

BBNPCEm Resource

From: Hartle, Mark [mhartle@pa.gov]
Sent: Tuesday, July 07, 2015 4:02 PM
To: BBNPCOLEIS Resource
Cc: Lora Zimmerman; Young, Leroy; Wnuk, Robert; Shervinskie, Thomas; Urban, Chris; Pat Naugle (pnaugle@srbc.net); Trowbridge, Eugene
Subject: [External_Sender] Draft EIS for Combined License at the Bell Bend Nuclear Power Plant - Pennsylvania Fish and Boat Commission comments
Attachments: 20150707PFBC_Comments_Bell_Bend_EIS.pdf; PPL Bell Bend (2009-079 2009-080 2012-007) Required CWU Mitigation and Passby Flows Ltr 12-28-12.pdf; 43303_10-24-2014.pdf

Dear U.S. Nuclear Regulatory Commission,

Attached you will find comments by the Pennsylvania Fish and Boat Commission on the Draft Environmental Impact Statement for Combined License at the Bell Bend Nuclear Power Plant.

Thank you for your consideration of our comments.

Sincerely,

Mark Hartle

*Mark A. Hartle, Aquatic Resources Section Chief
Pennsylvania Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA
(814) 359-5133*

Federal Register Notice: 88FR22231
Comment Number: 6

Mail Envelope Properties (89519d49ffd34b239b4b9874bdb535b0)

Subject: [External_Sender] Draft EIS for Combined License at the Bell Bend Nuclear Power Plant - Pennsylvania Fish and Boat Commission comments
Sent Date: 7/7/2015 4:01:47 PM
Received Date: 7/7/2015 4:02:28 PM
From: Hartle, Mark

Created By: mhartle@pa.gov

Recipients:

"Lora Zimmerman" <lora_zimmerman@fws.gov>
Tracking Status: None
"Young, Leroy" <leyoung@pa.gov>
Tracking Status: None
"Wnuk, Robert" <rw nuk@pa.gov>
Tracking Status: None
"Shervinskie, Thomas" <tshervinsk@pa.gov>
Tracking Status: None
"Urban, Chris" <curban@pa.gov>
Tracking Status: None
"Pat Naugle (pnaugle@srbc.net)" <pnaugle@srbc.net>
Tracking Status: None
"Trowbridge, Eugene" <etrowbridg@pa.gov>
Tracking Status: None
"BBNPCOLEIS Resource" <BBNPCOLEIS.Resource@nrc.gov>
Tracking Status: None

Post Office: ENCTCEXCH015.PA.LCL

Files	Size	Date & Time
MESSAGE	490	7/7/2015 4:02:28 PM
20150707PFBC_Comments_Bell_Bend_EIS.pdf		407515
PPL Bell Bend (2009-079 2009-080 2012-007) Required CWU Mitigation and Passby Flows Ltr		
12-28-12.pdf	857266	
43303_10-24-2014.pdf	169849	

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:



Pennsylvania Fish & Boat Commission

Division of Environmental Services

450 Robinson Lane
Bellefonte, PA 16823
Phone: 814-359-5133
Fax: 814-359-5175

Sent via e-mail to BBNP.COLEIS@nrc.gov

July 7, 2015

Chief – Rules, Announcements, and Directives Branch
Division of Administrative Services, Office of Administration
Mail Stop: OWFN 12-H08
U.S. Nuclear Regulatory Commission

Washington, DC 20555-0001

Re: Pennsylvania Fish and Boat Commission comments on the Environmental Impact Statement for the Combined License for the Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania

Dear Sir/Madam:

The Pennsylvania Fish and Boat Commission (PFBC) provided information to the team that completed the subject Environmental Impact Statement for the Bell Bend Nuclear Power Plant. We have also engaged with appropriate agencies regarding studies and permitting necessary for this project to proceed. We recognize that NRC, in Section 10.6.3 of the EIS, has concluded that construction and operation of the Bell Bend Nuclear Power Plant would have benefits that, with identified mitigation, would outweigh the economic, environmental and social costs associated with new plant construction and operation. This conclusion is beyond the scope of our agency's mission, which is "to protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities." Our role is to avoid, minimize and mitigate foreseeable impacts to aquatic resources and recreational fishing and boating. We have reviewed the EIS for Bell Bend with respect to this role and would like to provide the following comments, which are organized by environmental impact type.

