

Low Impact Hydropower Institute

34 Providence Street
Portland, Maine 04103
Tel. (207) 773-8190 • Fax (207) 773-8191
www.lowimpacthydro.org

LOW IMPACT HYDROPOWER QUESTIONNAIRE APPLICANT FORMAT

[Excerpted from Part VI, Section E of the Low Impact Hydropower Certification Program. Words in italics are defined in Part VI, Section C, and line-by-line instructions are available in Section D of the program, available on-line in PDF format at <http://www.lowimpacthydro.org/Jan02criteria.pdf>].

E. LOW IMPACT HYDROPOWER QUESTIONNAIRE

Background Information	Applicant Answer
1) Name of the <i>Facility</i> .	The Bowersock Mills and Power Company
2) Applicant's name, contact information and relationship to the Facility. If the Applicant is not the Facility owner/operator, also provide the name and contact information for the Facility owner and operator.	The Bowersock Mills and Power Company P.O. Box 66 Lawrence, Kansas 66044 www.bowersockpower.com Contact: Sarah Hill-Nelson, Secretary-Treasurer, 785-766-0884 Additional Owner/Operators Stephen Hill, President, 785-749-1111 Eric Nelson, Vice-President, 785-843-1385 Marcia Hill, Board Member, 785-843-1356
3) Location of Facility by river and state.	Kansas River, Kansas
4) Installed capacity.	2,687 kVA

	or 2.4 megawatts
5) Average annual generation.	Since 1995: 11,950,000 kWh 1945 – 1995: 9,200,000 kWh
6) Regulatory status.	FERC Exemptee, November 15 th , 1985 FERC Project # 2644 NATDAM # KS00033 Most recent FERC Inspection: August 12, 2002 “All project structures were inspected and found to be in satisfactory condition.”
7) Reservoir volume and surface area measured at the high water mark in an average water year.	Volume: $10 \times 750 \times 7290 = 54,675,000$ cu. ft. Surface area = 5,467,500 sq. ft. We assume an average depth of 10 ft. and surface level is affected up to 1.5 miles upstream.
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse). [Requested information, but not required]	Approximately 46,200 sq. ft. Dam = $665 \times 30'$ Spillway = $180' \times 100'$ Power Plant = $75' \times 30' + 200' \times 30' = 46,200$ sq. ft.
9) Number of acres inundated by the Facility. [Requested information, but not required]	Bowersock is a run of river 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 impoundment. [Requested information, but not required]	Approximately 36.4 acres. $7920' \times 200' = 1,584,000$ sq. ft. = 36.4 acres
11) Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.	See Exhibit A.
12) Please attach a description of the Facility, its mode of operation (i.e., peaking/run of river) and a map of the Facility.	See Exhibit B.
Questions for “New” Facilities Only: If the Facility you are applying for is “new”	

<p>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. [If your facility was constructed and operating as of August of 1998, skip questions 13-17 and proceed to section A].</p>	
<p>13) When was the dam associated with the Facility completed?</p>	
<p>14) When did the added or increased generation first generate electricity?</p>	
<p>15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?</p>	
<p>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)?</p>	

<p>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?</p> <p>(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.</p>			
<p>A. Flows</p>	<p>PASS</p>	<p>FAIL</p>	<p>Applicant Answer</p>
<p>1) Is the Facility in <i>Compliance with Resource Agency Recommendations</i> 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?</p>	<p>YES = Pass, Go to B <u>N/A = Go to A2</u></p>	<p>NO = Fail</p>	<p>N/A</p>
<p>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?</p>	<p>YES = Pass, go to B <u>NO = Go to A3</u></p>		<p>Undetermined. Neither the State of Kansas nor the USFWS has conducted any studies regarding "good" habitat flow standards using the Montana-Tennant method. It is possible that the facility meets these standards. In the absence of this information, the facility defers to the judgment of the Kansas Department of Agriculture which oversees water flow regulations for the State of Kansas.</p>
<p>3) If the Facility is unable to meet the flow standards in A.2.,</p>	<p><u>YES = Pass, go to B</u></p>	<p>NO = Fail</p>	<p>YES. There are no flow conditions set by state or</p>

<p>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?</p>			<p>federal regulatory agencies. The project is run-of-river, and passes all flows it receives. 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 quality." (See Exhibit C.) The USFWS has stated that "the dam passes all flows it receives." (See Exhibit E.4.)</p> <p>The Kansas Department of Agriculture is correct in asserting that the facility has no "effective" control over flow conditions. In very rare circumstances, (low flows with extreme freezing upriver – one recorded instance in the history of facility operations) the facility can have a small, but measurable impact on downstream flows. In order to eliminate this possibility, the facility is currently installing a device to measure the upstream river stage. The device has set points that will issue an alarm if the river stage goes above or below a pre-set level. This 24-hour alert system will notify plant personnel in the case of a dramatic alteration in upstream river flow (such as an extreme freeze) so that the plant may apply appropriate corrective action to maintain consistent flows downstream. Installation will take place in mid-summer, 2004, when flows reach an appropriately low level.</p>
<p>B. Water Quality</p>	<p>PASS</p>	<p>FAIL</p>	
<p>1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a</p>	<p>YES = Go to B2</p>	<p>NO = Fail</p>	<p>b.) YES. The project is considered to be in compliance with state water quality standards by the Kansas Department of Health and Environment.</p>

<p>Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or</p> <p>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?</p>			<p>(See Exhibit D.) Analysis of the USFWS suggests that the facility could “likely increase dissolved oxygen in the downstream reach of the river due to “pour-over” mixing effect. This would be a positive benefit in the summer during low flows.” See Exhibit E.4.)</p>
<p>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?</p>	<p>YES = Go to B3 NO = Pass</p>		<p>YES. (See Exhibit D.)</p>
<p>3) If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?</p>	<p>YES = Pass</p>	<p>NO = Fail</p>	<p>YES. The Kansas Department of Health & Environment has found that the facility “has not been identified as causing or contributing to an impairment of any designated uses for the Kansas River.” (See Exhibit D.)</p>
<p>C. Fish Passage and Protection</p>	<p>PASS</p>	<p>FAIL</p>	
<p>1) Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?</p>	<p>YES = Go to C5 N/A = Go to C2</p>	<p>NO = Fail</p>	<p>N/A. According to the Kansas Department of Wildlife and Parks (KDWP), there are no Mandatory Fish Passage Prescriptions established for anadromous and catadromous fish in the Kansas River. (See Exhibit E.3.)</p>
<p>2) 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 run is extinct)?</p>	<p>YES = Go to C2a NO = Go to C3</p>		<p>NO. There are records of catadromous fish in the facility region, but according to the KDWP, “there is not enough scientific evidence collected to either support or reject extirpation of the American Eel at or downstream of the facility. Vernon Tabor of the USFWS “speculate[s] that eel (as well as other species) could, and do, pass along the face of the levee on the north riverside. (See Exhibit E.3 and E.4.)</p>

<p>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?</p> <p>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?</p>	<p>YES = Go to C2b N/A = Go to C2b</p> <p>YES = Go to C5 N/A = Go to C3</p>	<p>NO = Fail</p> <p>NO = Fail</p>	<p>N/A. (See Exhibit E 1 and E.2). Resource agencies have reserved the right to recommend adoption of fish passage in the future, but have not made a specific recommendation with a triggering event.</p>
<p>3) If, since December 31, 1986:</p> <p>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 C2a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>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?</p>	<p>NO = Go to C5 N/A = Go to C4</p>	<p>YES = Fail</p>	<p>NO. The KDWP and the USFWS have agreed that fish passage at the facility is not advisable at this point. A recommendation for fish passage was extended in 1985, and was rescinded via agreement of the agencies in 2004. (See Exhibit E.1 and 2.) The lack of a Mandatory Fish Passage Prescription is not due to the technological infeasibility of passage, the absence of habitat upstream, or lack of anadromous or catadromous fish in the area.</p>
<p>4) If C3 was not applicable:</p>			

<p>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</p> <p>b) If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US 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?</p>	YES = Go to C5	NO = Fail	
<p>5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of <i>Riverine</i> fish?</p>	YES = Go to C6 N/A = Go to C6	NO = Fail	N/A. According to the KDWP and the USFWS there are no Mandatory Fish Passage Prescriptions for upstream/downstream movement of <i>Riverine</i> fish. (See Exhibit E.3.) The USFWS has raised concerns regarding passage of <i>Riverine</i> species, (See Exhibit E.4) but has most recently stated that efforts to block the invasion of Asian carp species should override lesser concerns for passage of native <i>Riverine</i> species. (See Exhibit E.2.)
<p>6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?</p>	YES = Pass, go to D N/A = Pass, go to D	NO = Fail	N/A. Neither KDWP nor the USFWS has set compliance standards on the facility other than those outlined in the FERC permit. (See Exhibit E.3 and 4.)
<p>D. Watershed Protection</p>	PASS	FAIL	
<p>1) Is the Facility in Compliance with Resource Agency Recommendations, or, if none, with license conditions, regarding protection, mitigation or enhancement of lands inundated by the Facility or otherwise occupied by the Facility, and regarding other watershed protection, mitigation and enhancement activities?</p>	YES and N/A = Pass	NO = Fail	N/A. Neither the KDWP nor the USFWS has identified any water protection conditions set by State or Federal resource agencies. (See Exhibit E.3 and 4.)

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 NO = Pass, go to F		YES. While there are no Federally listed threatened or endangered species present in the facility area and/or downstream reach, there are state-listed T/E species and Species in Need of Conservation (SINC). Species include: Bald Eagle (<i>Haliaeetus leucocephalus</i>), Pallid Sturgeon (<i>Scaphirrhynchus albus</i>), Sicklefin Chub (<i>Macrhybopsis meeki</i>), Flathead Chub (<i>Platygobio gracilis</i>), River Shiner (<i>Notropis blennioides</i>), Blue Sucker (<i>Cycleptus elongatus</i>), Plains Minnow (<i>Hybognathus placitus</i>), and Highfin Carpsucker (<i>Carpodes velifer</i>). (See Exhibit E.3.)
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	N/A. According to the KDWP, "there currently are no recommendations involved with a state recovery plan for any T/E species relevant to the facility." (See Exhibit E.3.)
3) If the Facility has received authority 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 authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?	YES = Go to E4 N/A = Go to E5	NO = Fail	N/A. The KDWP explains that "no established state procedures address incidental take of a listed species regarding this applicant; therefore the question is not applicable." (See Exhibit E.5.)
4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:	YES = Pass, go to F	NO = Fail	YES. According to the KDWP, "environmental concerns were addressed during the process of renewing the Facility's FERC license/exemption in 1985." (See Exhibit E.3.) There is no recovery plan

<p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility's operations?</p>			<p>for the threatened or endangered species under active development by any relevant resource agency.</p>
<p>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?</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>	<p>YES. The KDWP and the USFWS have come to mutual agreement that under current conditions, the dam is providing a positive service to native species by impeding the invasion of non-native Asian carps, thereby protecting the habitat and resources critical for the survival of native species.</p>
<p>F. Cultural Resource Protection</p>	<p>PASS</p>	<p>FAIL</p>	
<p>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?</p>	<p>YES = Pass, go to G N/A = Go to F2</p>	<p>NO = Fail</p>	<p>YES. (See Exhibit F.)</p>
<p>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 <i>Native American Tribe</i>, 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?</p>	<p>YES = Pass, go to G</p>	<p>NO = Fail</p>	

	PASS	FAIL	
G. Recreation			
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	NO = Fail	YES. The facility is in compliance with conditions established in the FERC License. The facility is currently working with a broad coalition of community groups including the Kansas Whitewater Association, Friends of the Kaw, the City of Lawrence and Westar Energy to establish a whitewater park below the Bowersock Dam. The park would include improved access to the river for both canoeists and kayakers. The overriding purpose for the park would be to increase community awareness of the river, and improve community commitment to preservation of the river and its environs.
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	YES.
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	NO.



