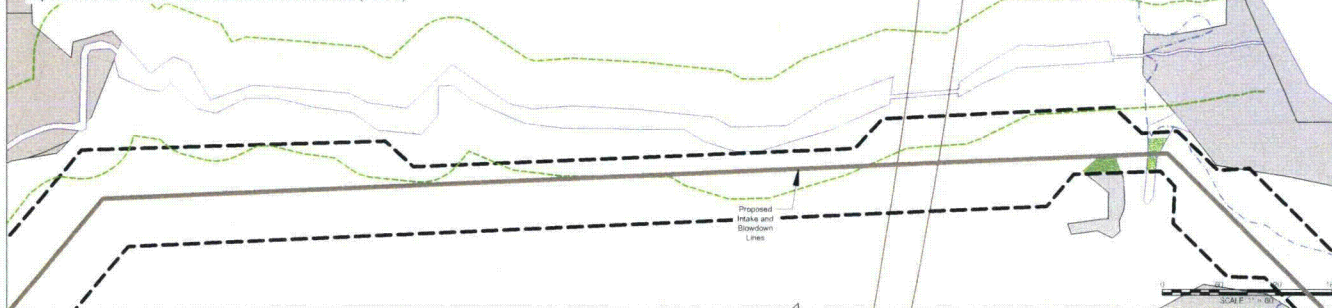


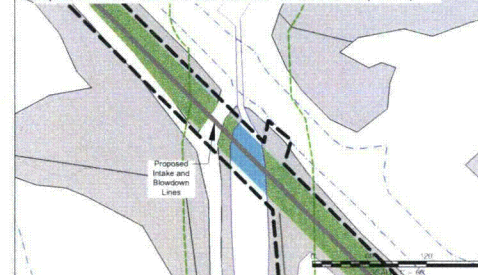




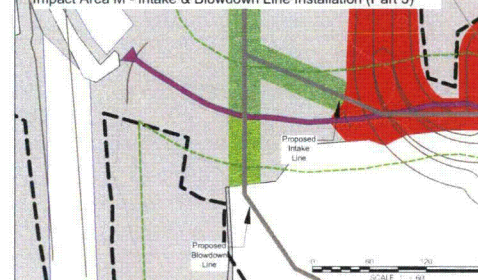
Impact Area M - Intake & Blowdown Line Installation (Part 1)



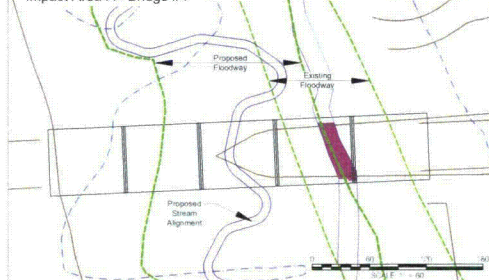
Impact Area M - Intake & Blowdown Line Installation (Part 2)



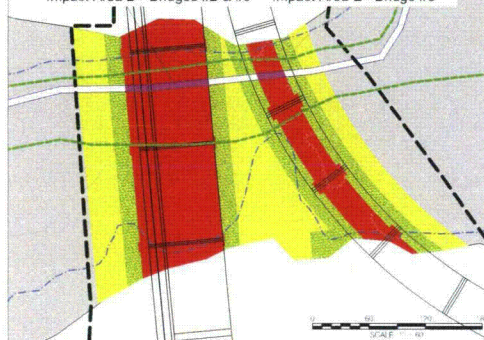
Impact Area M - Intake & Blowdown Line Installation (Part 3)