Construction and Preconstruction

Water Use

Impacts are listed as "Small" and Mitigation Measures proposed are "None". PFBC provided comments and recommendations on Water Obstruction and Encroachment Permit E40-720 to Pennsylvania Department of Environmental Protection and has been satisfied with avoidance and mitigation measures associated with construction covered by this permit. If the permit approval expires before construction or construction modification is proposed, PFBC will reevaluate any proposals through review of the most current information available.

Water Quality

We believe the EIS conclusion is accurate regarding water quality concerns anticipated to be a local and temporary increase in suspended solids from construction. Required erosion and sedimentation measures should mitigate most construction water quality impacts.

Ecological (aquatic)

Our Mission:

www.fish.state.pa.us

To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.

The Northern cricket frog (*Acris crepitans*), a state endangered species, may be affected by plant construction and operation. PFBC responded to a Pennsylvania Natural Diversity Inventory search associated with the Bell Bend Plant with a Species Impact Review #43303 dated October 27, 2014. This letter, which is attached, indicated that the Northern cricket frog is a species of concern at the site. Surveys, seasonal restrictions and other measures to protect this animal may be recommended by our agency to assess presence of this species or to avoid or minimize impacts. This review is valid for two years.

Other than the endangered species listed above, PFBC is satisfied with avoidance measures implemented to date in construction plans. Most wetland impacts will be avoided. The EIS describes proposed mitigation that includes a stream and floodplain restoration project on two reaches of Walker Run and restoration of the North Branch Canal System. PFBC reviewed the Walker Run restoration project plans and is satisfied with the improved ecological values provided by the project as mitigation. In our comments to Pennsylvania DEP regarding Water Obstruction and Encroachment Permit E40-720, we stated that, "While there are stream and wetland impacts at this site, the proposed stream channel relocation and wetland mitigation will increase aquatic resources on and adjacent to this site."

Economic Impacts to Community Infrastructure and Community Services

Impact is stated in the EIS as "moderate". PFBC saw no clear category to describe potential impacts to recreational fishing and boating, so we will place our comments in this category. During water intake installation, recreational fishing and boating will be affected on the north bank of the river and in the river channel where the intake is to be located. Aids to Navigation (ATONs), signage and indication to boaters and anglers where safe passage is available should be accommodated during the construction phase. Coordination with our agency will be necessary during the construction process.

Operation

Water Use

PFBC provided comments and reviewed results on an Instream Flow Incremental Methodology study that evaluated impacts of the proposed Bell Bend water withdrawal on fish and mussels. Small impacts during low flow conditions were shown for a riffle fish species, Northern Hogsucker (*Hypentilium nigricans*) and Green Floater, *Lasmigona subviridis*, a mussel that utilizes shallow fine substrate habitat. The Susquehanna River Basin Commission in its December 28, 2012 letter, which is provided, specified a passby flow equal to the monthly flow that is exceeded 95% of the time from May through October. PFBC is satisfied that the low flow protection required by SRBC will negate operational impacts to riverine habitat at low flows.

Water Quality

The project will reduce flow in the river by the amount of its water withdrawal and will slightly reduce the river's assimilative capacity. Anticipated impacts to water quality due to the Bell Bend withdrawal that the EIS characterizes as "Small" should be offset by low flow protection and consumptive use mitigation required by SRBC.