The Bowersock Mills & Power Company

June 21, 2004

Stephen H. Hill
President

I declare that the material presented in this application to the Low Impact Hydropower Institute for certification of The Bowersock Mills and Power Company is true and complete to the best of my knowledge and belief.

Eric S. Nelson
Vice-President

The primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit. The Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions. The undersigned Applicant agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.

Dated: June 21, 2004

Signed: Sarah Hill-Nelson

Title: Secretary - Treasurer

Sarah Hill - Nelson
Secretary - Treasurer

State of Kansas

County of Douglas

Before me, the undersigned authority, on this day personally appeared Sarah Hill-Nelson, known to me to be the person whose name is subscribed above, and acknowledged to me that she executed the same for the purpose therein expressed.

Sworn and subscribed before me this 21 day of June 2004.

Sharon Churchill
Notary Public and for Douglas County, Kansas

My commission expires August 1, 2007

P.O. Box 66
Lawrence, KS 66044
Office: 785.766.0884
Plant: 785.843.1385
bowersockpower@sabell.net
www.bowersockpower.com

Exhibit A – Resource Agency Contacts

The Bowersock Mills and Power Company Lawrence, Kansas LIHI Application for Low Impact Status May, 2004

FERC – Chicago Regional Office

- Peggy A. Harding, P.E.
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
312-353-6171
- John Hawk: 312-596-4437
Same as Above

Kansas Department of Agriculture, Division of Water Resources

- Matt A. Scherer III, P.E.
Kansas Department of Agriculture, Division of Water Resources
109 SW 9th Street, 2nd Floor
Topeka, Kansas 66612-1283
785-296-3717

Kansas Department of Health and Environment

- Michael B. Tate, PE, Chief
Bureau of Water, Technical Services Station
Division of Environment
1000 SW Jackson, Suite 420
Topeka, Kansas 66612-1367
785-296-5504

Kansas Department of Wildlife and Parks

- Mike Hayden
Secretary, Kansas Department of Wildlife and Parks
Office of the Secretary
1020 S. Kansas Avenue, Ste. 200
Topeka, Kansas 66612-1327
785-296-2281
- Nate Davis
Aquatic Ecologist
Environmental Services Section
Kansas Department of Wildlife and Parks, Operations Office
512 SE 25th Avenue

Pratt, Kansas 67124-8174
620-672-5911

Kansas State Historical Society

- Richard Pankratz
Director, Cultural Resources Division
Kansas State Historical Society
6425 SW Sixth Avenue
Topeka, Kansas 66615-1099
785-272-8681

US Fish and Wildlife Service

- Vernon Tabor
Kansas Ecological Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502
785-539-3474

Exhibit B – Facility Description

The Bowersock Mills and Power Company Lawrence, Kansas LIHI Application for Low Impact Status May, 2004

The Bowersock Mills and Power Company is a small, historic hydroelectric power plant that has been operating on the Kansas River in Lawrence, Kansas since 1874. The plant first began operation as a provider of mechanical energy to adjacent industries and by 1906 was providing AC power for homes and industries throughout the town. Throughout its operation, the dam and plant have been of critical importance to the city of Lawrence, first by providing a reliable energy resource and later by maintaining a steady flow to the city water intakes above the dam. The plant is family-owned, and for the majority of its existence has been owned by the Bowersock (now Hill) Family of Lawrence. Bowersock was one of the first hydroelectric power plants established west of the Mississippi River, and is the oldest continuously operating plant in the region.

The Bowersock project consists of a 664 foot long dam, 90 foot spillway, and 60 foot flume. The masonry and rock-filled timber crib dam has a crest elevation of 808 ft. mean sea level (MSL) and a height of 18 feet. The hinged-flashboard height increases the impoundment level above the dam top by 4 feet. The corresponding operating head is usually between 18 - 22 feet depending on water flow. One hundred and fifty feet of flashboards are pneumatically-operated and automated. All remaining flashboards are manually raised, and are designed to fall when river flows increase above 8,000 cubic feet per second (CFS). The intake section (flume) is integral to the powerhouse, with 7 turbine generators with a maximum combined rated capacity of 2.5 MW when operating with a head of 22 feet. The 90 foot spillway contains 7 gates that are manually operated.

The Bowersock project is run-of-river, with outflow approximately equal to inflow on an instantaneous basis. Outflows may fluctuate over a small range in the course of daily operations, including when the plant is shut down to clean debris off its intake racks or when repairs are necessary to the dam or flashboards. The project does not inundate, as all water storage lies within the natural confines of the Kansas River. The project has the ability to control the height of the millpond when the river flows are below 1800 CFS. Normal pond elevation with flashboards raised is 812 feet MSL. The Mill Pond has the potential to be drawn down by a maximum of five feet to 807 MSL. The combined maximum capacity of all seven turbines is 2100 CFS. As flows rise above 2100 CFS, the project begins to bypass water and the plant produces progressively less power. At flows above 30,000 CFS the head is too low to operate and the plant must cease operation until the river flows drop.

The powerhouse is now 100 years old and is a brick and mortar structure that extends into the river in the shape of a backwards L. Because the plant and much of Bowersock's equipment dates to the early 1900s, Bowersock faces continual challenges in order to keep the plant operational. Since 1999, Bowersock has invested a minimum of 80% of the assessed value of the plant in structural and equipment repairs, replacements, and improvements. Additional investments in production-related and water control equipment have allowed Bowersock to

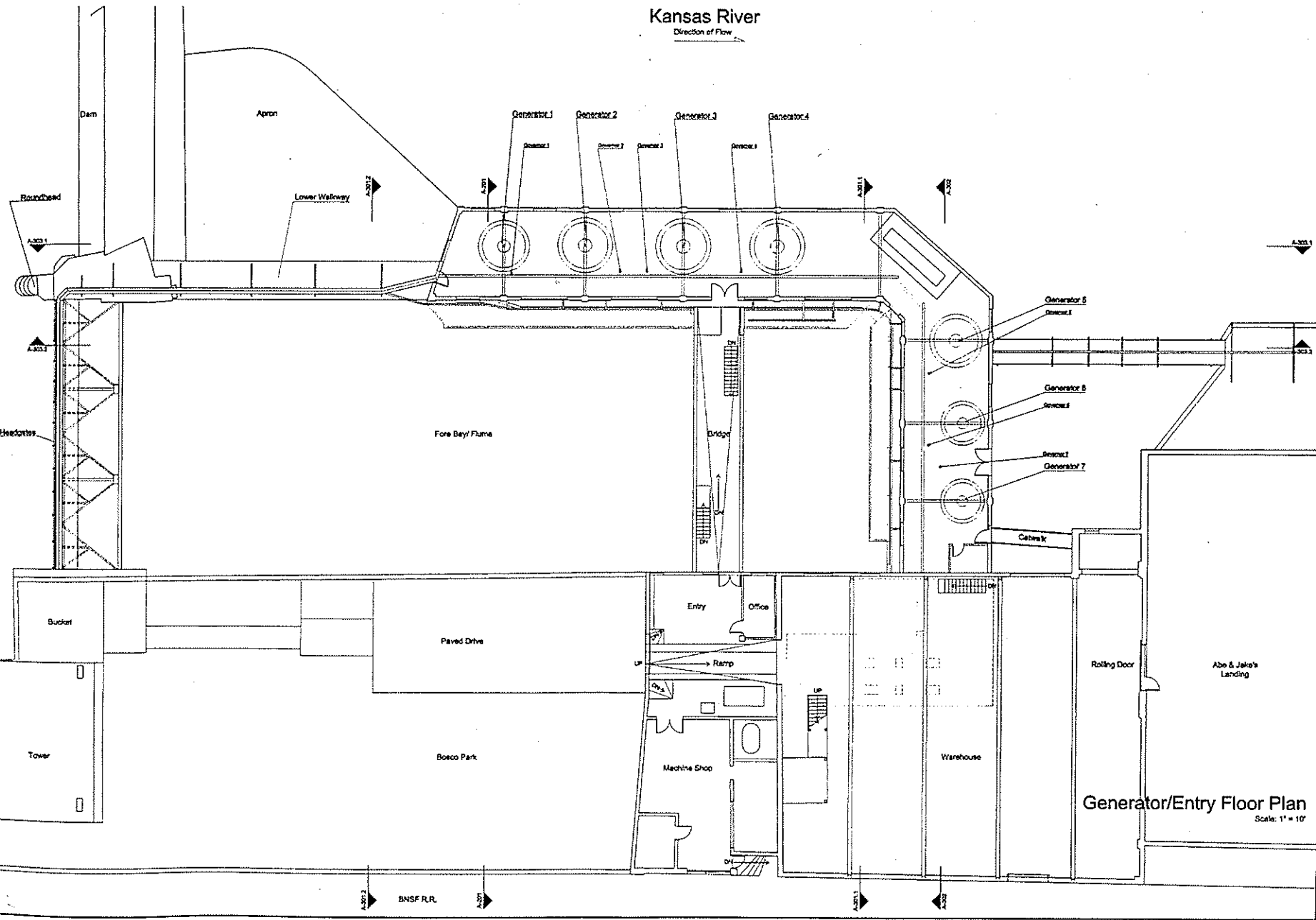
Exhibit B – Facility Description – Page 2

**The Bowersock Mills and Power Company
Lawrence, Kansas
LIHI Application for Low Impact Status
May, 2004**

improve productivity. Over the last seven years, improvements have increased production by 30%. Bowersock operates twenty-four hours a day and has two full-time staff members. Family members manage the business on a part-time basis. Currently, Bowersock sells all its energy (enough to power 1800 homes) to Westar Energy, the local energy conglomerate. Westar does not have a Green Energy program.

Kansas River

Direction of Flow

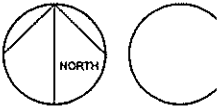


Bowersock Mill & Power Company

Lawrence, Kansas

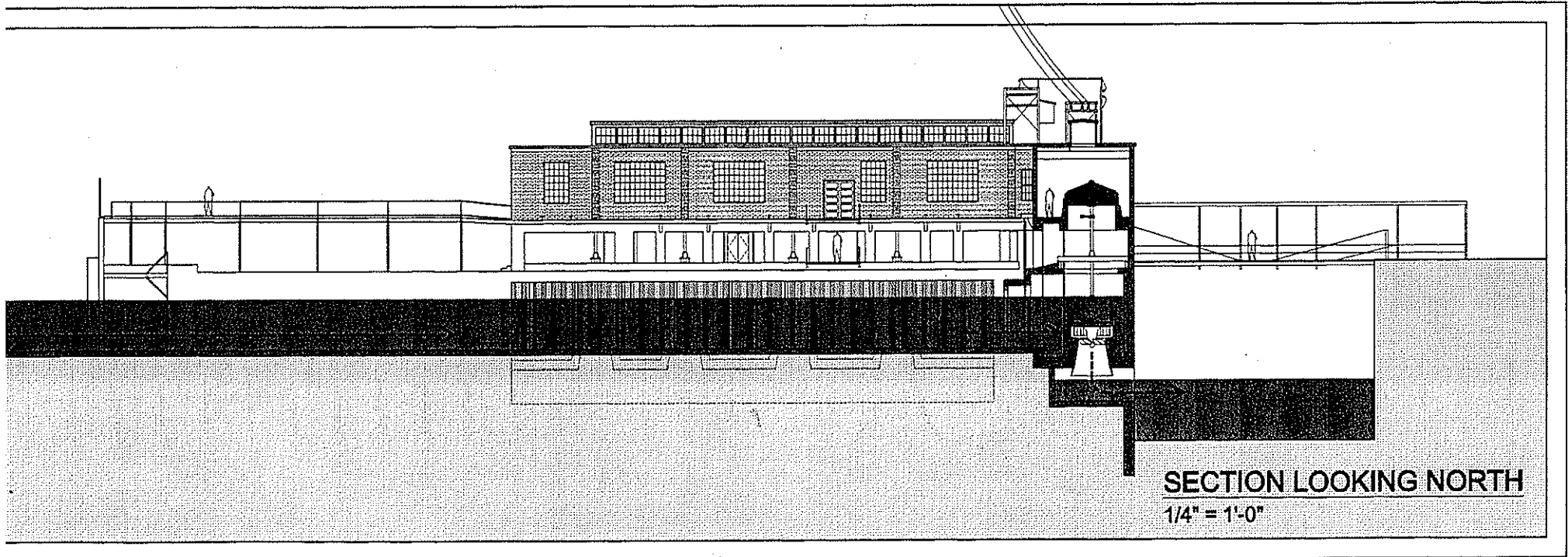
CP&Associate
Architects & Planners

2045 OLLAND AVENUE, SUITE 20
KANSAS CITY, MISSOURI 64108
PHONE: 816/451-8800 FAX: 816/451-8801
WWW: WWW.CPANDASSOCIATE.COM



Generator/Entry Floor Plan
Scale: 1" = 10'

NO.	DATE BY	DESCRIPTION
10	05.26.07	Final Draw
11	06.11.07	Revisions Set
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SECTION LOOKING NORTH

1/4" = 1'-0"

Exhibit C - Flows

**The Bowersock Mills and Power Company
Lawrence, Kansas
LIHI Application for Low Impact Status
May, 2004**

A copy of the following document is attached:

- Kansas Department of Agriculture, Division of Water Resources letter of December 24, 2002, finding that “the facility has no effective control over flow conditions,” and that flows in the river are established and managed through agreements among the Kansas Water Office, the U.S. Army Corps of Engineers, and the Kansas river Assurance District “to protect fish, wildlife, and water quality.”

