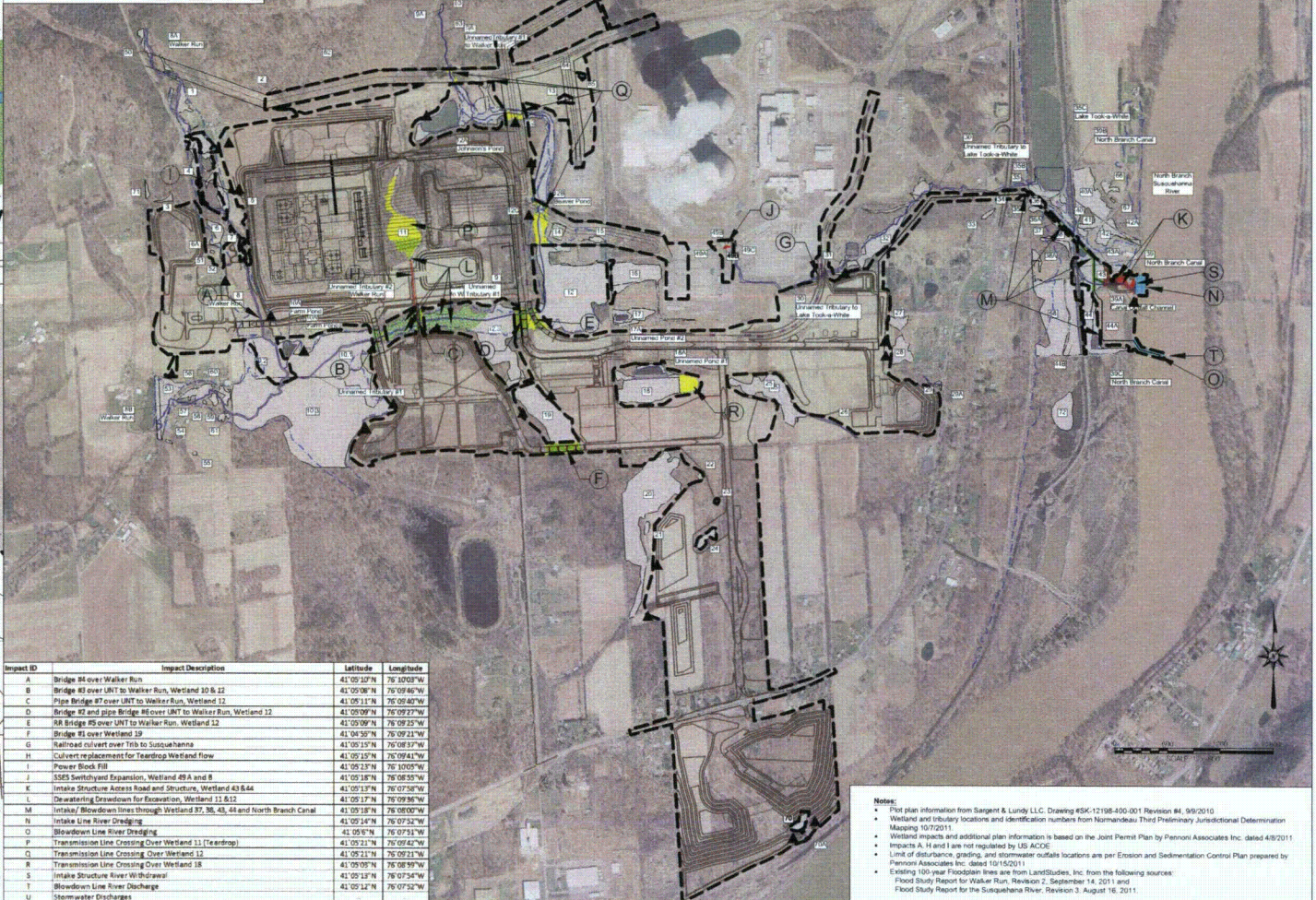


- Legend**
- Existing Wetlands
 - Streams
 - Limit of Disturbance
 - Existing 100-year Floodplain
 - Wetland ID Numbers
 - Permanent Stream Impacts
 - Temporary Stream Impacts
 - Permanent Wetland Impacts
 - Indirect Wetland Impacts
 - Temporary Wetland Impacts
 - Mitigation Site
 - Stormwater Outfalls (Impact U)