Ecological (aquatic)

The EIS denotes "Small" impacts due, in part, to impingement and entrainment of fish and aquatic life at the project intake. A study of Bell Bend (up to 42 MGD) impingement and entrainment impacts was performed by PPL by examining impingement and entrainment of fish at the existing Susquehanna Steam Electric Station intake (58.32 MGD withdrawal). PFBC is extremely concerned about fish lost through operation of this project. The Susquehanna Steam Electric Station (SSES) withdraws water from the same pool as planned for Bell Bend' withdrawal of up to 42 MGD. We conducted an analysis which assumes that impacts at Bell Bend would be similar to the Susquehanna Steam Electric Station, which has

a fish friendly intake in terms of screen size, orientation and intake velocity and prorated impacts to the size of the Bell Bend withdrawal. Table 1 attached to this letter defines the number and dollar value of fish expected to be trapped against the intake screen (impingement) at the project site. A total of 128 fish with a replacement value of \$96 per year are expected to be lost through impingement. This is a small number and value. Table 2, however, shows the number and dollar value of fish expected to be lost through the intake screen (entrainment) at the project site is projected as 9.6 million fish per year with a replacement value of \$2.6 million dollars. PFBC supports any measures that may be incorporated into intake design and construction to limit entrainment losses and will request mitigation for this substantial number of fish lost to the Susquehanna River if the Bell Bend Nuclear Power Plant is licensed and operated. We note that this loss is compounded by the number of fish lost at the SSES intake.

See comments above provided under "Water Use" for water withdrawal impacts on species inhabiting riverine habitat.

Provision of consumptive use mitigation water from Cowanesque Reservoir will draw the reservoir down over short periods in infrequent low flow events, which will affect aquatic plants, juvenile fish, amphibians, snakes and turtles in the water storage reservoir as indicated in Section 10 of the EIS. PFBC has not requested any activities to modify or mitigate impacts.

Economic Impacts to Community Infrastructure and Community Services

PFBC has a concern that was not considered in the EIS. Any increased security measures that may be imposed in the future have a high potential to exclude the public from the Susquehanna River near the Bell Bend Nuclear Power Plant and Susquehanna Steam Electric Station. If this occurs, negative economic impacts and loss of recreational use will result. PFBC would like to indicate for the record that we would oppose limitation of public use of the Susquehanna River in the vicinity of the Bell Bend Nuclear Power Plant. We have seen increases in security limit uses of public resources in the past.

Please contact me at (814) 359-5133 or e-mail mhartle@pa.gov if you have any questions or would like to discuss our comments.

Sincerely,



Mark A. Hartle, Chief
Aquatic Resources Section
Division of Environmental Services

Enclosures (2)

c: PFBC - L. Young, R. Wnuk, T. Shervinskie, C. Urban (via e-mail)
SRBC – Pat Naugle (via e-mail)
DEP – Eugene Trowbridge II (via e-mail)
USFWS – Lora Zimmerman (via e-mail)

Table 1. Estimated number and value of fish entrained by the Bell Bend Nuclear Power Plant withdrawing 42 MGD from the Susquehanna River.

Species	SSES Est. # Impinged ^a	Bell Bend Est. # Impinged ^b	Mean length ^a in inches	2003 AFS replacement value ^c	Cost updated to 2015 dollars ^d	Annual value of fish entrained
Bluegill	44	32	2	\$0.19	\$0.25	\$7.77
Rock Bass	34	24	3	\$0.60	\$0.77	\$18.95
Channel Catfish	31	22	3	\$0.62	\$0.80	\$17.86
Tessellated Darter	18	13	2	\$0.40	\$0.52	\$6.69
Spotfin Shiner	16	12	3	\$0.09	\$0.12	\$1.34
Spottail Shiner	5	4	2	\$0.09	\$0.12	\$0.42
Margined Madtom	4	3	2	\$0.25	\$0.32	\$0.93
Smallmouth Bass	4	3	8	\$4.00	\$5.16	\$14.86
White Crappie	4	3	4	\$0.98	\$1.26	\$3.64
White Sucker	4	3	4	\$0.71	\$0.92	\$2.64
Yellow Perch	3	2	6	\$1.73	\$2.23	\$4.82
Banded Darter	2	1	2	\$0.40	\$0.52	\$0.74
Pumpkinseed	2	1	5	\$1.25	\$1.61	\$2.32
Walleye	2	1	7	\$1.93	\$2.49	\$3.59
Bluntnose Minnow	1	1	2	\$0.09	\$0.12	\$0.08
Brown Trout	1	1	11	\$2.23	\$2.88	\$2.07
Northern Hogsucker	1	1	15	\$3.56	\$4.59	\$3.31
Unidentified fish	1	1	2		\$0.27	\$0.19
Yellow Bullhead	1	1	6	\$0.90	\$4.59	\$3.31
TOTAL	178	128	various	various	various	\$95.53