STATE OF KANSAS

BILL GRAVES, GOVERNOR
Jamie Clover Adams, Secretary of Agriculture
109 SW 9th Street
Topeka, Kansas 66612-1280
(785) 296-3558
FAX: (785) 296-8389



Division of Water Resources
David L. Pope, Chief Engineer
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283
(785) 296-3717 FAX (785) 296-1176

KANSAS DEPARTMENT OF AGRICULTURE

December 24, 2002

Bowersock Mills and Power Co.

Attn: Sara Hill

P.O. Box 66

Lawrence, KS 66044

Re: Bowersock Mills and Power Company Dam

Dear Ms. Hill:

This letter is to follow up the discussion we had regarding the Low Impact Hydropower Institute's questionnaire which you e-mailed to me some weeks ago. As you requested, we have reviewed the questions under "Flows" on pages 3 and 4 of the form. Below are this agency's responses. If you need to have a response directed to the Low Impact Hydropower Institute, please let me know.

1. Compliance with Resource Agency Recommendations: There are no agency recommendations regarding flow conditions for this facility. Because it is a run of the river facility, there are no practical recommendations to provide.
2. Compliance with Flow Release Schedule: Again, this is a run of the river facility and does not release water.
3. Appropriately Protective Flow Conditions: 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 in part are meant to protect fish, wildlife, and water quality.

I trust this provides the supporting documentation that you need, but if not please contact me. My direct telephone number is (785) 296-3083.

Sincerely,

Matt A. Scherer III, P.E.
Water Structures Program Manager

cc: Earl Lewis, Kansas Water Office
Equal Opportunity in Employment and Services

Exhibit D – Water Quality

The Bowersock Mills and Power Company Lawrence, Kansas LIHI Application for Low Impact Status May, 2004

- A copy of the following document is attached: Kansas Department of Health & Environment letter of December 9, 2002, finding that the facility is in compliance with state water quality standards, and “has not been identified as causing or contributing to an impairment of any designated uses for the Kansas River.” Although the Kansas River has been listed for chlordane, bacteria, ammonia, nutrients and oxygen demanding substances, the Bowersock facility “has not been identified as contributing to any of these impairments.”



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

December 9, 2002

Ms. Sarah Hill-Nelson
Bowersock Mills and Power Company
P.O. Box 66
Lawrence, Kansas 66044

Re: Low Impact Hydropower Questionnaire

Dear Ms. Hill-Nelson:

As per our December 9, 2002 telephone call and a subsequent email regarding the Low Impact Hydropower Institute questionnaire, the Kansas Department of Health and Environment (KDHE) offers the following responses the questionnaire:

- **Question B. 1) b) – Is the Facility 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?**
 - The facility is not required to have either a state or federal wastewater disposal permit. As such, a §401 water quality certification is not required. Additionally, your facility has not been identified as causing or contributing to an impairment of any designated uses for the Kansas River. Therefore, KDHE considers your facility to be in compliance with state water quality standards.

- **Question B. 2) and 3) - 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?**
 - The Kansas River in this area is listed on the 303d list (impaired waters list) for chlordane, bacteria, ammonia, nutrients and oxygen demanding substances. Your facility has not been identified as contributing any of these impairments.

If you should have further questions, please call me at 785.296.5504.

Sincerely,

Michael B. Tate, PE, Chief
Bureau of Water, Technical Services Section

c - Tom Stiles
Julie Coleman - NEDO

D:\OFFICE\WPWIN\WPDOCS\WQS\bowersock_questionnaire.doc

Exhibit E – Fish Passage and Protection

The Bowersock Mills and Power Company Lawrence, Kansas LIHI Application for Low Impact Status May, 2004

The issue of fish passage and protection related to the Bowersock Dam was most recently re-evaluated by the Kansas Department of Wildlife and Parks (KDWP), and the United States Fish and Wildlife Service (USFWS) through the spring of 2004. At the request of The Bowersock Mills and Power Company, the agencies worked to establish current consensus regarding the role of the Bowersock Dam in the Kansas River. The two agencies have come to an agreement that neither agency would recommend the placement of fish passage at the Bowersock Dam.

The agencies have agreed that they would not recommend placement of fish passage at the Bowersock Dam “due to the fact that [they] would like to restrict passage of ... non-native species.”

In 1985, the recommendation was made by the KDWP and the USFWS that a fish passageway should be constructed into the existing spillway at the dam. Since that time, both agencies have reversed their positions, reserving for the future the option to recommend fish passage should conditions change. (See Exhibit E.1 and E.2.)

- **Exhibit E.1** - A copy of the following document: Kansas Department of Wildlife and Parks, a letter from the Secretary of March 5, 2004 stating that “It is our opinion that construction of a fish passage would most likely increase the spread of [invasive Asian carp species] upstream... At this time we are not recommending the placement of the fish passage at Bowersock Dam due to the fact that we would like to restrict passage of these non-native species.” The KDWP included the caveat that “if Asian carp become established at high numbers above the dam in the future, we may feel that consideration for the passage of native species might need to be reconsidered.”
- **Exhibit E.2** – A copy of the following document: US Department of the Interior, Fish and Wildlife Service letter from the Kansas Ecological Field Office Representative Vernon Tabor dated May 18th, 2004, stating that “we recommend, at this time, that no unrestricted fish passage structures be placed at Bowersock Dam.” The document also stated that “the Service does not have any significant concerns, at this time, regarding the impact of Bowersock Dam on the Pallid sturgeon, or any other federally listed species.”
- **Exhibit E.3** – A copy of the following document: Kansas Department of Wildlife and Parks letter of February 3, 2003. The letter primarily addresses Fish Passage and Protection and Threatened and Endangered Species Protection. The letter includes documentation included in the 1985 FERC exemption, and recognizes that historically Bowersock has agreed to all recommendations from resource agencies, but explains that neither federal, nor state agencies deemed fish passage at the Bowersock Dam of sufficient impact to proceed with construction. This letter is in essence overridden by the most recent decision of the Kansas Department of Wildlife and Parks that passage should *not* be installed as of March 5, 2004. See Exhibit E.1.

- **Exhibit E.4** – A copy of the following document: US Fish and Wildlife Service, Completion of the LIHI Questionnaire on March 10, 2003 by Vernon Tabor of the Kansas Ecological Field Office. Tabor responds to the questionnaire and details some concerns regarding fish passage, but summarizes his analysis with the explanation “now blocks upstream passage of the recently introduced Asian carps... which are considered detrimental and should not pass the structure.” He qualifies this by stating that “It is hard to gage the costs/benefits to the upstream basin between the now blocked natives and the likely negative impacts of the Asian carps.” This letter is in essence overridden by the most recent letter from Tabor and the USFWS which more strongly discourages the construction of fish passage. See Exhibit E.2.
- **Exhibit E.5** – A copy of the following document: Kansas Department of Wildlife and Parks letter dated May 17th, 2004 confirming that “no established state procedures address incidental take of a listed species regarding the applicant, therefore the question is not applicable.”

KANSAS

DEPARTMENT OF WILDLIFE & PARKS

KATHLEEN SEBELIUS, GOVERNOR

March 5, 2004

Sarah Hill-Nelson
The Bowersock Mills and Power Company
P.O. Box 66
Lawrence, Kansas 66044

— Exhibit E.1

Dear Ms. Hill-Nelson,

The Kansas Dept. of Wildlife and Parks has been requested to review the issue of a fish passage system related to the Bowersock Dam in Lawrence. This issue of fish passage at Bowersock is complicated and not an easy issue to resolve. There are merits for both the construction of such a system and merits for leaving the current situation in place. I have discussed this issue with KDWP research staff, environmental services staff, local fisheries biologists as well as statewide fisheries administrators. In addition, we have visited with fisheries staff in Nebraska that have been involved with developing plans and implementing fish passage structures in that state. All this was done to determine if it would be appropriate to recommend construction of a fish passage system or not.

The primary value of placement of a fish passage system over Bowersock would be to develop a natural link for native species to stretches of the Kansas River both below and upstream of the dam. This link would allow for passage of species of fish that may not be able to overcome the twenty foot high barrier. This might be of particular value to species that have habitat needs found only in the upstream stretch during portions of their life cycle. However, it is very difficult to evaluate historical fish species composition of the Kansas River since most fish inventories were conducted after the Bowersock was constructed.

Of primary concern when discussing the need to place a fish passage, is the presence of Asian carp species in the Kansas and Missouri rivers. These non-native species have rapidly populated the fisheries in both of these rivers but have been primarily restricted to below the Bowersock dam. We feel the presence of the dam has been an impediment to their establishment at high numbers upstream from the dam. They are documented upstream but it is rare compared to the numbers observed below the dam. It is our opinion that construction of a fish passage would most likely increase the spread of these species upstream. The spread may have been slowed during the past few years due to drought conditions in the northeast part of the state. At this time we are not

Office of the Secretary

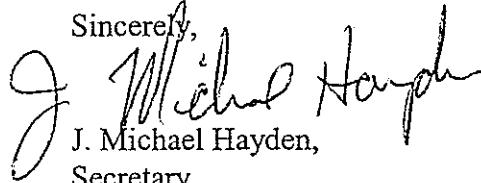
1020 S Kansas Ave., Ste. 200, Topeka, KS 66612-1327

Phone 785-296-2281 Fax 785-296-6953 www.kdwp.state.ks.us

recommending the placement of the fish passage at Bowersock dam due to the fact that we would like to restrict passage of these non-native species. However, in the future if Asian carp become established at high numbers above the dam in the future, we may feel that consideration for the passage of native species might need to be reconsidered.

Please let us know if we can be of any further assistance.

Sincerely,



J. Michael Hayden,
Secretary



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Kansas Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502-6172

May 18, 2004

Ms. Sarah Hill-Nelson
The Bowersock Mills and Power Company
P.O. Box 66
Lawrence, KS 66044

— Exhibit 2.2. —

Dear Ms. Hill-Nelson,

Thank you for the opportunity to review the Bowersock Mill operation in reference to your application for certification by the Low Impact Hydropower Institute, and provide information concerning the endangered pallid sturgeon (*Scaphirhynchus albus*). As you know from our previous conversations, the primary issues of our concern deal with the Bowersock dam acting as a barricade to the movement of native fishes in the Kansas River and the potential for the development of a fish passage structure.