Impact ID	Impact Description	Latitude	Longitude
A	Bridge #4 over Walker Run	41° 05' 27" N	76° 07' 02" W
B	Bridge #3 over UNT to Walker Run, Wetland 10 & 12	41° 05' 08" N	76° 09' 46" W
C	Pipe Bridge #7 over UNT to Walker Run, Wetland 12	41° 05' 11" N	76° 09' 40" W
D	Bridge #5 and Pipe Bridge #6 over UNT to Walker Run, Wetland 12	41° 05' 09" N	76° 09' 27" W
E	RA Bridge #5 over UNT to Walker Run, Wetland 12	41° 05' 09" N	76° 09' 27" W
F	Bridge #1 over Wetland 19	41° 04' 58" N	76° 09' 21" W
G	Railroad culvert over Tills to Susquehanna	41° 05' 15" N	76° 08' 57" W
H	Culvert replacement for Teardrop Wetland Flow	41° 05' 15" N	76° 09' 14" W
I	Power Rock Fill	41° 05' 23" N	76° 10' 05" W
J	SSES Switchyard Expansion, Wetland 49 A and B	41° 05' 18" N	76° 08' 35" W
K	Intake Structure Access Road and Structures, Wetland 43 & 44	41° 05' 13" N	76° 07' 58" W
L	Desalting Driveway for Reservoir, Wetland 11 & 12	41° 05' 17" N	76° 09' 14" W
M	Intake/ Blowdown Lines through Wetland 37, 38, 43, 44 and North Branch Canal	41° 05' 18" N	76° 08' 00" W
N	Intake Line River Dredging	41° 05' 14" N	76° 07' 52" W
O	Blowdown Line River Dredging	41° 05' 16" N	76° 07' 51" W
P	Transmission Line Crossing Over Wetland 11 (Teardrop)	41° 05' 21" N	76° 09' 14" W
Q	Transmission Line Crossing Over Wetland 12	41° 05' 21" N	76° 09' 21" W
R	Transmission Line Crossing Over Wetland 13	41° 05' 21" N	76° 09' 21" W
S	Intake Structure River Withdrawal	41° 05' 05" N	76° 08' 59" W
T	Blowdown Line River Discharge	41° 05' 12" N	76° 07' 54" W
U	Stormwater Discharges	41° 05' 12" N	76° 07' 52" W

- Notes:**
- Plot plan information from Sargent & Lundy LLC, Drawing #SK-12198-400-001 Revision #4, 9/9/2010
 - Wetland and tributary locations and identification numbers from Normandeau Third Preliminary Jurisdictional Determination Mapping 10/7/2011
 - Wetland impacts and additional plan information is based on the Joint Permit Plan by Pennoni Associates Inc. dated 4/8/2011
 - Impacts A, H and I are not regulated by US ACCE
 - Limit of disturbance, grading, and stormwater outfalls locations are per Erosion and Sedimentation Control Plan prepared by Pennoni Associates Inc. dated 10/15/2011
 - Existing 100-year Floodplain lines are from LandStudies, Inc. from the following sources:
 - Flood Study Report for Walker Run, Revision 2, September 14, 2011 and
 - Flood Study Report for the Susquehanna River, Revision 3, August 16, 2011.