^a from Normandeau Associates (2009) impingement and entrainment estimates for Susquehanna Steam Electric Station using 58.32 MGD intake withdrawal.

^b Bell Bend estimate based on reported 42.00 MGD withdrawal which is 72% of SSES withdrawal.

^c From Southwick and Loftus (2003). NE regional values used where. When not available, nationwide value used.

^d Using Consumer Price Index inflation calculator found at <http://data.bls.gov/cgi-bin/cpicalc.pl>

^e Value per fish taken from value of same category of fish entrained.

Table 2. Estimated number and value of fish entrained by the Bell Bend Nuclear Power Plant withdrawing 42 MGD from the Susquehanna River.

Species	SSES Est. # Entrained^a	Bell Bend Est. # Entrained^b	2003 AFS replacement value^c	Cost updated to 2015 dollars^d	Annual value of fish entrained
Banded Darter	13,778	9,922	\$0.34	\$0.44	\$4,351.98
Brown Bullhead	13,799	9,938	\$0.25	\$0.32	\$3,204.86
Common Carp	894,149	643,934	\$0.09	\$0.12	\$74,760.79
Chain Pickerel	13,635	9,819	\$0.20	\$0.26	\$2,533.42
Channel Catfish	2,570,361	1,851,083	\$0.25	\$0.32	\$596,974.28
Clupeidae	7,042	5,071	\$0.12	\$0.15	\$785.05
Cyprinidae	2,863,110	2,061,910	\$0.09	\$0.12	\$239,387.81
Lepomis sp.	42,151	30,356	\$0.23	\$0.30	\$9,006.52
Margined Madtom	69,502	50,053	\$0.25	\$0.32	\$16,142.05
Percidae	312,507	225,056	\$0.34	\$0.44	\$98,709.77
Quillback	2,164,020	1,558,451	\$0.07	\$0.09	\$140,728.09
Rock Bass	285,177	205,374	\$0.23	\$0.30	\$60,934.58
Shield Darter	7,042	5,071	\$0.34	\$0.44	\$2,224.32
Smallmouth Bass	427,672	307,994	\$0.39	\$0.50	\$154,951.90
Spottail Shiner	160,030	115,248	\$0.09	\$0.12	\$13,380.29
Tessellated Darter	6,838	4,924	\$0.34	\$0.44	\$2,159.88
Unidentified fish ^e	48,744	35,104		\$0.27	\$9,478.00
Unidentified darter	1,644,738	1,184,482	\$0.34	\$0.44	\$519,513.85
Walleye	171,869	123,774	\$0.09	\$0.12	\$14,370.16
White Sucker	1,299,692	935,992	\$0.41	\$0.53	\$495,046.26
Yellow Perch	308,528	222,191	\$0.34	\$0.44	\$97,452.95
TOTAL	13,324,384	9,595,750	various	various	\$2,556,096.81

^a from Normandeau Associates (2009) impingement and entrainment estimates for Susquehanna Steam Electric Station using 58.32 MGD intake withdrawal.

^b Bell Bend estimate based on reported 42.00 MGD withdrawal which is 72% of SSES withdrawal.

^c From Southwick and Loftus (2003) for 1" fish. Northeast values used where available. Otherwise, nationwide value used.

^d Using Consumer Price Index inflation calculator found at <http://data.bls.gov/cgi-bin/cpicalc.pl>

^e Value per fish calculated using total value divided by total number of fish for all other categories combined.

Susquehanna River Basin Commission

a water management agency serving the Susquehanna River Watershed



December 28, 2012

Mr. Michael J. Caverly
VP-Financial Nuclear-Development
PPL Bell Bend, LLC
Two North Ninth Street
Allentown, PA 18101-1179

Re: Requirements for Consumptive Water Use Mitigation and Passby Flows
for PPL Bell Bend, LLC – Bell Bend Nuclear Power Plant;
Salem Township, Luzerne County, Pennsylvania;
Commission Pending Nos. 2009-079 (SW) and 2009-080 (CU)

Dear Mr. Caverly:

The purpose of this letter is to provide PPL Bell Bend, LLC (PPL) with Susquehanna River Basin Commission (Commission) staff's recommendations for consumptive use mitigation and passby flow requirements for the Bell Bend Nuclear Power Plant (BBNPP). In lieu of PPL's request for a "conditional approval" in March 2013, staff is amenable to providing a letter in this time frame that details the status of PPL's BBNPP application and outlines general conditions that would be required in order for staff to recommend approval of the application at a future date.

The *Consumptive Water Use Application* and the *Surface Water Withdrawal Application* submitted by PPL are being reviewed for content with respect to Commission regulations under Section 3.10 of the Susquehanna River Basin Compact and 18 CFR §806, Subpart B (Application Procedure), and the general standards set forth in the Commission's *Consumptive Use Mitigation Plan* (Publication No. 253, adopted by Commission Resolution No. 2008-01) and Commission Policy No. 2012-01, *Low Flow Protection Policy related to Withdrawal Approvals*, adopted on December 14, 2012.¹ More specifically, the proposed withdrawal from the Susquehanna River and the consumptive use of that water are being reviewed under 18 CFR §806.4, §806.22, and §806.23 to develop appropriate recommendations to limit, condition, or deny the withdrawal to avoid significant adverse impacts, including adverse cumulative impacts to the water resources of the basin.

¹ Commission Policy No. 2012-01 has very recently replaced Commission Policy No. 2003-01, *Guidelines for Using and Determining Passby Flows and Conservation Releases for Surface-Water and Ground-Water Withdrawal Approvals*, previously adopted in 2003. The project applications are subject to regulations and policies in effect at the time of Commission action.

CONSUMPTIVE WATER USE MITIGATION

To avoid adverse impacts, Commission staff has determined that the appropriate form of consumptive use mitigation should be the utilization of compensating releases from storage upstream of the project. It has further determined that low flow releases equal to the consumptive use at the BBNPP should trigger when a flow at the Wilkes-Barre U.S. Geological Survey (USGS) stream gage reaches a flow level of the monthly P95 exceedance value (with exceptions noted herein), plus the designated consumptive use in the vicinity of the gage. By tying mitigation to the elimination of consumptive use impacts, we are assured of accomplishing efficient and comprehensive mitigation. Current regulations at 18 CFR §806.22 require acceptable mitigation releases of water from Commission-approved sources for a period of 90 days.

PASSBY FLOW REQUIREMENTS

As previously discussed, an important requirement will be for PPL to release water (in an amount equal to the plant's consumptive water use) upstream of the proposed plant when passby flow levels are reached. In support of applications submitted for its proposed BBNPP, PPL elected to conduct special project-specific aquatic studies, as provided for under both Commission Policy Nos. 2003-01 and 2012-01, to support alternate passby flow requirements. The Commission has received the following reports citing findings of these studies conducted by PPL or its authorized representatives:

1. **Potential Effects of the Bell Bend Project on Aquatic Resources and Downstream Users** (Volumes 1 and 2), Report No. 21665.001-LFHC3, prepared for PPL Bell Bend, LLC by Normandeau Associates, Inc., dated April 24, 2012
2. **Potential Effects of the Bell Bend Project on Water Quality of Backwater Areas used by Fry and Young-of-the-Year Smallmouth Bass for the Year 2012** (Volumes 1 and 2), Report No. 21665.001-SMB2, prepared for PPL Bell Bend, LLC by Environmental Resources Management, dated September 10, 2012
3. **Bell Bend Nuclear Power Plant Low Flow Impact Analysis-Mussels**, Document No. 565-065 Rev. 0, prepared for PPL Bell Bend, LLC by Kleinschmidt and others, dated October 2012

In general, Commission Policy No. 2012-01 recommends standard monthly passby flows equal to the calculated P95 monthly percent exceedance values for withdrawals from rivers in Aquatic Resource Class 6, which is the appropriate classification to apply given the location of the proposed project. In consideration of Commission Policy No. 2012-01 and the special aquatic studies, Commission staff recommends imposition of the passby flows identified in the table below. All recommended passby flows, as a percentage of average daily flow, are lower than those that would result from implementing the previous Commission Policy No. 2003-01, which recommended a passby flow of 20 percent of the annual average daily flow for a Warm Water Fishery. For USGS gage 01536500 for the Susquehanna River at Wilkes-Barre,

Pennsylvania, 20 percent average daily flow is 2,753 cubic feet per second (cfs). Note that recommended passby flow values listed in the table are adjusted to the project site location.

Recommended Passby Flows

Month	Passby Flow at the BBNPP Site (cfs)
January	None
February	None
March	None
April	None
May	1,750
June	1,750
July	1,750
August	1,200
September	890
October	1,010
November	None
December	None

Species of Concern

Freshwater mussel species (Green Floater, Yellow Lamp, Elktoe, and others) are present. A significant decrease in the smallmouth bass (SMB) population in the Susquehanna River has been documented; the cause is still being investigated by USGS, the Pennsylvania Fish and Boat Commission (PFBC), and others. The Instream Flow Incremental Methodology (IFIM) study focused on eight targeted fish species as indicator species. BBNPP consumptive use was shown in the study to impact various life stages of the targeted species, with the northern hogsucker being the most impacted.

Special Considerations

Another nuclear power plant, Susquehanna Steam Electric Station (SSES), is located immediately upstream of the proposed BBNPP site. Consumptive water use by SSES is not mitigated until flows at the Susquehanna River at Wilkes-Barre gage reach 7Q10 (835 cfs); therefore, the combined consumptive water use by both BBNPP of 43 cfs and SSES of 74 cfs, as well as the two thermal discharges, must be evaluated for impacts to aquatic life and other users located downstream from BBNPP. The locations of these two PPL plants downstream from the Wilkes-Barre gage will also be a factor in setting flow values at the gage for compliance monitoring.

The unusual channel morphology and associated hydraulics become increasingly important as flows decline and bedrock ridges and gravel bars emerge. In particular, an existing gravel bar dewateres critical Green Floater mussel habitat at flows below 1,300 cfs.

The months of May through July are indicated as critical months for young-of-the-year smallmouth bass (YOY SMB) according to studies performed by USGS, when the juveniles are particularly vulnerable to stresses from high water temperatures (T°) and low dissolved oxygen (DO). During July in particular, water temperatures frequently exceed biological thresholds established by USGS studies and Pennsylvania Chapter 93 Water Quality Standards, and low river flows contribute to stresses to aquatic life.

Although mussels may experience stress during flows lower than 1,300 cfs as more areas become dewatered, the recommended August threshold was set at 1,200 cfs, the monthly flow corresponding to approximately a 90 percent exceedance (P90) value. The IFIM study indicated that the rate of negative impact to aquatic life increases significantly at and below the flow rate of 1,200 cfs in August.

In months where temperature and dissolved oxygen concentrations are less important factors for aquatic life, the recommended passby requirements are based on the 95 percent flow exceedance for that month. For the months of November through April, passby requirements are not warranted and thus not recommended.

ADDITIONAL CONSIDERATIONS

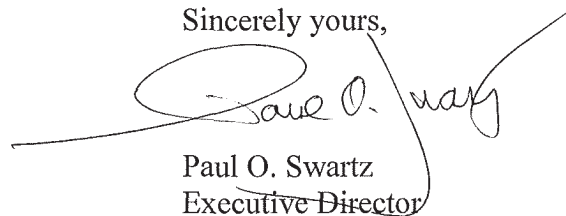
The recommendations herein represent staff's evaluation of the project at this time. Please note that the project is subject to Commission regulations and policies in effect at the time of Commission action. Other caveats include the following:

1. These recommendations are subject to revision based on changes to state and federal requirements, including but not limited to Pennsylvania Chapter 93 Water Quality Standards currently undergoing review and the addition of any additional state or federally listed aquatic species.
2. All additional scientific data available at the time of Commission action will be considered by staff and may result in revisions to these recommendations.
3. Any changes or modifications to the project, including a change to a different energy source, will require additional review that could result in revisions to these recommendations.
4. Any recommendations by Commission staff are not binding on the Commission.
5. Recommendations herein are not transferable in the event of a sale or other transfer of the project.
6. Consistent with past policy and practice, the Commission will incorporate the special conditions in the Pennsylvania Department of Environmental Protection's 401 Water Quality Certification into its recommendations when it acts on these applications.

7. Staff's recommendations were developed assuming that PPL mitigates SSES at 7Q10 events. Additional/more frequent mitigation for that facility could serve to lessen the impacts of BBNPP, and thus result in revised recommendations.
8. Changes to the Commission's consumptive use mitigation requirements or revisions to policies and regulations could cause the Commission to modify recommended passby thresholds.
9. PPL may propose operational alternatives, instream modifications, or other mitigative measures in an effort to lessen or obviate the need for passbys at the recommended thresholds. PPL may submit for staff consideration study interpretations demonstrating that partial mitigation will address the impacts expected at the recommended thresholds.
10. Assumptions about upstream water usage, hydrologic statistics, proposed BBNPP operations, or study interpretations are subject to change following consultation with partner agencies and prior to plant operation, and thus result in modified passby thresholds.

Should you have any questions regarding the review process, or if Commission staff can assist you in any way, please contact Jim Richenderfer at (717) 238-0423, extension 224.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Paul O. Swartz", is written over a horizontal line. The signature is fluid and cursive.

Paul O. Swartz
Executive Director

cc: Gary Petrewski – PPL Bell Bend, LLC



Pennsylvania Fish & Boat Commission

Division of Environmental Services

Natural Diversity Section

450 Robinson Lane

Bellefonte, PA 16823

814-359-5237

October 27, 2014

IN REPLY REFER TO

SIR# 43303

PPL Bell Bend LLC
Rocco Sgarro
Two N. Ninth Street
Allentown, Pennsylvania 18101

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No.
Bell Bend Nuclear Power Plant
LUZERNE County: Salem Township**

Dear Rocco Sgarro:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search “potential conflict” or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

The Northern cricket frog is a small (less than 2”) frog species found in a wide variety of habitats including permanent bodies of water such as slow-moving streams, ponds, lakes, marshes, bogs, and swamps, but also semi-permanent ponds and seasonal forest pools.. Breeding occurs from May to August with metamorphosed froglets emerging July to September. The Northern cricket frog occurs in small, isolated populations in eastern Pennsylvania. These small populations are threatened by pollution, and filling/clearing of wetlands and breeding habitat.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

Our Mission:

www.fish.state.pa.us

To protect, conserve and enhance the Commonwealth’s aquatic resources and provide fishing and boating opportunities.

If you have any questions regarding this review, please contact Nevin Welte at 412-586-2334 and refer to the SIR # 43303. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink that reads "Christopher A. Urban". The signature is written in a cursive style with a large, stylized "C" at the beginning.

Christopher A. Urban, Chief
Natural Diversity Section

CAU/NTW/dn