We believe this issue is basically two fold. Certainly the mill dam has acted as a barrier to the passage of native fishes, particularly upstream, since its construction. This has negatively affected these riverine species. However, we do recognize that some fishes have been able to pass upstream around the mill dam during extremely high flows. The second issue, and we believe the most complex, has been the establishment of several species of non-native Asian carps, particularly bighead carp (*Hypophthalmichthys nobilis*), in the Kansas River downstream of Bowersock dam. These non-native carps have the potential to detrimentally impact native riverine fishes, and if established upstream, to be introduced into major reservoirs resulting in likely negative impacts to sport-fisheries.

Presently, it appears that Bowersock dam is beneficial in terms of being relatively effective at restricting the dispersion of Asian carps upstream, while concurrently contributing negative impacts to native riverine fishes. This places the Fish and Wildlife Service (Service) in the difficult position of weighing the various biological impacts, both negative and positive. At this time, fisheries data is available that supports our position that the mill dam is detrimental to native fishes, but information is limited on the potential impacts of the establishment of Asian carps upstream of the dam, which we believe could be severe. In analyzing the available information, we recommend, at this time, that no unrestricted fish passage structures be placed at Bowersock dam. As more biological information becomes available in the future, we will continue to analyze the information and make scientifically sound recommendations regarding the placement of fish passage, if requested.

The Service does not have significant concerns, at this time, regarding the impact of Bowersock dam on the Pallid sturgeon, or any other federally listed species. The pallid sturgeon is known only to enter the lower Kansas River during flood events and is not representative of the typical fish fauna of this area.

Thank you for the opportunity to comment. If we can be of any further assistance, please contact Vernon Tabor of my staff at 785/539-3474, extension 110.

Sincerely,

A handwritten signature in cursive script that reads "William H. Gill". The signature is written in black ink and is positioned above the printed name and title.

William H. Gill
Kansas Field Supervisor

vmt/WHG



STATE OF KANSAS
DEPARTMENT OF WILDLIFE & PARKS



Operations Office
512 SE 25th Ave.
Pratt, KS 67124-8174
Phone: (620) 672-5911 FAX: (620) 672-6020 2972

February 3, 2003

Ms. Sarah Hill
Bowersock Mills and Power Company
P.O. Box 66
Lawrence, KS 66044

- Exhibit E.3.

Dear Ms. Hill,

I have compiled the most relevant information I could find in regards to your request for any environmental review concerning Bowersock's application for Low Impact Hydropower Certification. I think you will find that consultation with other State/Federal Agencies will be necessary to appropriately answer all of the questions on the Low Impact Hydropower Questionnaire. I have provided a list of other agencies that may be relevant to the application. Please feel free to contact me if you have any questions.

Thank you,

ND
Nate Davis, Aquatic Ecologist
Environmental Services Section
Kansas Department of Wildlife and Parks
(620) 672-5911, ext. 195

Flows: KS Department of Agriculture, Division of Water Resources
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283
(785) 296-3717 voice, (785) 296-1176 fax

Water quality standards: Kansas Department of Health and Environment, Division of Environment
1000 SW Jackson, Suite 420
Topeka, Ks. 66612-1367
(785) 296-1535; FAX (785) 296-8464

Watershed Protection
Kansas Water Office
901 S. Kansas Avenue
Topeka, KS 66612
785-296-3185

Cultural Resource Protection:
Kansas State Historical Society
6425 SW Sixth Ave
Topeka, KS 66615
(785) 272-8681; FAX (785) 272-8682

Fish Passage, Threatened & Endangered, Endangered Species Act, Incidental Take, and Recovery Plans regarding federally-listed T&E species and candidate species
U.S. Fish and Wildlife Service
315 Houston Street
Suite E
Manhattan, Kansas 66502
Phone Number: 785-539-3474
Fax Number: 785-539-8567

The Environmental Services Section of the Kansas Department of Wildlife and Parks (KDWP) response to Bowersock Dam and Mill Company's application for Low Impact Hydropower Certification Program.

The following is a response to the owner/operators request to complete the Low Impact Hydropower Questionnaire Applicant Form for the Low Impact Hydropower Institutes certification program. These answers are not conclusive as many of the questions would need to be addressed through scientific research. We will attempt to provide answers to questions relevant to the Environmental Services Section's knowledge of natural resources in the State of Kansas.

Background Information: N/A

A. Flows:

The Environmental Services Section of KDWP has no knowledge of any flow conditions set by state or federal regulatory agencies. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

B. Water Quality:

The Environmental Services Section of KDWP has no knowledge of any water quality conditions the Facility must meet to be in compliance with Section 401 of the Clean Water Act. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

C. Fish Passage and Protection:

1. The Environmental Services Section of KDWP has no knowledge of any Mandatory Fish Passage Prescriptions established for anadromous or catadromous fish issued by any resource agencies after 12/31/1996. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

2. There are historic records of the catadromous American Eel (*Anguilla rostrata*) both above and below the Facility area.

a) To the best of our knowledge, there is not enough scientific evidence collected to either support or reject extirpation of the American Eel at or downstream of the Facility.

b) Negotiations took place between the Facility's owners and the Kansas Department of Wildlife and Parks (formerly Kansas Fish and Game Commission) and the U.S. Fish and Wildlife Service in 1985 regarding a renewal application for a Federal Energy Regulatory Commission (FERC) license/exemption to operate the Bowersock hydroelectric facility. As a condition of the license, KDWP and USFWS reached an agreement with the owner's of the Facility to construct a fish passageway in the existing spillway, thereby allowing for upstream movement of riverine fish native to the Kansas River Basin. The costs to implement this project was to be split between the three entities with the USFWS providing the engineering work, KDWP would installing, maintaining, and operating the passageway, and Bowersock allowing construction and

providing financial support up to \$5,000 for implementation of the passageway. In a review of our files, no appropriation of funds had been made by the USFWS as of August 9, 1988 to design the structure. Since the initial phase (design) has not been funded by the USFWS no further steps were taken to install the structure. Since the recommendations by resource agencies involved were agreed to by the Bowersock Facility, we recognize the Facility has committed to provide fish passage measures and should not be held liable for neglect of this proposed structure having not been built.

3, a-c. The Environmental Services Section of KDWP has no evidence of any State authority to either accept or decline an opportunity to issue a Mandatory Fish Passage Prescription since December 31, 1986; however, this Department has provided recommendations stipulated in the FERC license that allow for construction of fish passageway for riverine fish as described above. This fish passageway was determined to be: 1) technologically feasible to construct; 2) adequate habitat exists upstream of the Facility; and 3) the riverine fish in question are present in the Facility area and downstream reach. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

4, a. No fish passage currently exists at the facility to determine survival rates.

4, b. This question is addressed to the U.S. Fish and Wildlife Service and not pertinent to the Environmental Services Section of KDWP.

5. The Environmental Services Section of KDWP has no knowledge of any Mandatory Fish Passage Prescriptions for upstream/downstream movement of *Riverine* fish. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

6. The Environmental Services Section of KDWP has not set compliance standards on the Facility other than those outlined in the FERC permit as described in section 2, b. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

D. Watershed Protection:

1. The Environmental Services Section of KDWP has no knowledge of any watershed protection conditions set by State or Federal resource agencies. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

E. Threatened and Endangered Species Protection:

1. Yes. Historical records indicate the following state/federally listed T/E species and state-listed Species in Need of Conservation (SINC) occur in the Facility area and/or downstream reach: Bald Eagle (*Haliaeetus leucocephalus*), Pallid Sturgeon (*Scaphirhynchus albus*), Sicklefin Chub (*Macrhybopsis meeki*), Flathead Chub

(*Platygobio gracilis*), River Shiner (*Notropis blennioides*), Blue Sucker (*Cycleptus elongatus*), Plains Minnow (*Hybognathus placitus*), and Highfin Carpsucker (*Carpiodes velifer*).

2. There currently are no recommendations involved with a state recovery plan for any T/E species relevant to the facility.

3. The Facility has no authority to incidentally *Take* a state-listed species.

4. Environmental concerns were addressed during the process of renewing the Facility's FERC license/exemption in 1985. See section 2, b for details concerning the proposed fish passage.

F. Cultural Resource Protection:

1. This Department has no knowledge of cultural resource protection, mitigation, or enhancement conditions the Facility must meet to be in compliance with Section their FERC license. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

2. This Department has no knowledge of any cultural resource protection plans the Facility may be liable for regarding any state, federal, or *Native American Tribe*. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies, or *Native American Tribe*.

G. Recreation:

1-3. The Environmental Services Section of KDWP has no knowledge of recreational conditions the Facility must meet to be in compliance with their FERC license, nor any other recreational accommodations the Facility provides. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.

H. Facilities Recommended for Removal:

1. The Environmental Services Section of KDWP has no knowledge of any recommendations for removal of the Facility. This does not exempt the Facility from any conditions set forth by other State or Federal resource agencies.



United States Department of the Interior
FISH AND WILDLIFE SERVICE



IN REPLY REFER TO:

FWE
Mail Stop 60120

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

AUG 09 1988

Memorandum

To: Field Supervisor, Kansas-Nebraska, Grand Island, Nebraska
Fish and Wildlife Enhancement MAIL STOP 64320

From: Assistant Regional Director, Fish and Wildlife Enhancement
Fish and Wildlife Service, Region 6

Subject: Bowersock Mills and Power Company Fish Passageway,
Kansas River Hydropower Project, FERC No. 2644,
Douglas County, Kansas (ER 85/742)

By memorandum dated June 9, 1988, the Kansas State Supervisor, Fish and Wildlife Enhancement, submitted a request for us to elevate the priority of the subject fish passageway to have Engineering design the structure so that it could be built by the Kansas Department of Wildlife and Parks and the Bowersock Mills and Power Company.

The memorandum states that the Fish and Wildlife Service has made a firm commitment to do the design work. We have checked into this matter and conclude that this office has not given any written commitment. In fact, such a commitment would require a Cooperative Agreement or Memorandum of Understanding among the principal parties, signed by the Regional Director.

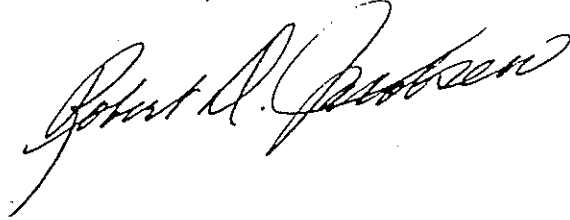
The design proposal has been submitted to this office from Manhattan for possible funding through normal budgeting process. It has been ranked with other proposals such as Platte River activities; but, because of budget restraints and higher priorities of other projects, this fish passageway design work has not been funded to date.

Most recently, this project was submitted by the Field Supervisor, Kansas-Nebraska, Fish and Wildlife Enhancement for possible funding with any excess end-of-year FY 88 funds that may exist. On the Field Supervisors list, this fish passageway project was ranked tenth. When this list is ranked with lists from other field offices, it is likely that the fish passageway design will again be a lower priority than funding will allow.

We encourage you to continue to submit this request for funding; however, if the project is desired in the near future then other arrangements for design of the fish passageways should be pursued as well.

If you have any questions or further comments please contact Jim Lutey,
(303) 236-8186.

cc: State Supervisor (FWE) ✓
Manhattan, Kansas
Mail Stop 64411





United States Department of the Interior

FISH AND WILDLIFE SERVICE
KANSAS STATE UNIVERSITY
DIVISION OF BIOLOGY, ACKERT HALL
MANHATTAN, KANSAS 66506

June 9, 1988

MEMORANDUM

TO: Assistant Regional Director, Fish and Wildlife Enhancement
Region 6, Denver, CO MAIL STOP 60120

FROM: State Supervisor, Fish and Wildlife Enhancement
Manhattan, KS MAIL STOP 64411

SUBJECT: Bowersock Mills and Power Company Fish Passageway, Kansas River
Hydropower Project (FERC Permit No. 2644-001), Douglas County,
Kansas (ER 85/742)

This memorandum is in response to discussions that have taken place over the past few months between Dennis Buechler, Field Supervisor, Don Dobel, Deputy Assistant Regional Director, and myself as well as members of our respective staffs. At issue has been our inability to obtain the design services (Division of Engineering) for a fish passageway by the Fish and Wildlife Service (construction will be accomplished and paid for by the Kansas Department of Wildlife and Parks (KDWP) and the Bowersock Mills and Power Company) as per a 1985 agreement between the Service, KDWP, and the Bowersock Mills and Power Company. It is our understanding that this project, although submitted by us each year as needing Regional Engineering support, has never ranked out high enough in priority by the Region to receive attention (funding and time for the design of the fish passageway).

Our request is simply that you give consideration to elevating the priority of the fish passageway design so that the passageway can be constructed as soon as possible. We anticipate that less than one staff-month of engineering support would be necessary. Background information and an abbreviated chronology of events is as follows.

BACKGROUND

A major license was issued to Bowersock Mills and Power Company of Lawrence, Kansas, under Section 4(e) of the Federal Power Act by the Federal Power Commission for a period effective January 1, 1938, and terminating December 31, 1987, for the continued operation and maintenance of Project No. 2644 (the Kansas River Project), located on the Kansas River, in Lawrence, Kansas. The Kansas River Project was constructed in 1872, by authority of the city of Lawrence. Electrical generating equipment was installed in 1906 for the purpose of converting the project from mechanical power to electric power generation.

As licensed by the Federal Power Commission, the Kansas River Project consists of: (1) a low dam of concrete masonry and cribbing about 880 feet long with crest elevation at 808 feet (M.S.L.); flashboards which raise the pool 4 feet above the crest; (2) a 68-foot long gated spillway; (3) a 1-1/2-mile long reservoir with elevation at 812 feet (M.S.L.) which provides a 15-foot operating head; (4) a short flume with 12 headgates; (5) a cableway used for operation and maintenance of the dam; (6) a powerhouse housing five 250-kW and two 300-kW generating units with a total capacity of 1,850 kW; (7) a 525-foot long, 2,400-volt transmission line connecting the project's generating facilities to the Kansas Power and Light Company's substation; and (8) appurtenant facilities.

On October 5, 1984, the Bowersock Mills and Power Company informed the Service that it would apply for a license renewal (license exemption) for their project. They requested pre-development consultation. During pre-development consultation we identified the need to provide for a passageway for fish at the dam, specifically, to allow the State threatened blue sucker (Cycleptus elongatus) to repopulate the Kansas River upstream of the dam and possibly allow for striped bass (Morone saxatilis) runs in the Kansas River in the spring of the year.

Historically, the blue sucker was found upstream of Lawrence, Kansas. It was able to pass this dam during high river flows until the existing spillway was modified after the 1951 floods. Since 1951, it is doubtful that this species has been able to pass the dam. Upstream populations have continued to decline. The Service lists the blue sucker as a Category 2 candidate species indicating that additional information on the biological status of the species is needed prior to a status decision for possible Federal listing. The primary aim of the passageway was to recover the blue sucker to a point that it could be delisted by the State and also not require Federal listing by the Service at the national level.

In anticipation of requesting a fish passageway as a condition for license renewal, Bob Green, Regional Hydrologist was contacted on March 15, 1985. The project was discussed and data needs ascertained. On April 10, 1985, this office transmitted a packet of data to Bob Green for his analysis. Mike Brewer, hydrologist, was assigned the project review. Around August 30, 1985, Mike provided this office with his work-up (a seven (7) page feasibility analysis). He determined that: 1) a fish passageway could be incorporated into the existing spillway; 2) the velocities in the spillway could be slowed to speeds that fish could navigate; and, 3) a preliminary design of baffles and a training wall could be relatively cheap to construct (approx. \$5,000).

Having determined this information, we held further discussions with the Bowersock Mills and Power Company and KDWP personnel. An agreement was reached wherein each party would participate in the design, installation and operation, as well as financial commitment, to the incorporation of a fish passageway at the existing spillway. The Service agreed to provide the engineering support and design the passageway as well as provide construction specifications for the KDWP to either construct, or allow for the taking of bids to construct, the passageway. The Bowersock Mills and Power Company would allow the construction and provide financial support with the KDWP to install, maintain, and operate the passageway. The above agreements were addressed in letters between the Service, KDWP and the Bowersock Mills and Power Company. Terms and conditions

were placed in the FERC license exemption to provide for the fish passageway as per agreement.

Throughout pre-development consultation, Lee Carlson, staff contact in the Regional Office, was kept informed of ongoing negotiations. He in-turn, kept then Assistant Regional Director, Bill Martin, informed. It was our understanding that everyone was quite aware of the agreements reached between the three parties involved. When terms and conditions were transmitted to FERC, they were contingent upon the Service doing the engineering work necessary to assure implementation.

It has been three years since the Bowersock Mills and Power Company received their license exemption from FERC. They, as well as the KDWP are anxious to build the fish passageway. In fact, the passageway is a priority advice for the KDWP. Because of the inactivity of the Service, we are developing a deeper hole for ourselves to climb out of. Our credibility is waning each month we fail to meet our commitments.

This office has not requested engineering assistance on other projects in the past. The one time that we have requested some assistance, we are seemingly not given much consideration. We propose that immediate consideration is now warranted. Not only will the Service's credibility be restored, but a great wealth of publicity will be generated by the construction of this fish passageway.

Please call me if you wish to discuss the contents of this memorandum in more detail and/or, hopefully, to inform us of any action taken to move this project up in priority order to begin engineering design this fiscal year.



cc: Field Supervisor, Grand Island, NE
MAIL STOP 64320



United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
DENVER FEDERAL CENTER, BUILDING 67, ROOM 840
P.O. BOX 25007
DENVER, COLORADO 80225-0007



December 10, 1987

ER 85/742

Mr. Kenneth F. Plumb
Secretary
Federal Energy Regulatory
Commission
825 North Capitol Street N.E.
Washington, D.C. 20426



Dear Mr. Plumb:

In response to a telephone request by Mr. Michael Andidos, Federal Energy Regulatory Commission, Chicago, Illinois, to the Fish and Wildlife Service, we have prepared the following clarification of our September 23, 1985, conditions for exemption for the Kansas River Hydro Project, FERC No. 2644-001, Douglas County, Kansas.

The comment that Mr. Andidos wanted clarified was Term and Condition No. 1 which reads as follows:

- I. Bowersock Mills and Power Company will allow one flood gate door at the spillway to remain open during the months of April, May, and June when Kansas River flows at Lawrence, Kansas, exceed 6,000 c.f.s.

The intent of this Term and Condition was to provide streamflows to a fish ladder, should one be built (see Term and Condition Nos. 2 and 3 of the September 23, 1985, letter). To date, the Kansas Department of Wildlife and Parks and the Fish and Wildlife Service have not positively determined the need for the fish ladder; therefore, compliance with Term and Condition No. 1 is unnecessary until such time that a fish ladder is actually installed.

We appreciate the opportunity to provide these additional comments on the Exemption application.

Sincerely,

Robert F. Stewart
Regional Environmental Officer

cc: William C. Wakefield
Stephen H. Hill
Kansas Fish and Game Dept.
ATTN: Dr. William Layher

MEMORANDUM

TO: Assistant Regional Director, Habitat Resources
Denver, CO
(Attn: Lee Carlson)

FROM: Acting Field Supervisor, Kansas-Nebraska
Grand Island, NE

SUBJECT: Review of Notice of Application for Exemption, Kansas
River Hydro Project, FERC # 2644-001, Douglas County,
Kansas (ER 85/742).

We have reviewed the subject Notice of Application for Exemption, Kansas River Hydro Project, FERC # 2644-001, Douglas County, Kansas, and Exhibit E. Environmental Report, and provide the following for incorporation into the Departmental response.

Exhibit E. Environmental Report

The primary deficiency in this report has been a lack of flow velocity data at the dam site, which apparently now is available at least in a preliminary form. To be complete it should provide fairly long range velocities at the dam, and both up and downstream, indicating maximum, minimum, and average. This information could possibly even be subdivided seasonally or monthly. Of greatest information to both the Fish and Wildlife Service and the Kansas Fish and Game Commission (KFGC) would be the spring spawning period.

This dam may play a role in the overall water supply of the Kansas River as it is affected by upstream reservoir releases. At least some detail of the release schedules of the reservoirs within the basin should be included here, with an analysis of how these will affect Bowersock Dam's ability to pass adequate sustained flows downstream. Conversely, expected high flows during spring releases should be evaluated for their impact on the dam's ability to dampen velocities to provide optimal spawning runs.

The habitat characteristics of the Kansas River channel both up and downstream from the dam should be evaluated, analyzing changes in habitat structure over a long period of time, 50 to 100 years or more. If records exist for the period prior to dam construction, these should be included to try and document what direct effects occurred. If this project is to be exempted from future reviews, then the record of past habitat changes may at least indicate future trends of what can be expected to occur. This information should include both changes occurring as a result of the dam's presence, and those for which the dam is not responsible but with which it may interact. Bowersock Dam is not

responsible for the activity of dredgers downstream or for any bed degradation they cause to happen. But if bed degradation moves upstream till it reaches the dam, this will affect future fisheries management decisions (i.e., trying to pass the blue sucker (Cycleptus elongatus) upstream).

Exhibit E states that upstream movement of fish "is impeded when discharge rates are low". It goes on to state that "It is not known whether the present high flow conditions seriously restrict the passage of fishes. Logically, passage is more difficult now than in the past, but passage probably varies with species of fish, volume of peak flow, and dates and duration of high flows".

One must assume that this discussion refers to fish movement within the reach between the Missouri River confluence and the Bowersock Dam, as it is affected by releases from the dam. Surely this is not suggesting that fish passage beyond the dam is possible at any flow velocities, at least by Kansas River fish species? This point should probably be clarified so that anyone reading this gets the clear message that the dam is an absolute barrier to fish migrating upstream. The river stage level would have to be higher than the dam, bank-full both up and downstream for any passage to be allowed; the "waterfall" effect would have to be completely damped out.

Fish Passageway

We have worked quite closely with the applicant and personnel of the KFGC to try and determine if a fish passageway could be incorporated into the existing dam and spillway at a cost that was not unreasonable. The fish passageway would be designed to allow striped bass (Morone saxatilis) and the State threatened blue sucker (Cycleptus elongatus), as well as other numerous warmwater species, to navigate around this impediment and repopulate upstream waters. The KFGC will assist the applicant financially if the cost of providing a fish passageway is not prohibitive.

We asked the Regional Engineer to assist us in determining if flow velocities could be slowed to allow for fish passage and, if found feasible, to design a passageway for this facility. Due to other priority commitments the Regional Engineer has been unable to finalize his investigation. Not knowing the feasibility of providing this passage has made it very difficult. We are, therefore, unable to stipulate a specific term or condition for fish passage for incorporation into the Federal Energy Regulatory Commission's (FERC) permit.

We, however, feel very strongly that, if feasible, a fish passageway should be incorporated into the FERC permit. Because we feel this way, we have developed a more generic condition to be specified in any FERC exemption permit as a condition of exemption. Otherwise, we oppose the issuance of an exemption and would request that the applicant apply for a renewal license for this facility.

It is requested that the following condition be specified in FERC's exemption permit as a condition of exemption:

Bowersock Mills and Power Company, in consort with the U.S. Fish and Wildlife Service and the Kansas Fish and Game Commission, will complete a feasibility study within 120-days, to determine if a fish passage facility could be installed at the Company's existing dam and spillway on the Kansas River at Lawrence, Kansas. The fish passage facility would be designed to: 1) allow warmwater fish species to bypass the Company's dam and spillway during upstream spawning migrations; and, 2) be reasonable, prudent and economically feasible to construct and operate as mutually agreed to by the parties involved. If found feasible, a fish passageway will be constructed by Bowersock Mills and Power Company. If found infeasible to provide a fish passageway at this time, a feasibility reevaluation will be conducted at 5-year intervals. If future evaluations find a fish passageway to be reasonable, prudent and economically feasible to install, Bowersock Mills and Power Company will modify their existing dam and spillway by constructing a fish passageway.

