witlaw@fws.gov

Friends of the Kaw – Kansas Riverkeeper

- Dawn Buhler
  Friends of the Kaw
  P.O. Box 1612
  Lawrence, KS 66044
  (785) 979-8341
  riverkeeper@kansasriver.org

Kansas Sierra Club

- Bill Griffith
  Kansas Sierra Club
  1303 South Broadway
  Leavenworth, Kansas 66048
  (913)702-4611
  bgriffith6@kc.rr.com

Kansas Natural Resources Council

- Sharon Ashworth
  Kansas Natural Resources Council
  P.O. Box 2635
  Topeka, Kansas 66601
  sharon.knrc@gmail.com

APPENDIX B
DESCRIPTON OF THE FACILITY

General Project Description.

The subject project, The Bowersock Mills & Power Company's Expanded Kansas River Hydropower Project, was originally certified by the Low Impact Hydropower Institute (LIHI Cert No. 15), on October 27th, 2004 as the "Bowersock Project." The original certified project was FERC-Exempt (P-2644). It had one powerhouse (South Powerhouse), manually-raised wooden flashboards, an authorized millpond maximum elevation of 812 NGVD, and a capacity of 2.35 MW.

The Bowersock Mills & Power Company (BMPC) had known for many years that the existing project under-utilized the historic Bowersock Dam, and had hoped to one day expand the project to maximize the electricity output from the existing dam structure. With this goal in mind, BMPC applied for a new FERC License as the Expanded Kansas River Hydropower Project which was granted in August, 2010. The new license granted permission for the replacement of the old spillway with a new powerhouse with four, vertical, fixed blade turbine generator sets with a capacity of 4.65 MW, and an increase in the approved millpond height from 812 NGVD to 813.5 NGVD. In a subsequent addendum to the license FERC granted approval for the replacement of the manually-raised, wooden flashboard system with a rubber dam. The expansion was initiated in June of 2011 and completed in December, 2012, resulting in a total project capacity of 7MW with an average estimated annual generation of approximately 33,000,00 kWh. The expanded project powerhouses occupy less square footage than the previous configuration (South Powerhouse and spillway), and is projected to produce approximately three times the kWh of the previous project in a median water flow year.

The operations of the expanded project remain fundamentally the same as they were under the prior configuration. The project continues to operate as a run-of-river operation, passing all upstream flows through the project as they reach the project site. Under the previous configuration, the project could utilize a maximum of 2,300 cfs through energy generation, and passed all flows in excess of 2300 cfs through Obermeyer Gates, the wooden flashboard system and the spillway on the north side of the river. The expanded project has the capacity to utilize 4,600 cfs for energy generation, and passes all flows in excess of 4,600 cfs through two separate sets of Obermeyer Gates and the rubber dam system.

The project storage is limited, with a total impoundment of 3,072 acre-feet, but a net effective impoundment of 2,758 acre-feet. The millpond is not intended to drop below 813.5 NGVD with the exception of infrequent, intentional drawdowns for project maintenance, but will often rise above that level due to natural flows which are significantly beyond the capacity of the project to handle. The median flow in the Kansas River at the Bowersock Dam is 3,400 cfs. In a typical year, flows in the Kansas River typically reach approximately 80,000 cfs at some point during the spring rains. At flows beyond 3,400 cfs, BMPC begins to lower the dam-top water retention

structures, first lowering the Obermeyer Gate Systems to pass excess flows, and subsequently lowering the four sections of the rubber dam to pass flows. Please see Appendix E, the BMPC Project Operations Monitoring Plan – Rubber Dam Revision for details on flow management.

At flows below 14,600 cfs, the Kansas River is still retained within the confines of the Kansas River channel, and the project continues to pass all upstream flows, either through the powerhouses for generation or through the Obermeyer Gate systems when flows exceed the cfs flow capacity of the generating units.

Project Stakeholders

Through the course of the Expanded Project License Process, key stakeholders in the Bowersock Dam were identified as follows:

- The Bowersock Mills & Power Company Expanded Kansas River Hydropower Project
- City of Lawrence, Kansas – draws approximately 50% of its water supply from the Bowersock Millpond on a daily basis[1]
- Public Recreation - Including protection of the millpond for the University of Kansas Boathouse immediately upstream of the dam and other community river recreationists both up and downstream of the Bowersock Dam.
- Protection of existing Kansas Department of Transportation bridge piers
- Protection from streambed degradation for the upper reaches of the Kansas River [2]
- Westar Energy, Lawrence Energy Center. BMPC studies confirm that the BMPC Millpond extends up the Kansas River to just beyond the Westar Energy Lawrence Energy Center intakes, which provide cooling water for a 600 MW coal-fired power plant.

Material Changes

The material changes made since the last project re-certification in 2009 include the following:

1.) Increase in maximum millpond height from 812 NGVD to 813.5 NGVD. This increase in maximum millpond height did not change the shape or configuration of the millpond, as

---

[1] Under a 1977 agreement (Extended to 2077 as of August 2010), the City of Lawrence is responsible for the maintenance of the Bowersock Dam. The agreement was established so that the City would have the ability to control and maintain the dam to protect its water supply. The Kaw River Water Treatment (WTP) raw water intakes, which supply approximately 50% of the City's daily water usage, depend upon the higher river headwater surface elevations of the Bowersock Mill Pond to meet the plant's operating capacity of 17.5 mgd.

[2] Letter from the Kansas Department of Transportation (KDOT), Michael Orth, P.E., CFM, to the Bowersock Mills and Power Company regarding potential impacts of the removal of the Bowersock Dam. November 26th, 2008. "The Kansas River has a sand streambed and sand bars can be seen along much of its length. The river has degraded over time due to several factors including downstream dredging and a long-term lowering of the Missouri River base level. Bowersock Dam has arrested the degradation and kept it from continuing upstream. Removal of the Bowersock Dam would result in further lowering of the bed elevation upstream as the river adjusts. This lowering would impact bridge foundations and berms channel banks, riparian vegetation, and cropland; not just along the Kansas River, but also along the river's upstream tributaries as they lower to meet the new base level… Removal of Bowersock Dam on the Kansas River in Lawrence could greatly impact not only the adjacent highway bridges but other infrastructure, farmland, natural habitats, the city's water supply, and the levee system which offers flood protection to downtown Lawrence. Impacts to the highway bridges would be significant and KDOT strongly opposes the removal of Bowersock Dam." Full letter attached in Appendix C.

813.5 is well within the riverbed, and the millpond was often at that level or above. It did increase inundation at low flows approximately ¼ of a mile further upriver than previous.

2.) Replacement of the north side spillway with a 4 unit powerhouse. The north side spillway had a history of intermittent use due to a poor design and a tendency to pack with debris. Project operators made periodic efforts to redesign the gates in order to improve operations, but the spillway was out of service more often than it was in service.
3.) Replacement of the wooden, manually-raised flashboards with a four-section rubber dam operated on a low-pressure blower system.
4.) Inclusion of a 20 ft. Obermeyer Gate immediately south of the new North Powerhouse.