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PROJECT
PPL, BELL BEND
Bentley Lane
Baltimore, PA 10603

SHEET TITLE:
ENCLOSURE D1 - BBNPP WETLAND & WATERCOURSE IMPACT LOCATION MAP - US ACCE
Bell Bend Nuclear Power Plant
Susquehanna County, PA

Revisions	No.	Date	Description
1	02/14/11	02/14/11	Initial Issue
2	07/14/11	07/14/11	Revised Issue

Project Number: E-726-1.8
Drawn by: JLS
Checked by: BE
Date: April 29, 2011
Scale: 1" = 600'
Drawing: WA-CE-001
Sheet Name:

Enclosure D3

BBNPP Wetland and Watercourse Impacts and Mitigation
ACOE Impacts and Mitigation

4/29/2011

						ACOE Jurisdictional Wetland Impacts					ACOE Stream Impacts				ACOE Indirect Impacts		Fxn./ Values Lost	PFO Loss (ac.)
Impact ID	Impact Description	Latitude	Longitude	EV Wetland?	Water Dependent?	Temporary	Permanent	PFO	PSS	PEM	Permanent	Temporary	Indirect	Indirect				
						(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(LF)	(ac.)	(LF)	(ac.)	(ac.)	(ac.)		
A	Bridge #4 over Walker Run	41°05'10"N	76°10'03"W	N/A	YES	---	---	---	---	---	---	---	---	---	---	None	---	
B	Bridge #3 over UNT to Walker Run, Wetland 10 & 12	41°05'08"N	76°09'46"W	YES	YES	0.22	0.02	---	---	0.02	---	---	---	---	0.09	PFO wildlife habitat	0.09	
C	Pipe Bridge #7 over UNT to Walker Run, Wetland 12	41°05'11"N	76°09'40"W	YES	YES	0.20	0.01	0.01	---	---	---	---	---	---	0.41	PFO wildlife habitat	0.42	
D	Bridge #2 and pipe Bridge #6 over UNT to Walker Run, Wetland 12	41°05'09"N	76°09'27"W	YES	YES	0.80	0.08	0.08	---	---	---	---	---	---	0.52	PFO wildlife habitat	1.00	
E	R/R Bridge #5 over UNT to Walker Run, Wetland 12	41°05'09"N	76°09'25"W	YES	YES	0.37	0.03	0.03	---	---	---	---	---	---	0.60	PFO wildlife habitat	0.63	
F	Bridge #1 over Wetland 13	41°04'55"N	76°09'21"W	NO	YES	0.79	0.09	0.09	---	---	---	---	---	---	0.98	PFO wildlife habitat	1.07	
G	Railroad culvert over Trib to Susquehanna	41°05'15"N	76°08'37"W	NO	YES	---	---	---	---	---	125	0.07	---	---	---	---	---	
H	Culvert replacement for Teardrop Wetland flow	41°05'15"N	76°09'41"W	YES	YES	---	---	---	---	---	---	---	---	---	---	---	---	
I	Power Block Fill	41°05'23"N	76°10'05"W	NO	NO	---	---	---	---	---	---	---	---	---	---	---	---	
J	SES Switchyard Expansion, Wetland 49 A and B	41°05'18"N	76°08'55"W	NO	NO	---	0.04	---	---	0.04	---	---	---	---	---	None	---	
K	Intake Structure Access Road and Structure, Wetland 43 & 44	41°05'13"N	76°07'58"W	NO	YES	---	0.98	0.30	---	0.68	617	0.07	---	---	---	PFO wildlife habitat, fish habitat, floodflow alteration, all 4 values	0.30	
L	Dewatering Drawdown for Excavation, Wetland 11 & 12	41°05'17"N	76°09'36"W	YES	YES	5.56	---	---	---	---	---	---	1188	0.30	---	Groundwater discharge	---	
M	Intake/ Blowdown lines through Wetland 37, 38, 43, 44 and North Branch Canal	41°05'18"N	76°08'00"W	NO	YES	0.78	---	---	---	---	---	---	47	0.04	0.07	Temporary PFO wildlife habitat	0.07	
N	Intake Line River Dredging	41°05'14"N	76°07'52"W	NO	YES	---	---	---	---	---	---	---	220	0.61	---	---	---	
O	Blowdown Line River Dredging	41°05'09"N	76°07'51"W	NO	YES	---	---	---	---	---	---	---	50	0.46	---	---	---	
P	Transmission Line Crossing Over Wetland 11 (Teardrop)	41°05'21"N	76°09'42"W	YES	NO	---	---	---	---	---	---	---	---	---	3.46	PFO wildlife habitat	3.46	
Q	Transmission Line Crossing Over Wetland 12	41°05'21"N	76°09'21"W	YES	NO	---	---	---	---	---	---	---	---	---	1.72	PFO wildlife habitat	1.72	
R	Transmission Line Crossing Over Wetland 18	41°05'03"N	76°08'59"W	NO	NO	---	---	---	---	---	---	---	---	---	0.75	PFO wildlife habitat	0.75	
S	Intake Structure River Withdrawal	41°05'13"N	76°07'54"W	N/A	YES	---	---	---	---	---	---	---	---	---	---	---	---	
T	Blowdown Line River Discharge	41°05'12"N	76°07'52"W	NO	YES	---	---	---	---	---	---	---	---	---	---	---	---	
U	Stormwater Discharges	---	---	YES/NO	YES	---	---	---	---	---	---	---	---	---	---	None	---	
Subtotals						8.52	1.35	0.51	0.00	0.74	742	0.14	1505	1.41	9.00		9.51	
EV Totals						6.95	0.14	0.12	0.00	0.02	0.00	0.00	1188	0.30	7.30		7.32	
Total Impacts Requiring Mitigation						8.52	1.25	0.51	0.00	0.74	742.00	0.14	0	0.00	9.00		9.51	
Minimum Wetland Replacement Acreage																		
ACOE (2:1 PFO, 1.5:1 PSS, 1:1 PEM) 1.76 ac.																		