Threatened and Endangered Species

The following listed and proposed endangered and threatened species may occur in the project vicinity:

Listed Species

Expected Occurrence

Bald Eagle (Haliaeetus leucocephalus)
Peregrine falcon (Falco peregrinus)

Migration, winter resident
Migration, possible winter resident

Interior least tern (Sterna antillarum
athalassos)

Possible breeding

Proposed Species

Expected Occurrence

Piping plover (Charadrius melodus)

Possible breeding

Based on present information, the current operation of the facility does not affect the above listed species. However, if an exemption is granted, the following specific condition must appear in the FERC permit as a condition of exemption:

Bowersock Mills and Power Company must consult with the U.S. Fish and Wildlife Service prior to any changes in operating procedures or new construction to determine the affect on Federally listed or proposed threatened and endangered species.

We appreciate the opportunity to provide comments and conditions for the FERC permit.

/signed/ James A. Henriksen

cc: FWS, Manhattan, KS

STATE OF KANSAS

Department of
Wildlife & Parks



Mike Hayden, *Governor*

Office Of The Secretary
900 Jackson Street, Suite 502
Topeka, Kansas 66612-1220
913-296-2281

Wildlife Operations
Box 54-A
Pratt, Kansas 67124-9599
316-672-5911

Park Operations
900 Jackson Street, Suite 502
Topeka, Kansas 66612-1220
913-296-2281

September 18, 1987

Ref: ED1.0702
Bowersock Mills

Richard Raines
State Office, U.S. FWS
Ackert Hall - KSU
Manhattan, KS 66506

Dear Mr. Raines:

Enclosed please find the letter I wrote to Stephen Hill regarding his re-licensing conditions for Bowersock Mills hydropower plant on the Kansas River. I think it is self-explanatory.

Sincerely,

William G. Layher, Ph. D.
Supervisor
Environmental Services Section

kap
enc

STATE OF KANSAS

Department of
Wildlife & Parks



Mike Hayden, Governor

Office Of The Secretary
900 Jackson Street, Suite 502
Topeka, Kansas 66612-1220
913-296-2281

Wildlife Operations
Box 54-A
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316-672-5911

Park Operations
900 Jackson Street, Suite 502
Topeka, Kansas 66612-1220
913-296-2281

July 30, 1987

Mr. Stephen Hill, President
Bowersock Mills
Box 66
Lawrence, KS 66044

Dear Mr. Hill:

This letter is written in relation to our phone conversation the morning of July 30th. In a letter dated September 5, 1985 from me to the Secretary of the Federal Energy Regulatory Commission, three items were requested as conditions for your operating license approval. As we discussed over the phone, one of the conditions was to leave one flood gate open during the months of April, May and June when Kansas River flows at Lawrence exceed 6,000 cfs.

The intent of this condition was to provide flows to a fish ladder should one be built. (See conditions 2 and 3 of the Sept. 5th letter referred to in paragraph one of this letter). Therefore, we do not request condition one compliance until such time when a fish ladder is actually installed.

To date we have not yet positively determined the necessity for the fish ladder. If one is built in the future, at that time we would request your compliance with condition one of the September 5th letter.

Please feel free to provide a copy of this letter to FERC if it would help clarify the intent of our requested conditions.

Sincerely,

A handwritten signature in cursive script, reading "William G. Layher".

William G. Layher, Supervisor
Environmental Services Section

WGL/clg

BOWERSOCK MILLS & POWER CO.

P O BOX 66
LAWRENCE, KANSAS 66044
913-843-1385

SEP 11

September 9, 1985

Galen Buterbaugh
Regional Director
U.S. Fish & Wildlife Service
Box 25486
Denver Federal Center
Denver, Colorado 80255

RE: Agency Comment: License Exemption Application
The Bowersock Mills & Power Co. FERC No. 2644-001

Dear Sir:

This letter is to confirm our agreement with your Mr. Richard Raines concerning fish passage at the Bowersock Dam pursuant to our application for license exemption now pending before the FERC.

As a condition of an exemption grant we agree to the following provisions to assist in fish passage at our dam for the duration of our license exemption:

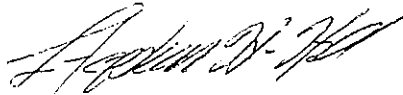
1) The applicant agrees to leave open one spillway gate between April 1 and June 30 each year at such times as river flows exceed 6,000 cfs at Lecompton, Kansas which is the nearest USGS gauging station.

2) The applicant agrees to allow the U.S. Fish & Wildlife Service and/or the Kansas Fish & Game to erect and maintain a fish ladder or passageway or other device to assist fish passage over the dam at one of the spillway gate locations.

3) The applicant agrees to bear one-third of the construction cost of such fish ladder, passageway, or other passage enabling devices up to a maximum of \$5,000.-

Sincerely yours,

The Bowersock Mills & Power Co.



Stephen H. Hill

SHH:lf

cc: Richard Raines
William Layher

Kansas Fish & Game

100.54A, RURAL ROUTE 2, PRATT, KANSAS 67124
(316) 672 5911

REGIONAL OFFICES.

Northwest Regional Office
2204 Vine
Hays, Kansas 67601

Northcentral Regional Office
Box 489, 511 Cedar
Concordia, Kansas 66901

Northeast Regional Office
3300 S.W. 29th St.
Topeka, Kansas 66614

Southwest Regional Office
808 Highway 56
Dodge City, Kansas 67801

Southcentral Regional Office
Box 424, 8420 Broadway
Valley Center, Kansas 67147

Southeast Regional Office
222 West Main Building
Suite C & D
Chanute, Kansas 66720

September 5, 1985

Mr. Kenneth F. Plumb, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: FERC #2644-001

Dear Mr. Plumb:

We have been in a continued negotiation and evaluation proceeding with Bowersock Mills, Lawrence, Kansas and the U.S. Fish and Wildlife Service. Today the U.S. Fish and Wildlife Service has completed a study of the Bowersock Mills Dam on the Kansas River, Douglas County, Kansas (FERC #2644-001). The findings indicate that a series of baffle structures on the spillway will slow velocities enough to allow fishes to move up and over the structure. In addition it appears that only 4 to 6 thousand dollars will be needed for actual construction of the baffles. Therefore we wish to repeal our condition as worded in our comments of June 21, 1985 and replace that condition with the following:

- 1) Bowersock Mills will allow one flood gate door at the spillway to remain open during the months of April, May and June when Kansas River flows at Lawrence, Kansas, exceed 6,000 cfs.
- 2) Bowersock Mills will allow minor modifications of the spillway to be made to facilitate fish passage (i.e. baffle construction or retaining wall).
- 3) Bowersock Mills will pay 1/3 of the costs associated with fish passage way construction up to a value not to exceed \$5,000. The Kansas Fish and Game Commission or other sources will be responsible for the remaining 2/3 of the project costs. It shall be the responsibility of the Kansas Fish and Game Commission to initiate actual construction if such is found feasible.

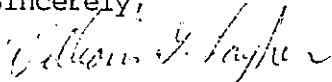
We have reviewed these conditions with Mr. Stephen Hill, President of Bowersock Mill and Power Company. It appears that he has no

Mr. Kenneth F. Plumb, Secretary
September 5, 1985
Page 2.

objections to these conditions.

If you have further questions please give me a call at 316/672-5911,
extension 146.

Sincerely,



William G. Layher, Ph.D.
Aquatic Ecologist
Environmental Services Section

WGL/clg

cc: Mr. Fred E. Springer, Director
Division of Project Management Branch, FERC
Mr. Stephen H. Hill, President
The Bowersock Mills and Power Company, Lawrence
Mr. Richard Raines
U.S. Fish and Wildlife Service, Manhattan

Agency Consultation

A. Federal Agencies Consulted:

1. National Marine Fisheries Service:

Copies of request for consultation and the reply are attached.

2. United States Fish and Wildlife Service:

Copies of correspondence are attached. This agency along with Kansas Fish and Game are concerned about fish passage around or over the Applicants dam. Consultation is still in progress. The general problem is discussed both below under Kansas Fish and Game as well as in Exhibit E under Fish and Wildlife Resources.

B. State Agencies Consulted:

1. Kansas State Historical Society:

Copies of our consultation request and the agencies reply are attached.

2. Kansas Forestry Fish and Game Commission:

Copies of correspondence are attached. Both the Kansas Fish and Game as well as the U. S. Fish and Wildlife Service have expressed verbally their concern about fish passage up the Kansas River. Historically the Bowersock Dam, in place since 1874, was not an obstacal because annual floods spread waters over the river bottoms allowing passage around the dam. In addition, at peak flows in excess of 80,000 cfs the dam "drowns out" (i.e. the head disappears). With the construction of the Corps of Engineer Reservoirs in the last 25 years the peak flows of the river have been shaved eliminating floods that previously may have facilitated fish passage.

Concerns that the dam may be a barrier are at this point conjectural only. Evidence that certain species are found below the dam and not above are based on limited sampling and reports of fishermen. The Applicant believes

F. Historical and Archeological Resources:

The project dam was erected in 1874 by the Lawrence Land Water Power Co. and produced mechanical power for various local businesses including paper manufacture, grain milling, and barbed wire factory. Electrified sometime in the 1890's, the dam and its cheap energy became the focal point for the industrial development of Lawrence. Businesses utilizing power from the dam included a paper mill, corrugated box factory, flour mill, shirt factory, ice plant, foundary, and wire mill, as well as the towns electric light utility.

After Several washouts, the Lawrence Land and Water Power Company failed in 1878 and the dam and power house structure were taken over by The Bowersock Mills, a grain milling enterprise directed and owned by Justin D. Bowersock.

In 1916 the firm was sold to the Jackman family of Lawrence who operated the dam, using its power in the operation of their flour milling, grain storage, and sand dredging operations until 1973 when controlling interest was acquired by the current owners who are direct descendents of J. D. Bowersock.

P.O. BOX 66
LAWRENCE, KANSAS 66044
913-843-1385

December 17, 1984

Executive Director
Kansas Historical Society
120 West 10th Street
Topeka, Kansas 66612

Dear Sir:

Our company is making an application to the FERC for license exemption on our 1.85 megawatt hydro electric operation (current license #2644) on the Kansas River at Lawrence, Kansas. Our current license expires December 31, 1987.

The exemption application will involve an increase in the rated capacity of our turbine generator #4 from 250 KVA to 310 KVA. No other changes in our physical plant, the dam, or the surrounding environs will occur.

For your information the Bowersock Dam was completed in 1874 and the production of power has been continuous since that time except for interruptions due to flood, fire, and occasional dam ruptures. The history of our company is probably well documented in your archives.

As part of our exemption filing we are required to consult with various federal and state agencies among which is the Kansas State Historical Society. Therefore if you have comments or questions, please contact me at your earliest convenience. A written response from you acknowledging this letter and containing any comments will be needed for our application.

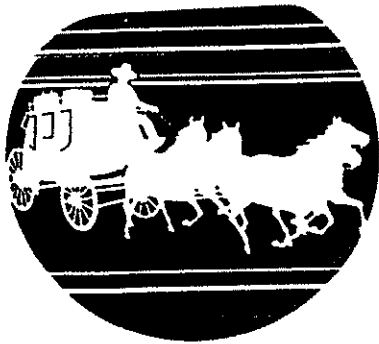
A copy of our environmental study, topographic maps, and a local map of our project are enclosed for your use.

Sincerely,

The Bowersock Mills & Power Co.

