LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION QUESTIONNAIRE

APRIL, 2014 REVISION

Background Information	
1) Name of the Facility as used in the FERC license/exemption.	The Bowersock Mills & Power Company Expanded Kansas River Hydropower Project
2) Applicant's name, contact information and relationship to the Facility. Please use the Project Contact Form in Appendix D.	Sarah Hill-Nelson Owner/Operator The Bowersock Mills & Power Company P.O. Box 66 500 South Powerhouse Road Lawrence, Kansas 66044 785-766-0884 See Appendix D.
3) Location of Facility including (a) the state in which Facility is located; (b) the river on which Facility is located; (c) the river-mile location of the Facility dam; (d) the river's drainage area in square miles at the Facility intake; (e) the location of other dams on the same river upstream and downstream of the Facility; and (f) the exact latitude and longitude of the Facility dam.	a.) Kansas b.) Kansas River c.) River Mile: 52.4 d.) Drainage Area: 60,114 sq. miles e.) 1 downstream weir/water diversion f.) Latitude/Longitude: 38.974022, -95.235078
4) Installed capacity. MATERIAL CHANGE	7MW
5) Average annual generation. MATERIAL CHANGE	32,726,533 kWh estimated and to be confirmed upon continuous annual operation
6) Regulatory status. MATERIAL CHANGE	FERC License P-13526 Granted August 31, 2010- 50 Year Term

	Full FERC Compliance as of 10/1/2014 NATDAM # KS00033
7) Reservoir volume and surface area measured at the normal maximum operating level. MATERIAL CHANGE	Through FERC License P-13526 the "millpond" of the project was defined as the area upstream of the dam within the existing river banks up to Elev. 814 NGVD. Normal maximum millpond level is 813.5' NGVD. The increase in millpond height impacted the millpond at low flows, as it extends the impact upstream by .5 miles from the previous max extent when maximum millpond level was 812 NGVD. The new increase in millpond height extended the impact upstream, but not change the channel of the millpond, as the millpond remains contained within the banks of the Kansas River at all levels at which it can be controlled by BMPC operations. Gross Volume at 813.5' NGVD: 3,072 Acre Feet. Reservoir Surface Area: 423 Acres * Based on HEC-RAS models of the corresponding river reach. In the initial BMPC LIHI Application, BMPC assumed an average depth of the millpond of 10 ft., and estimated that the surface level was affected up to 1.5 miles upstream. Through the process of acquiring the FERC License P-13526, a new analysis of the millpond was completed using a HEC-RAS model, and it was determined that the millpond was much shallower than BMPC had estimated,

	with correspondingly less storage capacity, but with impacts reaching 3.28 miles upstream. As a part of the study, it was determined that with the new millpond level of 814 NGVD, the millpond effect extends 3.78 miles upstream - an extension of millpond impacts upstream by ½ mile from the previous approved level.
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse). MATERIAL CHANGE	South Plant = 75'x30' +200'x30' = 46,200 sq. ft. South Powerhouse Flume 56' x 178' = 9,968 sq. ft. Dam = 665' x 30' = 19,950 sq. ft. North Powerhouse = 60' x 154'= 9,240 sq. ft. North Powerhouse Flume = Open flume facing river Recreational Area = All recreational areas within the Expanded Kansas River Project Area is owned and managed by the City of Lawrence through the Parks and Recreation Department, with the exception of the fishing deck on the downstream side of the North Powerhouse, which is 288 sq. ft., and a 775 foot-long canoe portage around the Bowersock Dam around the North Powerhouse.
9) Number of acres inundated by the Facility.	BMPC is a run of river hydropower plant. The full extent of water storage occurs entirely within the natural confines of the Kansas River.
10) Number of acres contained in a 200-foot zone extending around entire reservoir. CHANGE - BUT INSIGNIFICANT	FERC Project Boundary Area - approximately 664 Acres. See Appendix B.
11) Contacts for Resource Agencies and non-governmental organizations	See Appendix A
12) Description of the Facility, its mode of operation (i.e., peaking/run of	Run of River. See Appendix B.

river) and photographs, maps and diagrams. MATERIAL CHANGE	
Questions for "New" Facilities Only: If the Facility you are applying for is "new" (i.e., an existing dam that added or increased power generation capacity after August of 1998) please answer the following questions to determine eligibility for the program.	The BMPC project expansion was completed and available for generation in December, 2012.
13) When was the dam associated with the Facility completed?	1878; Most recent remediation, 2010.
14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.	January, 2013
15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?	No. The increase in capacity did not require a new diversion structure. The project did, however, replace the previous system of manually-raised flashboards with an inflatable rubber dam system.
16) Did the added or increased capacity include or require a change in water flow through the facility that worsened conditions for fish, wildlife, or water quality (for example, did operations change from run-of-river to peaking)?	No.
17 (a) Was the existing dam recommended for removal or decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity? (b) If you answered "yes" to question 17(a), the Facility is not eligible for certification, unless you can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.	No.
18 (a) If the added or increased generation is not yet operational, has the	

increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the facility is not eligible for consideration; and (b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.		
A. Flows	PASS	FAIL
1) Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches? NO CHANGE	YES = Pass, Go to B N/A = Go to A2	NO = Fail
2) If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method? NO CHANGE	YES = Pass, go to B NO = Go to A3	The State of Kansas has established minimum desirable streamflow targets for the Kansas River. According to the Kansas Department of Agriculture, "these flows are in part meant to protect fish, wildlife, and water quality." However, the targets have been established with standards other than the Montana-Tennant method. The BMPC project defers to the judgment of Kansas Agencies of Health and Environment, Agriculture, and the USACE, which

		determine flows in the Kansas River. As a run-of-river facility, the BMPC project passes all flows as they reach the dam with the exception of millpond refills which are conducted in full collaboration with all stakeholders.
3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality? NO CHANGE.	YES = Pass, go to B According to the Kansas Department of Agriculture, "the facility has no effective control over flow conditions, the State of Kansas through agreements among the Kansas Water Office, the U.S. Army Corps of Engineers, and the Kansas River Assurance District operates state-owned storage in three of the four federal reservoirs in the Kansas River Basin to achieve certain target flows. These flows are in part meant to protect fish, wildlife, and water	NO = Fail

	quality." The USFWS has stated that "the dam passes all the flows it receives."	
B. Water Quality	PASS	FAIL
1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?	YES = Go to B2	NO = Fail
2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?	YES = Go to B3 NO = Pass	
3) If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation? NO CHANGE	YES = Pass See Appendix C – Relevant Agency Communications for additional documentation.	NO = Fail
C. Fish Passage and Protection	PASS	FAIL

1) Are anadromous and/or catadromous fish present in the Facility area or are they know to have been present historically?	YES = Go to C2 NO = Go to C6	
2) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?	YES = Go to C6 N/A = Go to C2 (C3?)	NO = Fail
3) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish no longer have a migratory run)? a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility? b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?	YES = Go to C2a (C3a?) NO = Go to C3 YES = Go to C2b (C3b?) N/A = Go to C2b There is no documentation to suggest that the Bowersock Dam is responsible for the extinction or extirpation of the American Eel in the relevant reaches of the Kansas River. YES = Go to C5 N/A = Go to C3 See relevant portion of FERC License P-13526. Appendix C.	NO = Fail NO = Fail

4) If, since December 31, 1986: a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C.3.a above), and b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription, c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?	NO = Go to C6 N/A = Go to C4	YES = Fail
5) If C4 was not applicable: a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or b) If the Facility is unable to meet the fish passage standards in 5.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource, or ii) committed to the provision of fish passage measures in the future and obtained	YES = Go to C6	NO = Fail

a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?		
6) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?	YES = Go to C7 N/A = Go to C7	NO = Fail
7) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	YES = Pass, go to D N/A = Pass, go to D	NO = Fail
D. Watershed Protection	PASS	FAIL
1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?	YES = Eligible for 3 extra years of certification; Go to D4	NO = Go to D2
2) Has the Facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1,and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?	YES = Eligible for 3 extra years of certification; Go to D4	NO = Go to D3
3) Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)?	YES = Go to D4	NO = Go to D4
4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding	YES = Pass, go to E N/A = Pass, go to E	No = Fail

protection, mitigation or enhancement of shorelands surrounding the project?		
E. Threatened and Endangered Species Protection	PASS	FAIL
1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?	YES = Go to E2 See list in Appendix F NO = Pass, go to F	
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?	YES = Go to E3 N/A = Go to E3	NO = Fail
3) If the Facility has received authorization to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authorization pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?	YES = Go to E4 N/A = Go to E5	NO = Fail
4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that: a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or	YES = Pass, go to F	NO = Fail

c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or d) The recovery plan under active development will have no material effect on the Facility's operations?		
5) If E.2 and E.3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?	YES = Pass, go to F See Appendix C Comments from Kansas Department of Wildlife, Parks & Tourism.	NO = Fail
F. Cultural Resource Protection	PASS	FAIL
1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?	YES = Pass, go to G N/A = Go to F2	NO = Fail
2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or Native American Tribe, or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?	YES = Pass, go to G	NO = Fail
G. Recreation	PASS	FAIL
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?	YES = Go to G3 N/A = Go to G2 BMPC has received	NO = Fail

	approval to delay the final installation of the canoe portage pursuant to the need to have all four units in the North Powerhouse running to conduct full flow calculations in order to set the placement of the canoe portage.	
2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?	YES = Go to G3	NO = Fail
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	YES = Pass, go to H	NO = Fail
H. Facilities Recommended for Removal	PASS	FAIL
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	NO = Pass, Facility is Low Impact	YES = Fail