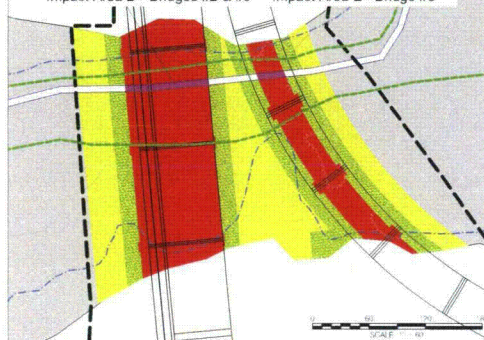
Impact Area A - Bridge #4



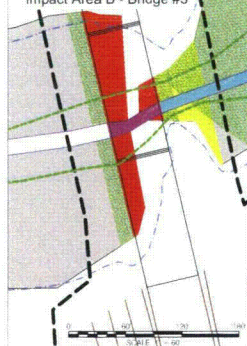
Impact Area D - Bridges #2 & #6



Impact Area E - Bridge #5



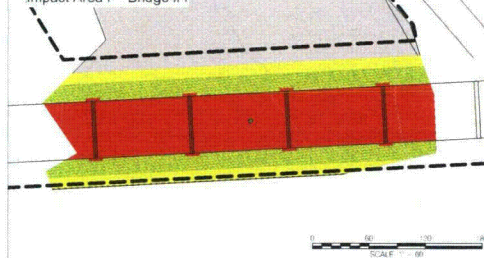
Impact Area B - Bridge #3



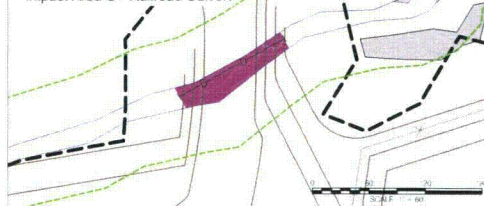
Impact Area C - Bridge #7



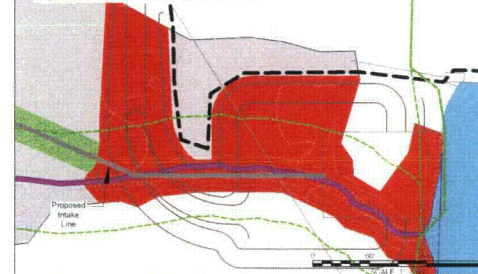
Impact Area F - Bridge #1



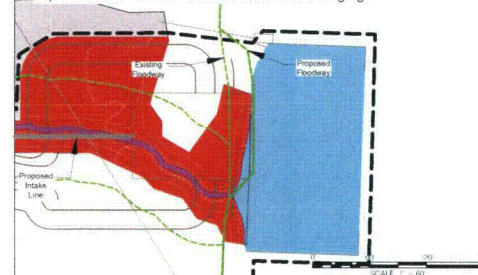
Impact Area G - Railroad Culvert



Impact Area K - Intake Structure Fill



Impact Area S - Intake Structure with River Dredging



# Legend

- Existing Wetlands
- Streams
- Limit of Disturbance
- Existing 100-year Floodplain
- Floodway (FEMA LandStudies Inc. & 50' Buffer)
- Wetland ID Numbers
- Permanent Stream Impacts
- Temporary Stream Impacts
- Permanent Wetland Impacts
- Indirect Wetland Impacts
- Temporary Wetland Impacts
- Stormwater Outfalls (Impact U)

\* Regulatory floodways delineated on this plan are from the following sources:  
 • Susquehanna River: Bell Bend Nuclear Power Plant Flood Study Report Susquehanna River (LSI Doc. No. F.S.-SR-001) by LandStudies, Inc. Revision 3, August 16, 2011  
 • Walker Run: FEMA Flood Insurance Study Panel 20 of 20 for the Township of Salem, Pennsylvania, Luzerne County Community-Panel Number 420625 0020 B, Effective March 18, 1980 and Bell Bend Nuclear Power Plant Flood Study Report Walker Run (LSI Doc. No. F.S.-WR-001) by LandStudies, Inc. Revision 2, September 14, 2011  
 • All Other Areas: 50' from existing edge of water

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PROJECT: PPL, BELL BEND  
 Bortroy Lane  
 Berwick, PA 16803

SHEET TITLE: ENCLOSURE D2, ENLARGEMENTS -  
 BBNPP WETLAND & WATERCOURSE IMPACT  
 LOCATION MAP - DEP  
 Bell Bend Nuclear Power Plant  
 Luzerne County, PA

NO.	REV.	DESCRIPTION
1	01	ISSUED FOR PERMITTING
2	02	REVISIONS TO PERMITTING
3	03	REVISIONS TO PERMITTING

Drawn By:	J. DUBIEL
Checked By:	J.S.
Reviewed By:	RE
Date:	April 19, 2011
Scale:	1" = 60'
Project Number:	WD DEP 001A



Enclosure D4  
BBNPP Wetland and Watercourse Impacts and Mitigation  
DEP Impacts and Mitigation

11/3/2011

						DEP Jurisdictional Wetland Impacts					DEP Stream Impacts				DEP		Fun. / Values Lost	PFO Loss (ac.)	
Impact ID	Impact Description	Latitude	Longitude	EV Wetland?	Water Dependent?	Qualifies for GP or Waiver?	Temporary	Permanent *	PFO	PS	PEM	Permanent*	Temporary	Indirect Impacts					
							(ac.)	(ac.)	(ac.)	(ac.)	(ac.)	(LF)	(ac.)	(LF)	(ac.)	(ac.)			
A	Bridge #4 over Walker Run	41°05'30"N	76°10'03"W	NO	YES	YES - GP7	---	---	---	---	---	65	0.03	---	---	---	None	---	
B	Bridge #3 over UNT to Walker Run, Wetland 10 & 12	41°05'08"N	76°09'46"W	YES	YES	NO	0.09	0.14	0.01	---	0.13	62	0.02	---	---	0.07	PFO wildlife habitat	0.99	
C	Pipe Bridge #7 over UNT to Walker Run, Wetland 12	41°05'11"N	76°09'40"W	YES	YES	NO	0.16	0.05	0.05	---	---	12	0.00	---	---	0.37	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	NO	0.18	0.50	0.50	---	---	87	0.01	---	---	0.50	PFO wildlife habitat	1.00	
E	HR bridge #5 over UNT to Walker Run, Wetland 12	41°05'09"N	76°09'25"W	YES	YES	NO	0.23	0.17	0.17	---	---	29	0.00	---	---	0.47	PFO wildlife habitat	0.63	
F	Bridge #1 over Wetland 19	41°04'55"N	76°09'21"W	NO	YES	NO	0.33	0.55	---	---	---	---	---	---	---	0.52	PFO wildlife habitat	1.07	
G	Railroad culvert over Trb to Susquehanna	41°05'15"N	76°08'37"W	NO	YES	NO	---	---	---	---	---	125	0.070	---	---	---	---	---	
H	Culvert replacement for Teardrop Wetland flow	41°05'15"N	76°09'41"W	YES	YES	YES - Waiver 2	---	---	---	---	---	---	567	0.01	---	---	---	---	
I	Power Block Fill	41°05'23"N	76°10'05"W	NO	NO	NO	0.00	0.12	---	---	0.12	---	---	---	---	---	---	---	
J	SOES Switchyard Expansion, Wetland 49 A and B	41°05'38"N	76°08'55"W	NO	NO	NO	---	0.06	---	---	0.06	---	---	---	---	---	None	---	
K	Intake Structure Access Road and Structures, Wetland 43 & 44	41°05'13"N	76°07'58"W	NO	YES	NO	---	0.98	0.30	---	0.68	617	0.07	---	---	---	PFO wildlife habitat, fish habitat, floodflow alteration, all 4 values	0.30	
L	Downgrading Drawdown for Excavation, Wetland 11 & 12	41°05'17"N	76°09'36"W	YES	YES	NO	5.56	---	---	---	---	---	---	1395	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	YES - GP5	0.78	---	---	---	---	---	---	47	0.04	0.07	Temporary PFO wildlife habitat	0.67	
N	Intake Low River Driveway	41°05'14"N	76°07'53"W	NO	YES	NO	---	---	---	---	---	---	---	230	0.63	---	---	---	
O	Blowdown Line River Driveway	41°05'16"N	76°07'51"W	NO	YES	NO	---	---	---	---	---	---	---	50	0.46	---	---	---	
P	Transmission Line Crossing Over Wetland 11 (Teardrop)	41°05'21"N	76°09'42"W	YES	NO	YES-GP5	---	---	---	---	---	---	---	---	---	3.46	PFO wildlife habitat	3.46	
Q	Transmission Line Crossing Over Wetland 12	41°05'21"N	76°09'23"W	YES	NO	YES-GP5	---	---	---	---	---	---	---	---	---	1.72	PFO wildlife habitat	1.72	
R	Transmission Line Crossing Over Wetland 38	41°05'09"N	76°08'59"W	NO	NO	YES-GP5	---	---	---	---	---	---	---	---	---	0.75	PFO wildlife habitat	0.75	
S	Intake Structure River Wetland	41°05'17"N	76°07'54"W	NO	YES	YES-GP4	---	---	---	---	---	---	---	---	---	---	---	---	
T	Blowdown Line River Discharge	41°05'12"N	76°07'52"W	NO	YES	NO	---	---	---	---	---	---	---	---	---	---	---	---	
U	Stormwater Discharges			YES/NO	YES	YES - GP4	---	---	---	---	---	---	---	---	---	---	None	---	
Subtotals:							7.33	2.57	1.58	0.00	0.99	997	0.21	2280	1.42	7.93		9.51	
EV Totals:							6.22	6.86	0.73	0.00	0.13	190.09	0.04	1963	0.31	6.59		7.32	
Mitigation:							0.00	1.39	0.51	0.00	0.88	742.00	0.14	0	0.00	7.93		9.51	
Minimum Wetland Replacement Acreage																			
DEP (1:1 Ratio)							1.39 ac.												

\*Bridges open shadows over wetlands and streams are permanent DEP impacts that do not require mitigation.

Mitigation Sites	Wetland Creation						Stream Restoration						Description of Primary Functions and Values Created/ Enhanced	PFO created/ converted [ac]
	Total	PFO Created	PFO Impacted*	PS	PEM Created	PEM Impacted*	Total	Abandoned*	Control	Net Creation	Enhancement			
	[ac]	[ac]	[ac]	[ac]		[ac]	[LF]	[LF]	[LF]	[LF]	[LF]			
Walker Run, Site A and B	7.87	8.20	-0.08	0.00	0.00	-0.25	2213	-2799	4159	1360	853	PFO wildlife habitat, fish habitat, stream stabilization, groundwater recharge, sediment reductions, flood flow alteration	13.72	
Riverlands North Branch Canal Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Uniqueness/heritage, recreation, educational/scientific value, flood flow alteration, PFO wildlife habitat	0.48	
Confess Lane Removal	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	PFO wildlife habitat	0.40	
Total Mitigation Sites	8.23	8.56	-0.08	0.00	0.00	-0.25	2213	-2799	4159	1360	853.00		14.60	

\* Impacts associated with the relocation of the Walker Run stream channel are reported as negative values. Permanent wetland impacts are a result of the channel being relocated to wetland areas. Abandoned stream channel to be converted to wetlands. See Mitigation Narrative for more details.

Replacement Ratios Provided (Recommended Sites)				
Total (ac.)	PFO (ac.)	PS (ac.)	PEM (ac.)	
5.94	16.70	N/A	-0.29	

Note: Replacement ratios based on impacts from project, including mitigation impacts

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**PPL, BELL BEND**  
Bendway Lane  
Bend, PA 18003

ENCLOSURE D4 - BBNPP WETLAND & WATERCOURSE IMPACTS - DEP  
Bell Bend Nuclear Power Plant  
Luzerne County, PA

SHEET TITLE:

No.	Date	Description
1	11/09/11	ISSUE TABLE

Project Number: E-726-LB  
Drawn By: JS  
Checked By: BE  
Date: October 14, 2011  
Scale: NA  
Drawing Number: W-DEP-002  
Sheet Number:

**3**  
OF 3