Stephen H. Hill
President

SHH:lf
Enclosure



KANSAS STATE HISTORICAL SOCIETY

CENTER FOR HISTORICAL RESEARCH

120 West Tenth • Topeka, Kansas 66612 • 913/296-3251

KANSAS MUSEUM OF HISTORY

6425 South West Sixth • Topeka, Kansas 66615 • 913/272-8681

December 20, 1984

Mr. Stephen H. Hill
President
Bowersock Mills & Power Co.
P. O. Box 66
Lawrence, KS 66044

Dear Mr. Hill:

We have reviewed the materials submitted for our comments on the relicensing of your hydroelectric operation. Inasmuch as there are no physical changes planned for the environment of the plant and dam, and the relicensing is for an activity carried on at that location for more than one hundred years, this office has no objection to the relicensing. The activities to be licensed will not have any adverse effects on any property listed on the National Register of Historic Places or otherwise identified in our files as having historical significance.

Sincerely,

Joseph W. Snell
State Historic Preservation Officer

by Richard Pankratz
Director, Historic Preservation Dept.

JWS:RDP:cgw

Low Impact Hydropower Institute

319 SW Washington Street, Suite 709
Portland, OR 97204-2618
Tel. (503) 227-1763 • Fax (503) 223-8544
www.lowimpacthydro.org

LOW IMPACT HYDROPOWER QUESTIONNAIRE APPLICANT FORMAT

[Excerpted from Part VI, Section E of the Low Impact Hydropower Certification Program. Words in italics are defined in Part VI, Section C, and line-by-line instructions are available in Section D of the program, available on-line in PDF format at <http://www.lowimpacthydro.org/Jan02criteria.pdf>].

03/10/2003

Comments from:

Vernon Tabor
USFWS
Kansas Ecological Field Office
Manhattan, KS

E. LOW IMPACT HYDROPOWER QUESTIONNAIRE

Background Information	Applicant Answer
1) Name of the <i>Facility</i> .	Bowersock Mill & Power Co., Lawrence, KS
2) Applicant's name, contact information and relationship to the Facility. If the Applicant is not the Facility owner/operator, also provide the name and contact information for the Facility owner and operator.	
3) Location of Facility by river and state.	Kansas River, Lawrence, KS
4) Installed capacity.	
5) Average annual generation.	
6) Regulatory status.	
7) Reservoir volume and surface area measured at the high water mark in an average water year.	
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse). [Requested information, but not required].	
9) Number of acres inundated by the Facility. [Requested information, but not required]	

<p>10) Number of acres contained in a 200-foot zone extending around entire impoundment. [Requested information, but not required]</p>	
<p>11) Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.</p>	
<p>12) Please attach a description of the Facility, its mode of operation (<i>i.e.</i>, peaking/run of river) and a map of the Facility.</p>	
<p>Questions for “New” Facilities Only: If the Facility you are applying for is “new” <i>i.e.</i>, 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. [If your facility was constructed and operating as of August of 1998, skip questions 13-17 and proceed to section A].</p>	
<p>13) When was the dam associated with the Facility completed?</p>	
<p>14) When did the added or increased generation first generate electricity?</p>	
<p>15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?</p>	
<p>16) Did the added or increased capacity include or</p>	

<p>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)?</p>	
<p>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?</p> <p>(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.</p>	

A. Flows	PASS	FAIL	Applicant Answer
1) Is the Facility in <i>Compliance with Resource Agency Recommendations</i> 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?	YES = Pass, Go to B N/A = Go to A2	NO = Fail	Yes? Not sure most of the conditions are applicable to this facility. The dam passes all flows it receives.
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?	YES = Pass, go to B NO = Go to A3		
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?	YES = Pass, go to B	NO = Fail	
B. Water Quality	PASS	FAIL	
2) 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	YES = Go to B2	NO = Fail	Yes? Again, I'm not sure how the operation of this facility would impact water quality, however it could likely increase dissolved O ₂ in the downstream reach of river due to the "pour-over" mixing effect. This would be a positive benefit in the summer during low flows.

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?			
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 is not a cause of that violation?	YES = Pass	NO = Fail	
C. Fish Passage and Protection	PASS	FAIL	
1) Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?	YES = Go to C5 N/A = Go to C2	NO = Fail	?? Again, this is unknown, primarily because this facility the applicability of the prescriptions are not

consistent (IN MY OPINION) with this type of structure on a plains river.

<p>2) 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 run is extinct)?</p> <p>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?</p> <p>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?</p>	<p>YES = Go to C2a NO = Go to C3</p> <p>YES = Go to C2b N/A = Go to C2b</p> <p>YES = Go to C5 N/A = Go to C3</p>	<p><i>Yes</i></p> <p>NO = Fail</p> <p>NO = Fail</p>	<p><i>There are records only of American eel in this river system. The structure, almost assuredly, acts as a barricade to fish passage for this species as well as all others, except during periods of extremely high flows (upper flood magnitude). During those flows, I would speculate that eel (as well as other spp.) could, and do, pass along the face of the levee on the north riverside.</i></p>
<p>3) If, since December 31, 1986:</p> <p>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 C2a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p>	<p>NO = Go to C5 N/A = Go to C4</p>	<p>YES = Fail</p>	<p><i>? Fish passage at this facility has been considered in the past, except not Mandatory. There has been little emphasis on this issue in the Kansas River basin, and the plains overall, mainly because there are so few of these structures on plains rivers. Basically, it has been a non-issue.</i></p>

<p>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?</p>			<p>Considering only anadromous & catadromous spp., the American eel exists in such low numbers in this portion of the Kansas basin, it has not been considered by the resource agencies as an issue.</p>
<p>4) If C3 was not applicable:</p> <p>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</p> <p>b) If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US 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?</p>	<p>YES = Go to C5</p>	<p>NO = Fail</p>	<p>upstream passage</p>
<p>5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?</p>	<p>YES = Go to C6 N/A = Go to C6</p>	<p>NO = Fail</p>	<p>Bowersock, in my opinion, blocks nearly all fish passage of riverine spp, except at high flows. This detrimental to many of the species, reducing their ability to reach upstream habitat (which is in existence).</p>
<p>6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?</p>	<p>YES = Pass, go to D N/A = Pass, go to D</p>	<p>NO = Fail</p>	<p>However, it also now blocks upstream passage of the recently introduced Asian carps (Bighead, silver, black, & grass carps), which are considered detrimental and should not pass the structure.</p>

* It is hard to gage ~~the~~ costs/benefits to the upstream basin between the now blocked natives & the likely negative impacts of the Asian carps.

However, it also now blocks upstream passage of the recently introduced Asian carps (Bighead, silver, black, & grass carps), which are considered detrimental and should not pass the structure.

D. Watershed Protection	PASS	FAIL	
1) Is the Facility in Compliance with Resource Agency Recommendations, or, if none, with license conditions, regarding protection, mitigation or enhancement of lands inundated by the Facility or otherwise occupied by the Facility, and regarding other watershed protection, mitigation and enhancement activities?	YES and N/A= Pass	NO = Fail	
E. Threatened and Endangered Species Protection	PASS	FAIL	
2) 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 NO = Pass, go to F		No.

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	
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<p>3) If the Facility has received authority to incidentally <i>Take</i> 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 authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?</p>	<p>YES = Go to E4 N/A = Go to E5</p>	<p>NO = Fail</p>	
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<p>4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:</p> <p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility's operations?</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>	
<p>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?</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>	
<p>F. Cultural Resource Protection</p>	<p>PASS</p>	<p>FAIL</p>	
<p>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?</p>	<p>YES = Pass, go to G NO = Fail Go to F2</p>	<p>NO = Fail</p>	
<p>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 <i>Native American Tribe</i>, or a letter from a senior officer of the relevant agency or Tribe that no plan is</p>	<p>YES = Pass, go to G</p>	<p>NO = Fail</p>	

needed because Cultural Resources are not negatively affected by the Facility?			
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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	NO = Fail	
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	

KANSAS

DEPARTMENT OF WILDLIFE & PARKS

KATHLEEN SEBELIUS, GOVERNOR

May 17, 2004

Ms. Sarah Hill
Bowersock Mills and Power Company
P.O. Box 66
Lawrence, KS 66044

Dear Ms. Hill,

The following is an amendment concerning Bowersock's application for Low Impact Hydropower Certification.

E. Threatened and Endangered Species Protection

3 (iii). For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?

Although state-listed species occur in the Kansas River, no established state procedures address incidental take of a listed species regarding this applicant; therefore the question is not applicable.

Nate Davis, Aquatic Ecologist
Environmental Services Section



Exhibit F -- Cultural Resource Protection

The Bowersock Mills and Power Company Lawrence, Kansas LIHI Application for Low Impact Status May, 2004

The Bowersock Mills and Power Company is one of the oldest standing structures in Lawrence, Kansas. As one of the first hydroelectric power plants established west of the Mississippi River, and the enterprise that made further development of the town possible, the plant has historic significance on par with or greater than any buildings in the region. The Bowersock Mills and Power Company has not applied for historic status, but has plans to eventually do so.

A copy of the following document is attached:

- Kansas State Historical Society letter of April 16, 2003, finding that the office has “no objection to the certification for continuing that activity. The activities that will be certified will not adversely affect any property listed on the National Register of Historic Places or otherwise identified in our files as having historical significance.”



KANSAS

Kansas State Historical Society
Dick Pankratz, *Director, Cultural Resources Division*

KATHLEEN SEBELIUS, GOVERNOR

April 16, 2003

Ms. Sarah Hill-Nelson
Secretary-Treasurer
Bowersock Mills and Power Company
P. O. Box 66
Lawrence, KS 66044

Dear Ms. Hill-Nelson:

We have reviewed the materials sent us with your letter of April 7, 2003, concerning certification of the Bowersock Dam as a low impact hydropower dam. Since the dam has been operating and producing power since 1874, this office has no objection to the certification for continuing that activity. The activities that will be certified will not adversely affect any property listed on the National Register of Historic Places or otherwise identified in our files as having historical significance.

Sincerely yours,

Mary R. Allman
State Historic Preservation Officer



Richard Pankratz
Director, Cultural Resources Division

Exhibit G – FERC Exemption

**The Bowersock Mills and Power Company
Lawrence, Kansas
LIHI Application for Low Impact Status
May, 2004**

Copies of the following documents are attached:

- Federal Energy Regulatory Commission Exemption Order for The Bowersock Mills and Power Company, Project No. 2644-001 dated November 15th, 1985.
- Letter from the Federal Energy Regulatory Commission dated December, 10th, 1985 highlighting relevant articles of the exemption.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Bowersock Mills & Power Company)

Project No. 2644-001

ORDER GRANTING EXEMPTION FROM LICENSING OF A
SMALL HYDROELECTRIC PROJECT OF 5 MEGAWATTS OR LESS

(Issued November 15, 1985)

The Applicant 1/ filed an application for exemption from all or part of Part I of the Federal Power Act (Act) pursuant to 18 C.F.R. Part 4 Subpart K (1980) implementing in part Section 408 of the Energy Security Act (ESA) of 1980 for a project as described in the attached public notice. 2/

Notice of the application was published in accordance with Section 408 of the ESA and the Commission's regulations and comments were requested from interested Federal and State agencies including the U.S. Fish and Wildlife Service and the State Fish and Wildlife Agency. All comments, protests and motions to intervene that were filed have been considered. No agency has any objection relevant to issuance of this exemption.

Standard Article 2, included in this exemption, requires compliance with any terms and conditions that Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. The terms and conditions referred to in Article 2 are contained in any letters of comment by these agencies which have been forwarded to the Applicant in conjunction with this exemption. 3/

Should the Applicant contest any terms or conditions that were proposed by Federal or State agencies in their letters of comment as being outside the scope of Article 2, the Commission shall determine whether the disputed terms or conditions are outside the scope of Article 2.

- 1/ Applicant Bowersock Mills & Power Company, Project No. 2644-001 and filing date December 27, 1984.
- 2/ Pub. Law 96-294, 94 Stat. 611. Section 408 of the ESA amends inter alia, Sections 405 and 408 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. §§2705 and 2708).
- 3/ An exemption from licensing granted by this Commission does not serve as any basis for restricting hunting and fishing access to the waterway involved except to the extent required for public safety purposes.

Based on the terms and conditions required by Federal and State fish and wildlife agencies, the environmental information in the application for exemption, other public comments, and staff's independent analysis, issuance of this order is not a major Federal action significantly affecting the quality of the human environment. 4/

The Director of the Office of Hydropower Licensing or the Director's designee, under 18 C.F.R. § 375.314, orders:

(A) Kansas River Project No. 2644 as described and designated in Bowersock Mills & Power Company application filed on December 27, 1984, is exempted from all of the requirements of Part I of the Federal Power Act, including licensing, subject to the standard articles in §4.106, of the Commission's regulations attached hereto as Form E-2, 18 C.F.R. §4.106 45 Fed. Reg. 11658 (March 25, 1985).

(B) This order is final unless appealed to the Commission by any party within 30 days from the issuance date of this order under 18 C.F.R. 385.1902 (1985).

Don Garber

for Kenneth M. Pusateri
Acting Director, Office of
Hydropower Licensing

- 5/ Environmental Assessment, Kansas River Project, FERC Project No. 2644--001, Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission, August 8, 1985. This document is available in the Division of Public Information and in the Commission's public file associated with this proceeding.

§ 4.106 Standard terms and conditions of exemption from licensing

Any exemption from licensing granted under this subpart for a small hydroelectric power project is subject to the following standard terms and conditions:

(a) Article 1. The Commission reserves the right to conduct investigations under sections 4(g), 306, 307, and 311 of the Federal Power Act with respect to any acts, complaints, facts, conditions, practices, or other matters related to the construction, operation, or maintenance of the exempt project. If any term or condition of the exemption is violated, the Commission may revoke the exemption, issue a suitable order under section 4(g) of the Federal Power Act, or take appropriate action for enforcement, forfeiture, or penalties under Part III of the Federal Power Act.

(b) Article 2. The construction, operation, and maintenance of the exempt project must comply with any terms and conditions that the United States Fish and Wildlife Service and any state fish and wildlife agencies have determined are appropriate to prevent loss of, or damage to, fish or wildlife resources or to otherwise to carry out the purposes of the Fish and Wildlife Coordination Act, as specified in Exhibit E of the application for exemption from licensing or in the comments submitted in response to the notice of the exemption application.

(c) Article 3. The Commission may revoke this exemption if actual construction or any proposed generating facilities has not begun within two years, or has not been completed within four years from the date on which this exemption was granted. If an exemption is revoked under this article, the Commission will not accept from the prior exemption holder a subsequent application for exemption from licensing or a notice of exemption from licensing for the same project within two years of the revocation.

(d) Article 4. This exemption is subject to the navigation servitude of the United States if the project is located on navigable waters of the United States.

(e) Article 5. This exemption does not confer any right to use or occupy any Federal lands that may be necessary for the development or operation of the project. Any right to use or occupy any Federal lands for those purposes must be obtained from the administering Federal land agencies. The Commission may accept a license application by any qualified license applicant and revoke this exemption, if any necessary right to use or occupy Federal lands for those purposes has not been obtained within one year from the date on which this exemption was granted.

(f) Article 6. In order to best develop, conserve, and utilize in the public interest the water resources of the region, the Commission may require that the exempt facilities be modified in structure or operation or may revoke this exemption.

(g) Article 7. The Commission may revoke this exemption if, in the application process, material discrepancies, inaccuracies, or falsehoods were made by or on behalf of the applicant.

(h) Article 8. Any exempted small hydroelectric power project that utilizes a dam that is more than 33 feet in height above streambed, as defined in 18 CFR 12.31(c) of this chapter, impounds more than 2,000 acre-feet of water, or has a significant or high hazard potential, as defined in 33 CFR Part 222, is subject to the following provisions of 18 CFR Part 12, as it may be amended:

- (1) Section 12.4(b)(1)(i) and (ii), (b)(2)(i) and (iii), (b)(iv), and (b)(v);
- (2) Section 12.4(c);
- (3) Section 12.5;
- (4) Subpart C; and
- (5) Subpart D.

For the purposes of applying these provisions of 18 CFR Part 12, the exempted project is deemed to be a licensed project development and the owner of the exempted project is deemed to be a licensee.

(i) Before transferring any property interests in the exempt project, the exemption holder must inform the transferee of the terms and conditions of the exemption. Within 30 days of transferring the property interests, the exemption holder must inform the Commission of the identity and address of the transferee.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

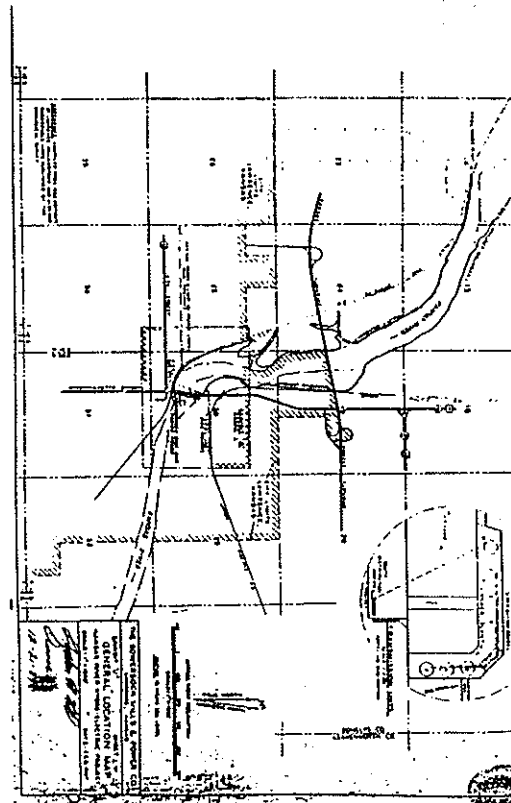
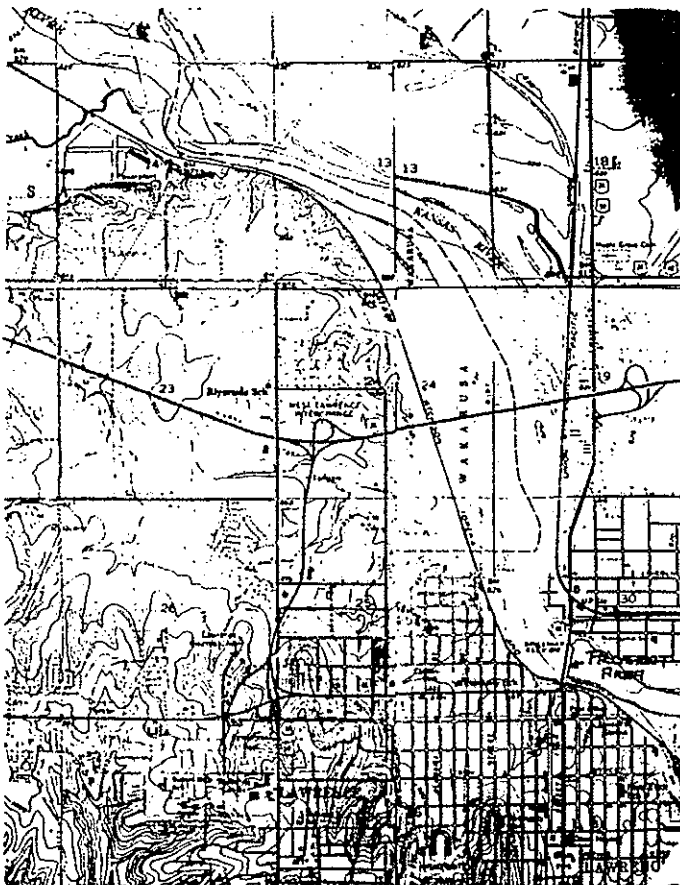
(April 29, 1995)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

- a. Type of Application: Exemption 5-MW or Less
- b. Project No.: P-2644-001
- c. Date Filed: December 27, 1984
- d. Applicant: The Bowersock Mills & Power Co.
- e. Name of Project: Kansas River
- f. Location: On the Kansas River in Douglas County, Kansas
- g. Filed Pursuant to: Section 408 of the Energy Security Act of 1980, 16 U.S.C. §§ 2704 and 2709
- h. Contact Person: Stephen H. Hill
The Bowersock Mills & Power Co.
Box 66
Sixth and New York Streets
Lawrence, Kansas 66044

- i. Comment Date: JUN 10 1985
- j. Description of Project: The proposed project would utilize a currently licensed facility. Licensee/Applicant plans to increase the installed capacity of the project from 1.85 to 1.91 MW. The exempted project would consist of: (1) an existing 645-foot-long, 20-foot-wide dam including spillway at elevation 408 feet m.s.l. owned by the Applicant; (2) an existing 200-acre reservoir with a storage capacity of 900 acre-feet at elevation 812 m.s.l.; (3) an existing powerhouse to house a rebuilt turbine/generator with a capacity of 1.91 MW which would discharge flows back into the Kansas River; (4) an existing three phase transmission line 600 feet long; and (5) appurtenant facilities. The estimated average annual energy produced by the project would be 6.5 million kWh operating under a net hydraulic head of 17 feet. Project power will be sold to the Kansas Power and Light Company.
- k. This notice also consists of the following standard paragraphs: A1, A9, B, C, D3a.
- l. Purpose of Exemption - An exemption, if issued, gives the Exemptee priority of control, development, and operation of the project under the terms of the exemption from licensing, and protects the Exemptee from permit or license applicants that would seek to take or develop the project.

DC-A-13



FEDERAL ENERGY REGULATORY COMMISSION

CHICAGO REGIONAL OFFICE
230 SOUTH DEARBORN STREET, ROOM 3130
CHICAGO, ILLINOIS 60604

In reply refer to:

DINS-OHL-CH
Project No. 2644

December 10, 1985

Mr. Stephen H. Hill, President
The Bowersock Mills and Power Company
546 Massachusetts Street
P.O. Box 66
Lawrence, Kansas 66044

Dear Mr. Hill:

By order issued November 15, 1985, the Commission granted an exemption from licensing for the Kansas River Project No. 2644. The responsibility for supervision of the exemption rests with this office.

Preservation of the right to develop and operate the project and retain exemption from licensing is dependent upon compliance with the terms and conditions of the exemption order. I recommend that you review all the articles included in the order, and especially the following article which requires action by the exemptee by a specified date.

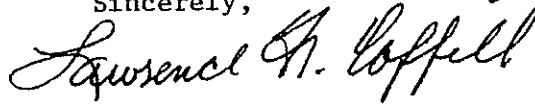
Article 3 of the standard terms and conditions states that the Commission may accept a license application and revoke the exemption if actual construction or development of proposed generating facilities has not started within two years, or has not been completed within four years, from the date on which the exemption was granted. Therefore, construction of the project, as specified in the application for exemption, must begin by November 15, 1987, and be completed by November 15, 1989. Please notify me when construction starts.

Article 2 concerns compliance with terms and conditions necessary for fish and wildlife protection and conservation including any requirements specified in Exhibit E of the application for exemption or in comments received from Federal or State fish and wildlife agencies in response to the notice of the exemption application.

Article 8 applies to a dam which is more than 33 feet in height, impounds more than 2,000 acre-feet or has a significant or high hazard potential. The Kansas River Dam does not meet any of these conditions; therefore, sub-items (i) through (v) are not applicable.

Should you have any questions on this correspondence or the exemptee's obligations under the terms of the exemption, please call me or Mr. Clifford Emmerling at (312) 353-6168.

Sincerely,

A handwritten signature in cursive script that reads "Lawrence F. Coffill". The signature is written in dark ink and is positioned above the typed name.

Lawrence F. Coffill, P.E.
Regional Director