Minimum Wetland Replacement Acreage

ACOE (2:1 PFO, 1.5:1 PSS, 1:1 PEM) 1.76 ac.

Mitigation Sites	Wetland Creation				Wetland Enhancement				Stream Restoration			Description of Primary Functions and Values Created/ Enhanced	PFO created/ converted (acres)
	Total	PFO	PSS	PEM	Total	PFO	PSS	PEM	Total	Creation	Enhancement		
	(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(LF)	(LF)	(LF)		
Walker Run, Site A and B	7.87	8.12	0	-0.25	5.52	5.52	0.00	0.00	2213	1360	853	PFO wildlife habitat, fish habitat, stream stabilization, groundwater recharge, sediment reductions, flood flow alteration	13.73
Riverlands- North Branch Canal Restoration	0.00	0.00	0.00	0.00	1.24	1.24	0.00	0.00	0	0	0	Uniqueness/heritage, recreation, educational/scientific value, flood flow alteration, PFO wildlife habitat	0.48
Confers Line Removal	0.36	0.36	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	PFO wildlife habitat	0.40
Total Mitigation Sites	8.23	8.48	0.00	-0.25	6.80	6.80	0.00	0.00	2213.00	1360.00	853.00		14.60

* Impacts associated with the relocation of the Walker Run Stream Channel are reported as negative values. See Mitigation narrative for more details.

Replacement Ratios Provided (Recommended Sites)	Total	PFO	PSS	PEM
	(ac.)	(ac.)	(ac.)	(ac.)
Replacement Ratio (ACOE)	12.07	29.96	N/A	-0.34

Note: Replacement Ratios based on impacts from project, excluding mitigation impacts

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PROJECT:
PPL, BELL BEND
Bromley Lane
Barnesville, PA 18603

SHEET TITLE:
ENCLOSURE D3 - BBNPP WETLAND & WATERCOURSE IMPACTS - US ACOE
Bell Bend Nuclear Power Plant
Luzerne County, PA

Revisions	No.	Date	Description
1	1	4/29/11	

Project Number: E-726-LB
Drawn By: JS
Checked By: BE
Date: October 14, 2011
Scale: N/A
Drawing Number: 08 COE-002
Sheet Number: