

## **Information for File #2013-04869-RMM**

**Applicant:** Northern States Power Company-Minnesota, an Xcel Energy Company

**Corps Contact:** Ryan Malterud

**Address:** 180 Fifth Street East, Suite 700, St. Paul, MN 55101

**E-Mail:** Ryan.M.Malterud@usace.army.mil

**Phone:** (651) 290-5286

**Primary County:** Dakota

**Section:** 13, 23, and 24

**Township:** 27 North

**Range:** 24 West

**Information Complete On:** October 29, 2014

**Posting Expires On:** November 9, 2014

**Authorization Type:** LOP-05-MN

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above. Any approved jurisdictional determination made prior to reaching a permit decision will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/>.

**Project Purpose (as stated by the applicant):** Northern States Power company-Minnesota (NSPM) has operated the Black Dog Electrical Generating Plant (Plant) since 1952. The plant property occupies 1,422 acres near the Minnesota River in the City of Burnsville. The facility currently operates a natural gas-fired turbine-generator combined with a heat recovery steam generator and two coal-fired boilers that can also burn natural gas to produce electricity. NSPM will discontinue coal burning operations at the Plant in April 2015. Upon cessation of coal-fired operations, decommissioning of the outdoor coal structures in the yard area east of the plant (Yard Area) and closure of the coal yard subarea and ash settling ponds will be conducted.

**Project Description:** NSPM has enrolled the area of the coal yard subarea, ash settling ponds and the adjacent areas into the Minnesota Pollution Control Agency's (MPCA) Voluntary Investigation and Cleanup (VIC) program (VP26870). The closure and remediation work in this area is being implemented under a Response Action Plan (RAP) approved by MPCA VIC (April 29, 2014).

The proposed project includes the implementation of a RAP that was prepared for and accepted by MPCA for decommissioning and cleanup of the coal-related (outdoor) facilities at the Plant, as well as several related activities, as described below.

Response Actions that entail Work in Aquatic Resources:

- Prevention of the direct contact pathway to legacy coal and legacy coal combustion residuals (CCR) in the North Margin Subarea. This work affects Wetland 2 in the North Margin subarea and Wetland 3 in Area 1 of the coal yard subarea.
- Reduction of the direct contact pathway to legacy coal and legacy CCR in the South Margin subarea by placing a riprap cover system. The work affects the north shore of the Black Dog Lake Cedar Basin and the adjacent Wetland 1.
- Removal and off-site disposal of fly ash from the former cooling water discharge channel in the North Margin subarea. The work affects Wetland 2 and the adjacent Minnesota River bank.
- Stabilization of the Minnesota River bank along the North Margin subarea with riprap and a sheet piling wall. The work affects the Minnesota River.
- Associated work in waters that are part of this application:
  - Removal and/or sealing of ash settling pond system discharge structures/pipes along the Black Dog Lake Cedar Basin/Wetland 1.

**Name, Area and Types of Waters (Including Wetlands) Subject to Loss:** Please see the attached figure labeled MVP-2013-04869-RMM Page 1 of 14.

**Compensatory Mitigation:** The applicant has proposed to mitigate for unavoidable wetland impacts by utilizing existing Xcel credits and the purchase of wetland bank credits within Bank Service Area 9 at a 2:1 ratio.

**Drawings:** Please see attached figures labeled MVP-2013-04869-RMM Page 1 of 14 through Page 14 of 14.

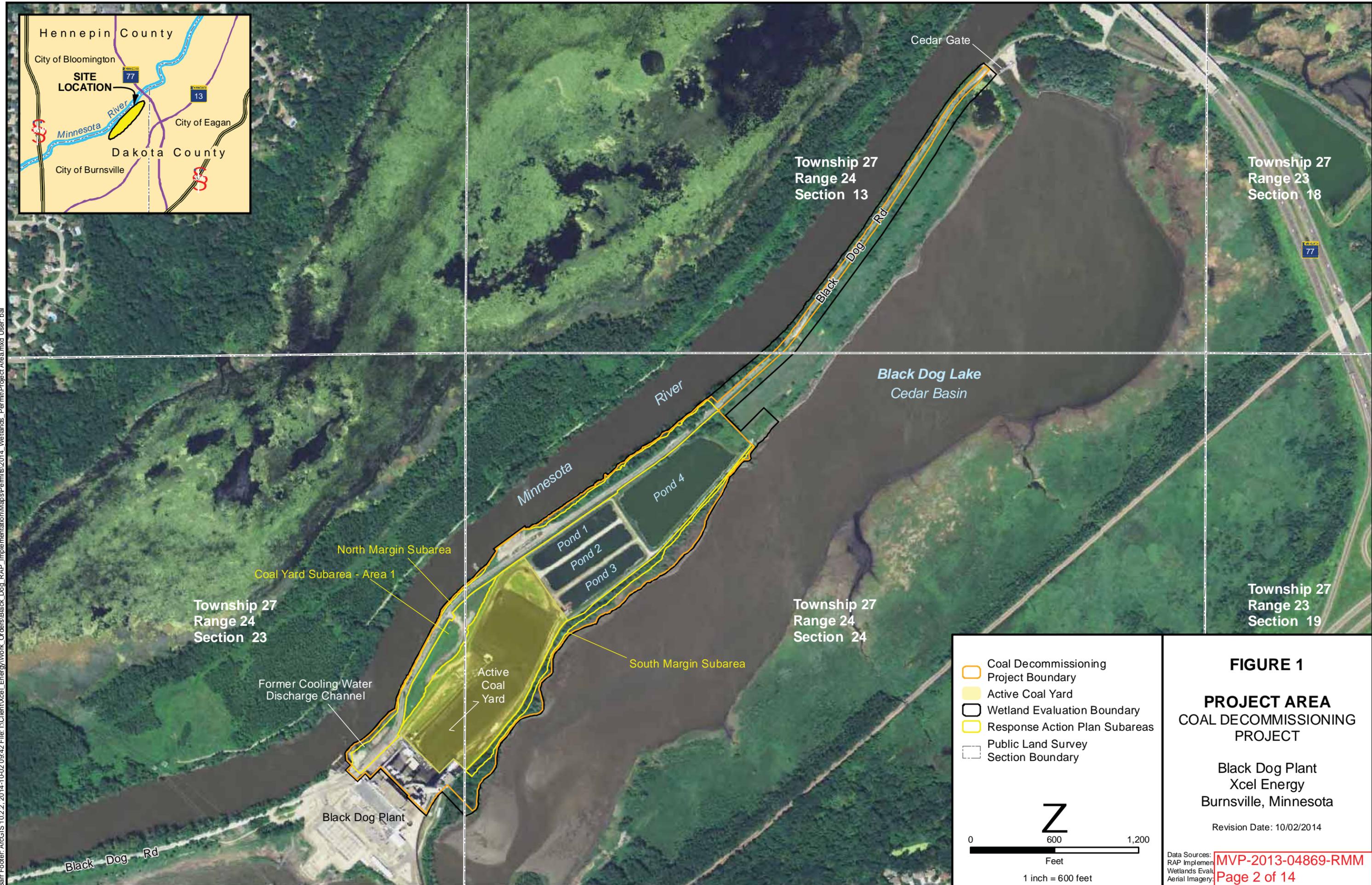
Table 2 Regulatory Agencies and Affected Water Resources under Their Review

U.S. Army Corps of Engineers: Wetland, Minnesota River, and Black Dog Lake Impact Details

Impact	Site	Wetland No.	Location within the Site	Area within Project (acre)	Area of Wetland Impact (acre)	Area of Wetland Treated as Part of Minnesota River or Black Dog Lake (as already accounted for in those rows)
Permanent	North Margin	6	Service Road at Cedar Outlet	0.59	0.00	0.00
		5	Between Black Dog Road and MN River	0.06	0.00	0.00
		4	Leased Area	0.02	0.00	0.00
		3	Area 1 Ditch	0.31	0.31	0.00
		2	Former Cooling Water Discharge Channel	0.47	0.47	0.05
	South Margin	1	Black Dog Lake Fringe	4.93	0.58	0.38
<b>Subtotal</b>					<b>1.36</b>	<b>0.43</b>
<b>Total Permanent Impact Area: 1.36 - 0.43 = 0.93 ac</b>						
Temporary <sup>2</sup>	South Margin	1	Construction Access Road (15' wide)		0.95	
<b>Total Temporary Impact Area</b>					<b>0.95</b>	
Impact	Site	Location within the Site		OHW (ft MSL)	Area of Water Impact (acre)	
Permanent	North Margin	Minnesota River: Coal Dock		699	NA <sup>1</sup>	
		Minnesota River: Bank at Former Cooling Water Discharge Channel		699	0.42	
	South Margin	Black Dog Lake		697	0.42	
<b>Total Permanent Impact Area</b>					<b>0.84</b>	

<sup>1</sup>Coal Dock and nearby dolphins will be removed to mud line with area to be restored with more naturally sloped and protected river bank.

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**Legend**

- Coal Decommissioning Project Boundary
- Active Coal Yard
- Wetland Evaluation Boundary
- Response Action Plan Subareas
- Public Land Survey Section Boundary

**Scale**

0 600 1,200  
Feet  
1 inch = 600 feet

**FIGURE 1**

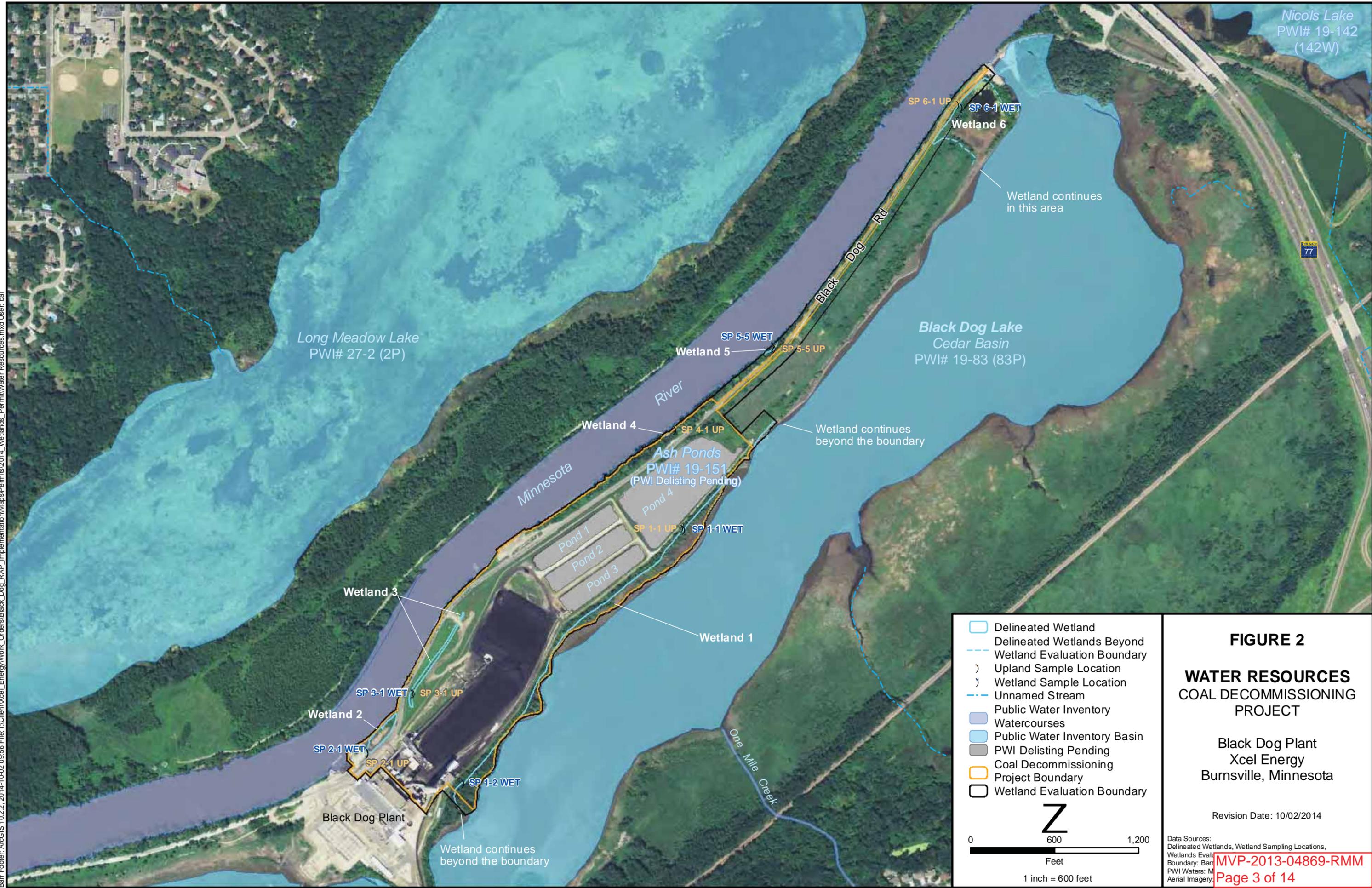
**PROJECT AREA**  
**COAL DECOMMISSIONING PROJECT**

Black Dog Plant  
Xcel Energy  
Burnsville, Minnesota

Revision Date: 10/02/2014

Data Sources: MVP-2013-04869-RMM  
RAP Implemen: Page 2 of 14  
Wetlands Eval:  
Aerial Imagery:

Barr Footer: ArcGIS 10.2.2, 2014-10-02 09:56 File: I:\Client\Xcel\_Energy\Work\_Orders\Black\_Dog\_RAP\_Implementation\Maps\Permits\2014\_Wetlands\_Permit\Water\_Resources.mxd User: bal



**FIGURE 2**

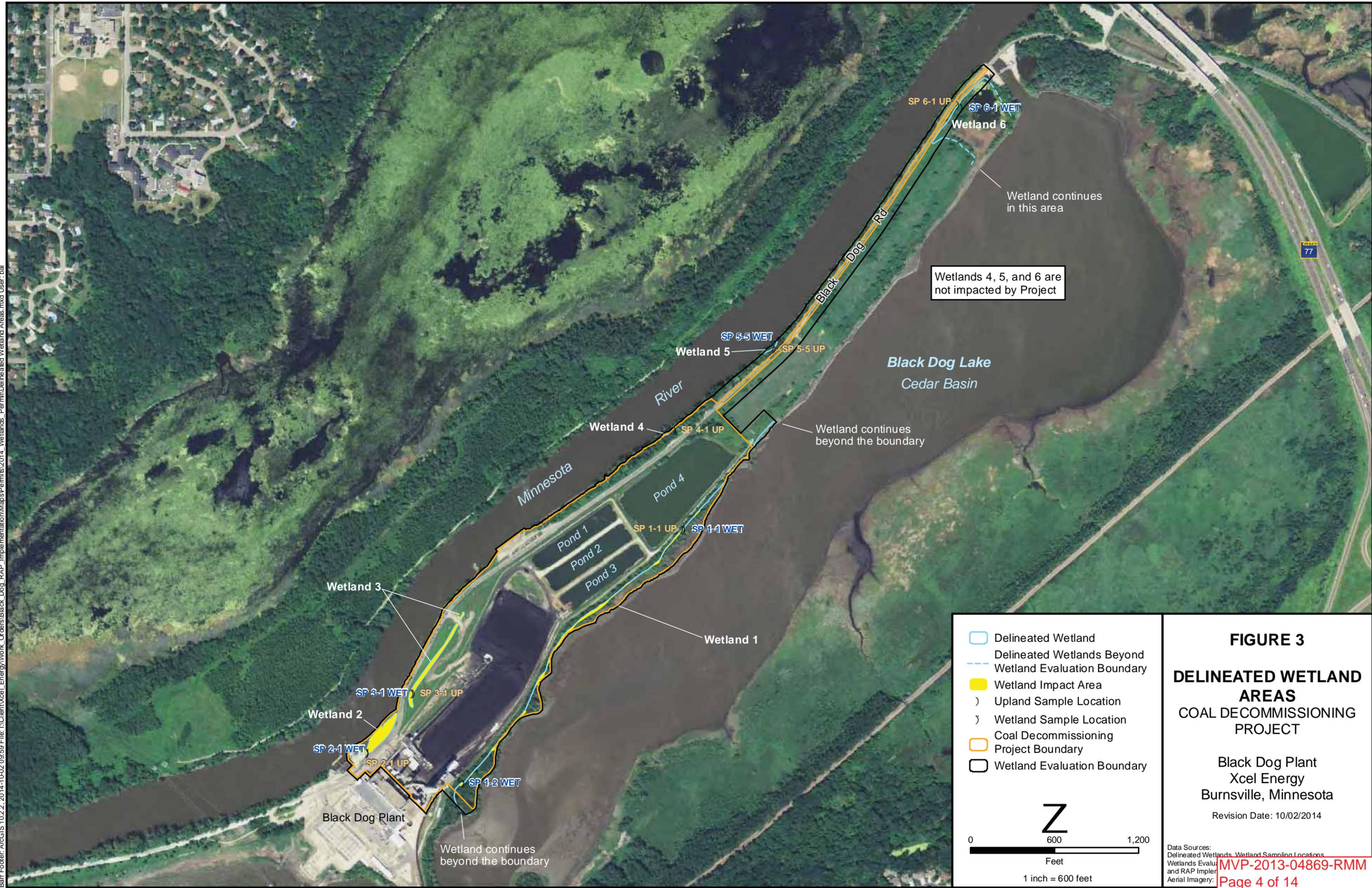
**WATER RESOURCES  
COAL DECOMMISSIONING  
PROJECT**

**Black Dog Plant  
Xcel Energy  
Burnsville, Minnesota**

Revision Date: 10/02/2014

Data Sources:  
Delineated Wetlands, Wetland Sampling Locations,  
Wetlands Eval  
Boundary: Barr  
PWI Waters: M  
Aerial Imagery: **MVP-2013-04869-RMM**  
**Page 3 of 14**

Barr Footer: ArcGIS 10.2.2, 2014-10-02 09:59 File: I:\Client\Xcel\_Energy\Work\_Orders\Black\_Dog\_RAP\_Implementation\Maps\Permits\2014\_Wetlands\_Permit\Delimited\_Wetland\_Areas.mxd User: bai



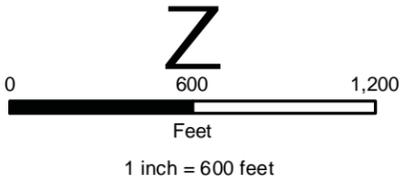
Wetlands 4, 5, and 6 are not impacted by Project

Wetland continues in this area

Wetland continues beyond the boundary

Wetland continues beyond the boundary

- Delineated Wetland
- Delineated Wetlands Beyond Wetland Evaluation Boundary
- Wetland Impact Area
- Upland Sample Location
- Wetland Sample Location
- Coal Decommissioning Project Boundary
- Wetland Evaluation Boundary



**FIGURE 3**  
**DELINEATED WETLAND AREAS**  
**COAL DECOMMISSIONING PROJECT**

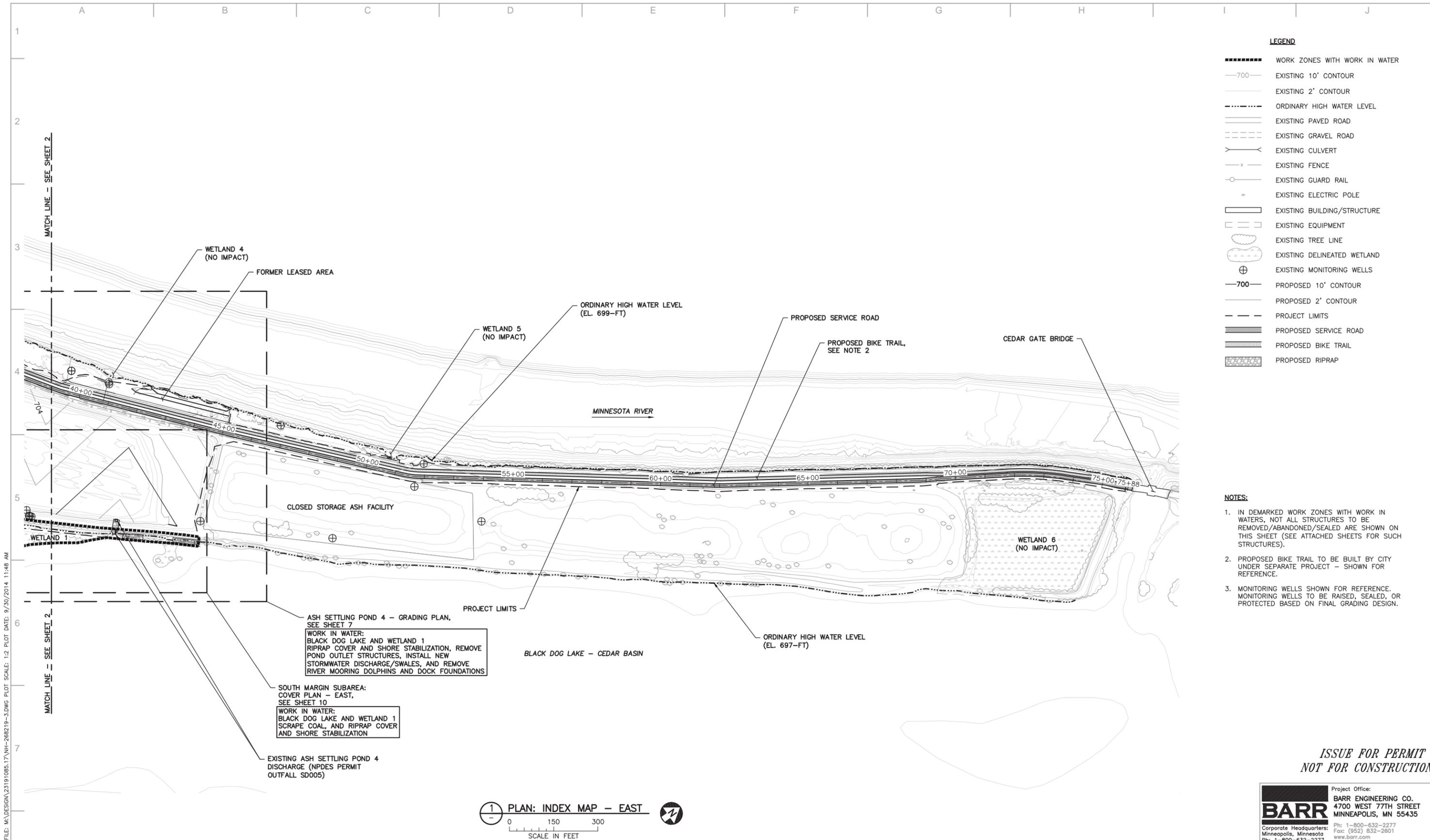
Black Dog Plant  
 Xcel Energy  
 Burnsville, Minnesota

Revision Date: 10/02/2014

Data Sources:  
 Delineated Wetlands, Wetland Sampling Locations,  
 Wetlands Evaluation and RAP Implementation  
 Aerial Imagery: MVP-2013-04869-RMM  
Page 4 of 14







**LEGEND**

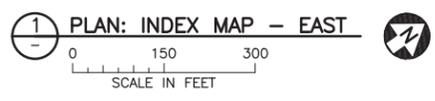
- WORK ZONES WITH WORK IN WATER
- 700--- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- ORDINARY HIGH WATER LEVEL
- ===== EXISTING PAVED ROAD
- EXISTING GRAVEL ROAD
- <---> EXISTING CULVERT
- x- EXISTING FENCE
- o- EXISTING GUARD RAIL
- ◇ EXISTING ELECTRIC POLE
- ▭ EXISTING BUILDING/STRUCTURE
- ▭ EXISTING EQUIPMENT
- EXISTING TREE LINE
- EXISTING DELINEATED WETLAND
- ⊕ EXISTING MONITORING WELLS
- 700--- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- - - - - PROJECT LIMITS
- ===== PROPOSED SERVICE ROAD
- PROPOSED BIKE TRAIL
- ▨ PROPOSED RIPRAP

- NOTES:**
1. IN DEMARKED WORK ZONES WITH WORK IN WATERS, NOT ALL STRUCTURES TO BE REMOVED/ABANDONED/SEALED ARE SHOWN ON THIS SHEET (SEE ATTACHED SHEETS FOR SUCH STRUCTURES).
  2. PROPOSED BIKE TRAIL TO BE BUILT BY CITY UNDER SEPARATE PROJECT - SHOWN FOR REFERENCE.
  3. MONITORING WELLS SHOWN FOR REFERENCE. MONITORING WELLS TO BE RAISED, SEALED, OR PROTECTED BASED ON FINAL GRADING DESIGN.

CADD USER: Bryan D. Pitterie FILE: M:\DESIGN\23191085.17\NH-266219-3.DWG PLOT SCALE: 1:2 PLOT DATE: 9/30/2014 11:48 AM

**ISSUE FOR PERMIT  
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**BARR** Project Office:  
 BARR ENGINEERING CO.  
 4700 WEST 77TH STREET  
 MINNEAPOLIS, MN 55435  
 Ph: 1-800-632-2277  
 Fax: (952) 832-2601  
 www.barr.com



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS	DWG NO.	MANUFACTURER	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME  
JEREMY J. GACNIK

SIGNATURE  
*[Signature]*

DATE  
09-23-14

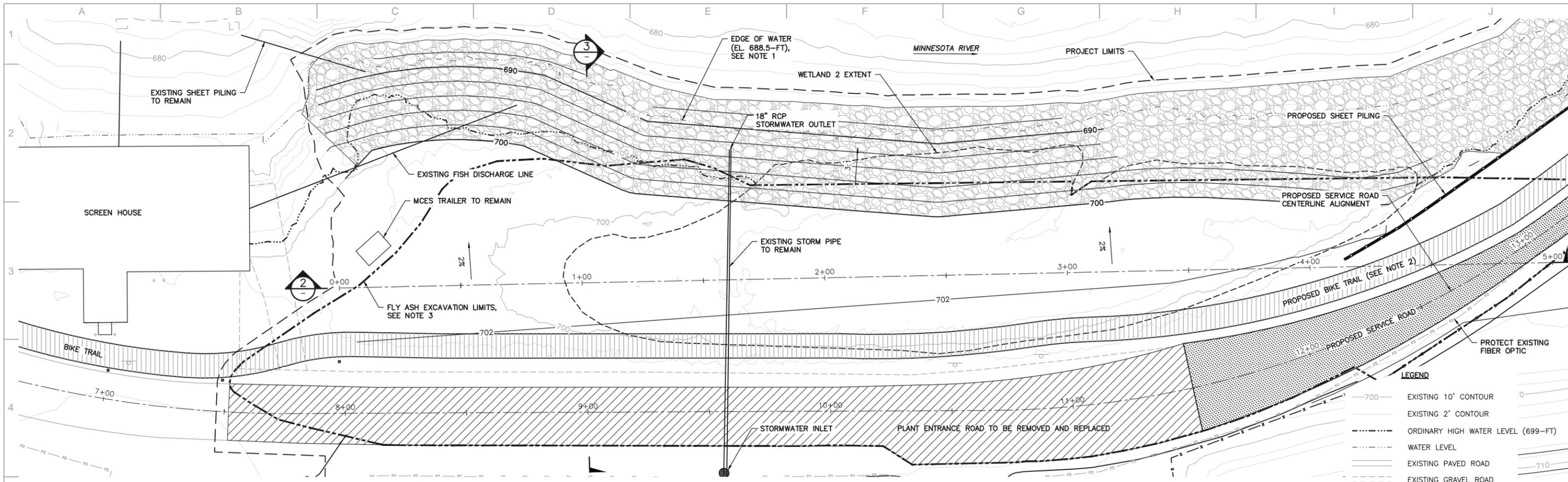
LICENSE #  
49292

NORTHERN STATES POWER  
**BLACK DOG**  
CITY, STATE

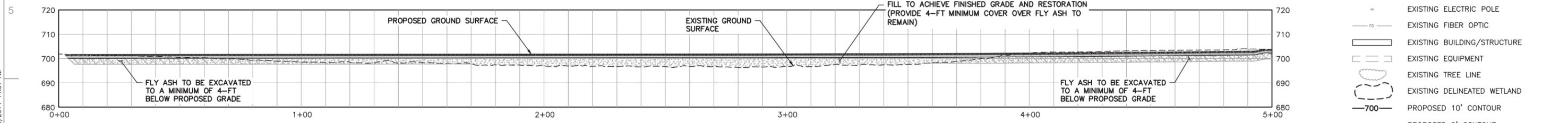
THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

ENERGY SUPPLY  
ENGINEERING & CONSTRUCTION

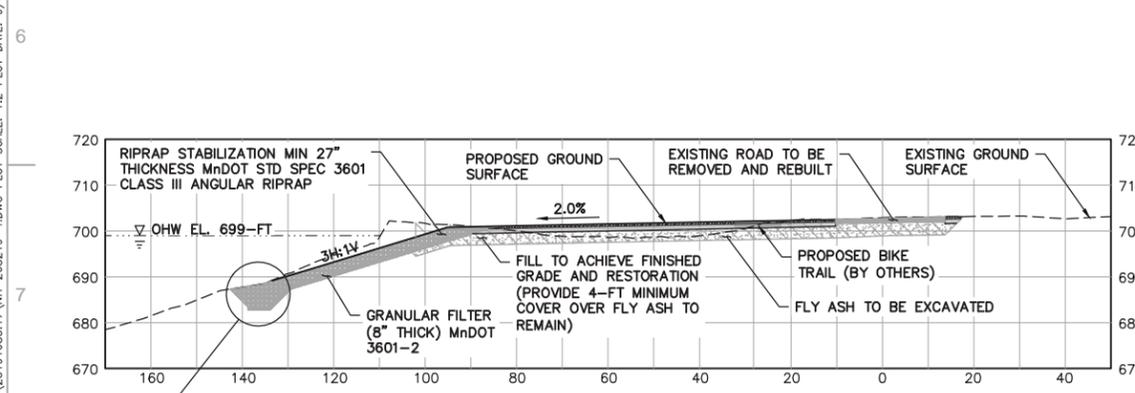
**UNIT 0**  
BLACK DOG ENVIRONMENTAL PERMITTING  
INDEX MAP  
**MVP-2013-04869-RMM**  
Page 7 of 14



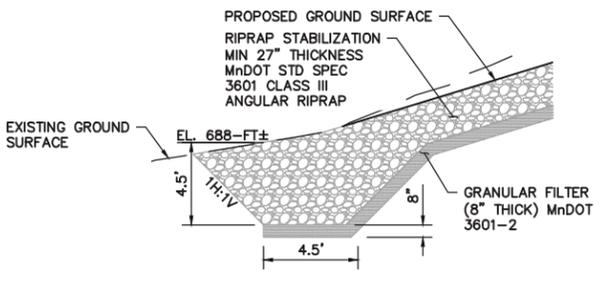
**1 PLAN: FORMER COOLING WATER DISCHARGE CHANNEL**  
 SCALE IN FEET



**2 PROFILE: FORMER COOLING WATER DISCHARGE CHANNEL**  
 SCALE IN FEET



**3 SECTION: FORMER COOLING WATER DISCHARGE CHANNEL**  
 SCALE IN FEET



**4 DETAIL: RIPRAP ANCHOR**  
 SCALE IN FEET

**LEGEND**

- 700 — EXISTING 10' CONTOUR
- 710 — EXISTING 2' CONTOUR
- - - - - ORDINARY HIGH WATER LEVEL (699-FT)
- — — — — WATER LEVEL
- — — — — EXISTING PAVED ROAD
- - - - - EXISTING GRAVEL ROAD
- — — — — EXISTING CULVERT
- ||||| EXISTING RAILROAD
- — — — — EXISTING GUARD RAIL
- — — — — EXISTING ELECTRIC POLE
- — — — — EXISTING FIBER OPTIC
- — — — — EXISTING BUILDING/STRUCTURE
- — — — — EXISTING EQUIPMENT
- — — — — EXISTING TREE LINE
- — — — — EXISTING DELINEATED WETLAND
- 700 — PROPOSED 10' CONTOUR
- — — — — PROPOSED 2' CONTOUR
- - - - - PROJECT LIMITS
- ||||| PLANT ENTRANCE ROAD TO BE REPLACED
- ||||| PROPOSED SERVICE ROAD
- ||||| PROPOSED BIKE TRAIL
- ||||| PROPOSED GRAVEL SURFACE
- ||||| PROPOSED RIPRAP
- — — — — PROPOSED SHEET PILING
- — — — — PROPOSED FENCE
- - - - - FLY ASH/COAL/CCR EXCAVATION LIMITS

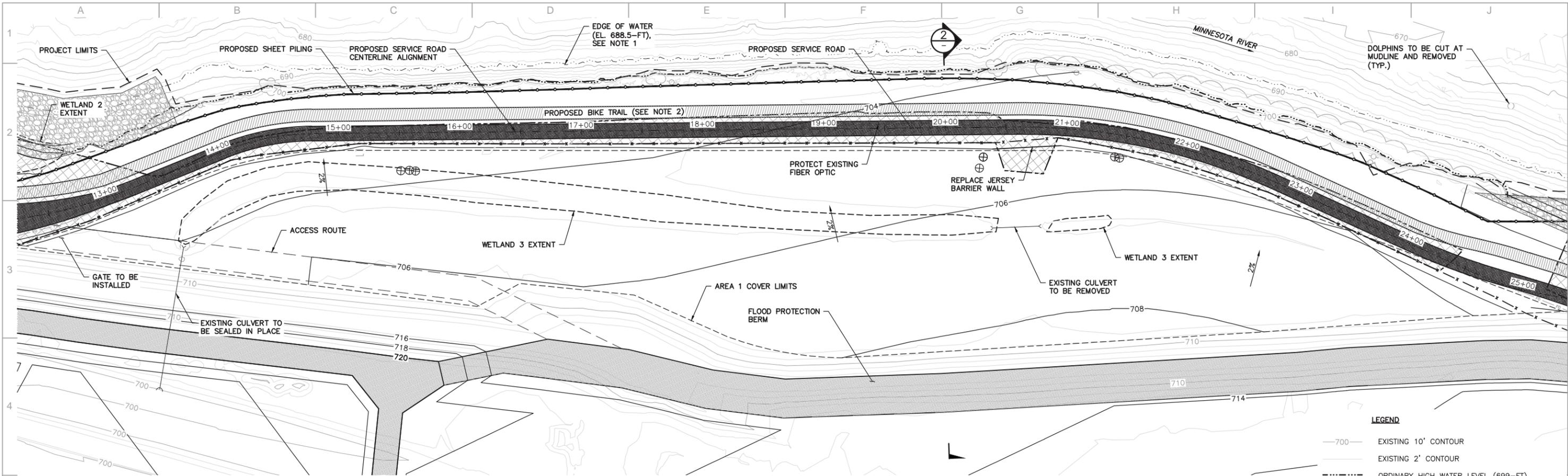
- NOTES:**
- EDGE OF WATER SHOWN IS FROM AUG. 1, 2013 SURVEY. RIVER LEVELS FLUCTUATE AND ARE SHOWN FOR REFERENCE ONLY.
  - PROPOSED BIKE TRAIL TO BE BUILT BY CITY UNDER SEPARATE PROJECT - SHOWN FOR REFERENCE.
  - HORIZONTAL EXTENT OF FLY ASH/COAL/CCR EXCAVATION IS APPROXIMATE AND SHALL FIELD VERIFIED DURING CONSTRUCTION.
  - THE FLY ASH/COAL/CCR LIMITS SHOWN ARE FROM A DETAILED DELINEATION UNDER THE BLACK DOG ROAD CORRIDOR. ADDITIONAL COAL/CCR IS PRESENT IN AREA 1 AND OTHER PORTIONS OF THE SITE AS SHOWN ON SITE CROSS-SECTIONS AND DETAILS.
  - FLY ASH/COAL/CCR SHALL BE EXCAVATED TO THE HORIZONTAL EXTENT IDENTIFIED DURING CONSTRUCTION TO A MINIMUM DEPTH OF 4-FT BELOW THE PROPOSED FINISHED GROUND SURFACE.
  - FLY ASH SHALL BE EXCAVATED TO WATER TABLE AND REMOVED FROM THE SITE TO BE DISPOSED OF IN AN APPROVED LANDFILL.
  - COAL/CCR EXCAVATED BENEATH PLANT ENTRANCE ROAD SHALL BE DEPOSITED IN THE COAL YARD AS FILL.
  - WETLAND IS BACKFILLED/FLOODED BY RIVER AT HIGH LEVELS ABOVE 695-FT MSL THROUGH CONNECTION AT THE EAST OF THE WETLAND. RIVER OHW DEPICTED UPSTREAM AND DOWNSTREAM OF WETLAND.
  - EXISTING CRUSHED STORMWATER CULVERT LOCATED WITHIN WETLAND 2 TO BE REMOVED.

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 4700 WEST 77TH STREET  
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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS	 NORTHERN STATES POWER <b>BLACK DOG</b> CITY, STATE	THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.	<b>UNIT 0</b> BLACK DOG ENVIRONMENTAL PERMITTING <b>FORMER COOLING WATER</b> <b>MVP-2013-04869-RMM</b> Page 8 of 14
DWG. NO.	MANUFACTURER	DESCRIPTION	DATE	LICENSE #	APVD:	DATE	SCALE:										
														I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINTED NAME: JEREMY J. GACNIK SIGNATURE: DATE: 09-23-14 LICENSE #: 49292	DWN: ATD DATE: 07-17-14 CHK: RLG DATE: 09-03-14 ENG: ATD DATE: 07-17-14 CHK: PTS DATE: 09-10-14 PM: JYG DATE: 09-15-14 PROJ. NO: 23191085.17 APVD: ALP DATE: 09-18-14 SCALE: AS SHOWN	ENERGY SUPPLY ENGINEERING & CONSTRUCTION	

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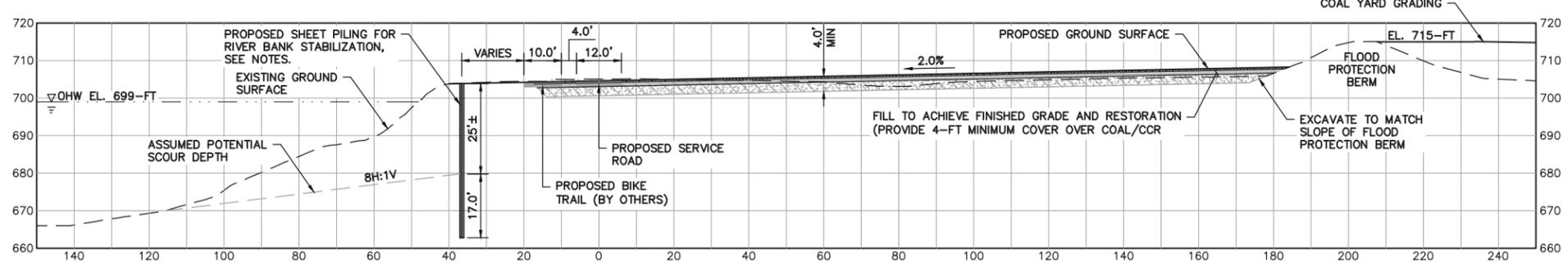


1 PLAN: AREA 1 GRADING

**LEGEND**

- 700 — EXISTING 10' CONTOUR
- — — EXISTING 2' CONTOUR
- - - - - ORDINARY HIGH WATER LEVEL (699-FT)
- - - - - WATER LEVEL
- - - - - EXISTING CULVERT
- ||||| EXISTING RAILROAD
- ⊕ EXISTING ELECTRIC POLE
- ro — EXISTING FIBER OPTIC
- [ ] EXISTING BUILDING/STRUCTURE
- [ ] EXISTING EQUIPMENT
- EXISTING TREE LINE
- EXISTING DELINEATED WETLAND
- ⊕ EXISTING MONITORING WELLS
- 700 — PROPOSED 10' CONTOUR
- — — PROPOSED 2' CONTOUR
- - - - - PROJECT LIMITS
- ||||| PROPOSED SERVICE ROAD
- ||||| PROPOSED BIKE TRAIL
- ||||| PROPOSED GRAVEL SURFACE
- ||||| PROPOSED RIPRAP
- ⊕ PROPOSED SHEET PILING
- x - PROPOSED FENCE
- [ ] FLY ASH/COAL/CCR EXCAVATION LIMITS

- NOTES:**
- EDGE OF WATER SHOWN IS FROM AUG. 1, 2013 SURVEY. RIVER LEVELS FLUCTUATE AND ARE SHOWN FOR REFERENCE ONLY.
  - PROPOSED BIKE TRAIL TO BE BUILT BY CITY UNDER SEPARATE PROJECT - SHOWN FOR REFERENCE.
  - HORIZONTAL EXTENT OF COAL/CCR EXCAVATION IS APPROXIMATE AND SHALL FIELD VERIFIED DURING CONSTRUCTION.
  - THE COAL/CCR LIMITS SHOWN ARE FROM A DETAILED DELINEATION UNDER THE BLACK DOG ROAD CORRIDOR. ADDITIONAL COAL/CCR IS PRESENT IN AREA 1 AND OTHER PORTIONS OF THE SITE AS SHOWN ON SITE CROSS-SECTIONS AND DETAILS.
  - COAL/CCR SHALL BE EXCAVATED TO THE HORIZONTAL EXTENT IDENTIFIED DURING CONSTRUCTION TO A MINIMUM DEPTH OF 4-FT BELOW THE PROPOSED FINISHED GROUND SURFACE.
  - COAL/CCR EXCAVATED BENEATH FORMER BLACK DOG ROAD SHALL BE DEPOSITED IN THE COAL YARD AS FILL.
  - AREA 1 EXISTING DRAINAGE PATTERN FLOWS THROUGH FLOOD PROTECTION BERM AND INTO COAL YARD. THIS DISCHARGE HAS BEEN MANAGED AS COAL YARD RUNOFF AS HISTORICALLY THIS AREA WAS COAL YARD AREA.
  - MONITORING WELLS SHOWN FOR REFERENCE. MONITORING WELLS TO BE RAISED, SEALED, OR PROTECTED BASED ON FINAL GRADING DESIGN.



2 SECTION: AREA 1 GRADING

- SHEET PILE NOTES:**
- SHEET PILE TO BE CAPPED WITH CONCRETE. FENCE OR RAILING BY XCEL ENERGY - DESIGN TO BE DETERMINED LATER.
  - SHEET PILE DEPTH AND ANCHOR TO BE DESIGNED DURING CONSTRUCTION PHASE.
  - DISTANCE BETWEEN PROPOSED SHEET PILE AND EDGE OF BIKE TRAIL VARIES FROM 7.5-FT TO 17.5-FT.

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CADD USER: Bryan D. Pitterne FILE: M:\DESIGN\2319\085\17\NH-268219-5.DWG PLOT SCALE: 1:2 PLOT DATE: 9/23/2014 3:07 PM

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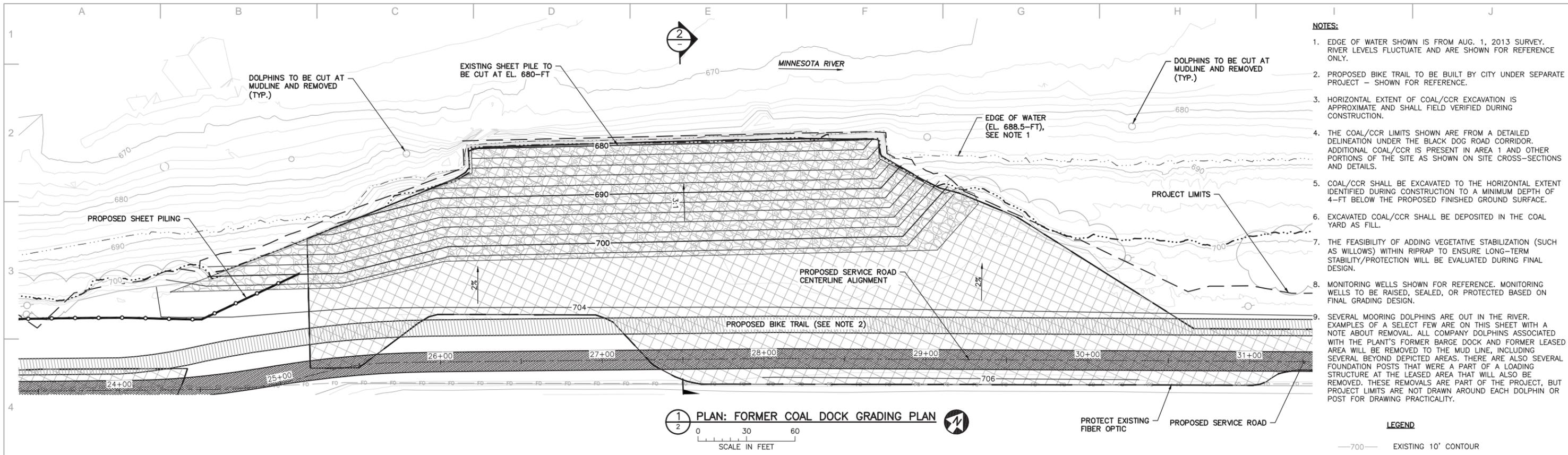
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PRINTED NAME: JEREMY J. GACNIK  
SIGNATURE: [Signature]  
DATE: 09-23-14 LICENSE #: 49292

**XcelEnergy**  
NORTHERN STATES POWER  
**BLACK DOG**  
CITY, STATE

DWN: ATD	DATE: 07-17-14	CHK: RLG	DATE: 09-03-14
ENG: ATD	DATE: 07-17-14	CHK: PTS	DATE: 09-10-14
PM: JJG	DATE: 09-15-14	PROJ. NO: 23191085.17	
APVD: ALP	DATE: 09-18-14	SCALE: AS SHOWN	

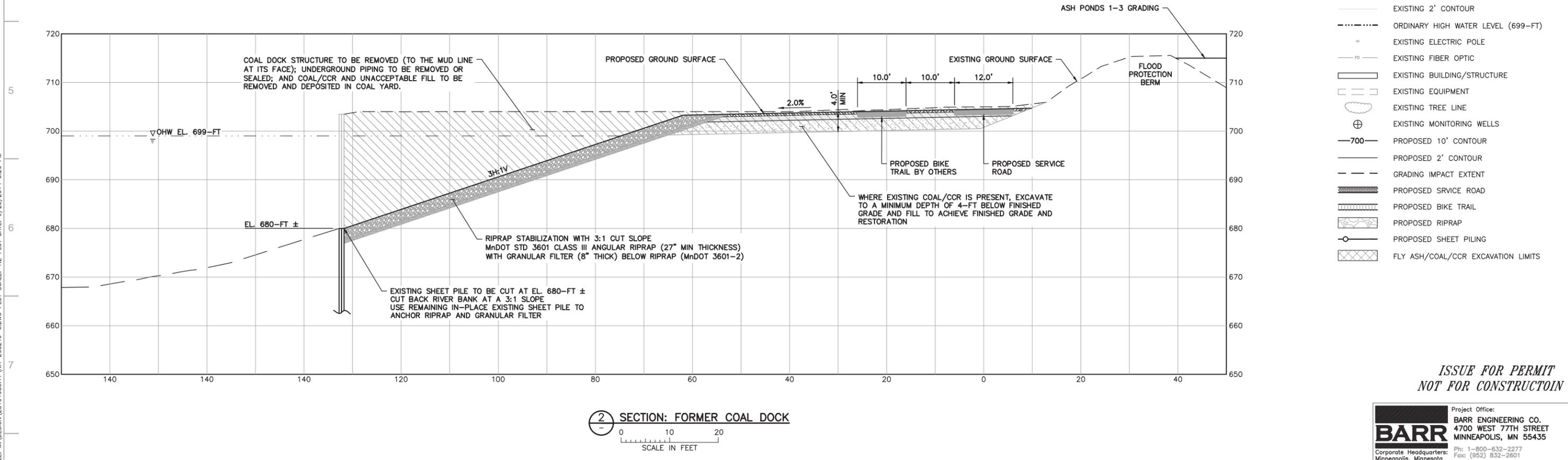
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**UNIT 0**  
BLACK DOG ENVIRONMENTAL PERMITTING  
AREA 1  
**MVP-2013-04869-RMM**  
Page 9 of 14



- NOTES:**
- EDGE OF WATER SHOWN IS FROM AUG. 1, 2013 SURVEY. RIVER LEVELS FLUCTUATE AND ARE SHOWN FOR REFERENCE ONLY.
  - PROPOSED BIKE TRAIL TO BE BUILT BY CITY UNDER SEPARATE PROJECT - SHOWN FOR REFERENCE.
  - HORIZONTAL EXTENT OF COAL/CCR EXCAVATION IS APPROXIMATE AND SHALL BE VERIFIED DURING CONSTRUCTION.
  - THE COAL/CCR LIMITS SHOWN ARE FROM A DETAILED DELINEATION UNDER THE BLACK DOG ROAD CORRIDOR. ADDITIONAL COAL/CCR IS PRESENT IN AREA 1 AND OTHER PORTIONS OF THE SITE AS SHOWN ON SITE CROSS-SECTIONS AND DETAILS.
  - COAL/CCR SHALL BE EXCAVATED TO THE HORIZONTAL EXTENT IDENTIFIED DURING CONSTRUCTION TO A MINIMUM DEPTH OF 4-FT BELOW THE PROPOSED FINISHED GROUND SURFACE.
  - EXCAVATED COAL/CCR SHALL BE DEPOSITED IN THE COAL YARD AS FILL.
  - THE FEASIBILITY OF ADDING VEGETATIVE STABILIZATION (SUCH AS WILLOWS) WITHIN RIPRAP TO ENSURE LONG-TERM STABILITY/PROTECTION WILL BE EVALUATED DURING FINAL DESIGN.
  - MONITORING WELLS SHOWN FOR REFERENCE. MONITORING WELLS TO BE RAISED, SEALED, OR PROTECTED BASED ON FINAL GRADING DESIGN.
  - SEVERAL MOORING DOLPHINS ARE OUT IN THE RIVER. EXAMPLES OF A SELECT FEW ARE ON THIS SHEET WITH A NOTE ABOUT REMOVAL. ALL COMPANY DOLPHINS ASSOCIATED WITH THE PLANT'S FORMER BARGE DOCK AND FORMER LEASED AREA WILL BE REMOVED TO THE MUD LINE, INCLUDING SEVERAL BEYOND DEPICTED AREAS. THERE ARE ALSO SEVERAL FOUNDATION POSTS THAT WERE A PART OF A LOADING STRUCTURE AT THE LEASED AREA THAT WILL ALSO BE REMOVED. THESE REMOVALS ARE PART OF THE PROJECT, BUT PROJECT LIMITS ARE NOT DRAWN AROUND EACH DOLPHIN OR POST FOR DRAWING PRACTICALITY.

- LEGEND**
- 700--- EXISTING 10' CONTOUR
  - EXISTING 2' CONTOUR
  - - - - - ORDINARY HIGH WATER LEVEL (699-FT)
  - ⊕ EXISTING ELECTRIC POLE
  - o- EXISTING FIBER OPTIC
  - ▭ EXISTING BUILDING/STRUCTURE
  - EXISTING EQUIPMENT
  - EXISTING TREE LINE
  - ⊕ EXISTING MONITORING WELLS
  - 700--- PROPOSED 10' CONTOUR
  - PROPOSED 2' CONTOUR
  - - - - - GRADING IMPACT EXTENT
  - ▨ PROPOSED SERVICE ROAD
  - ▨ PROPOSED BIKE TRAIL
  - ▨ PROPOSED RIPRAP
  - PROPOSED SHEET PILING
  - ▨ FLY ASH/COAL/CCR EXCAVATION LIMITS



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MINNEAPOLIS, MN 55435  
Ph: 1-800-632-2277  
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REFERENCE DRAWINGS		
DWG NO.	MANUFACTURER	DESCRIPTION

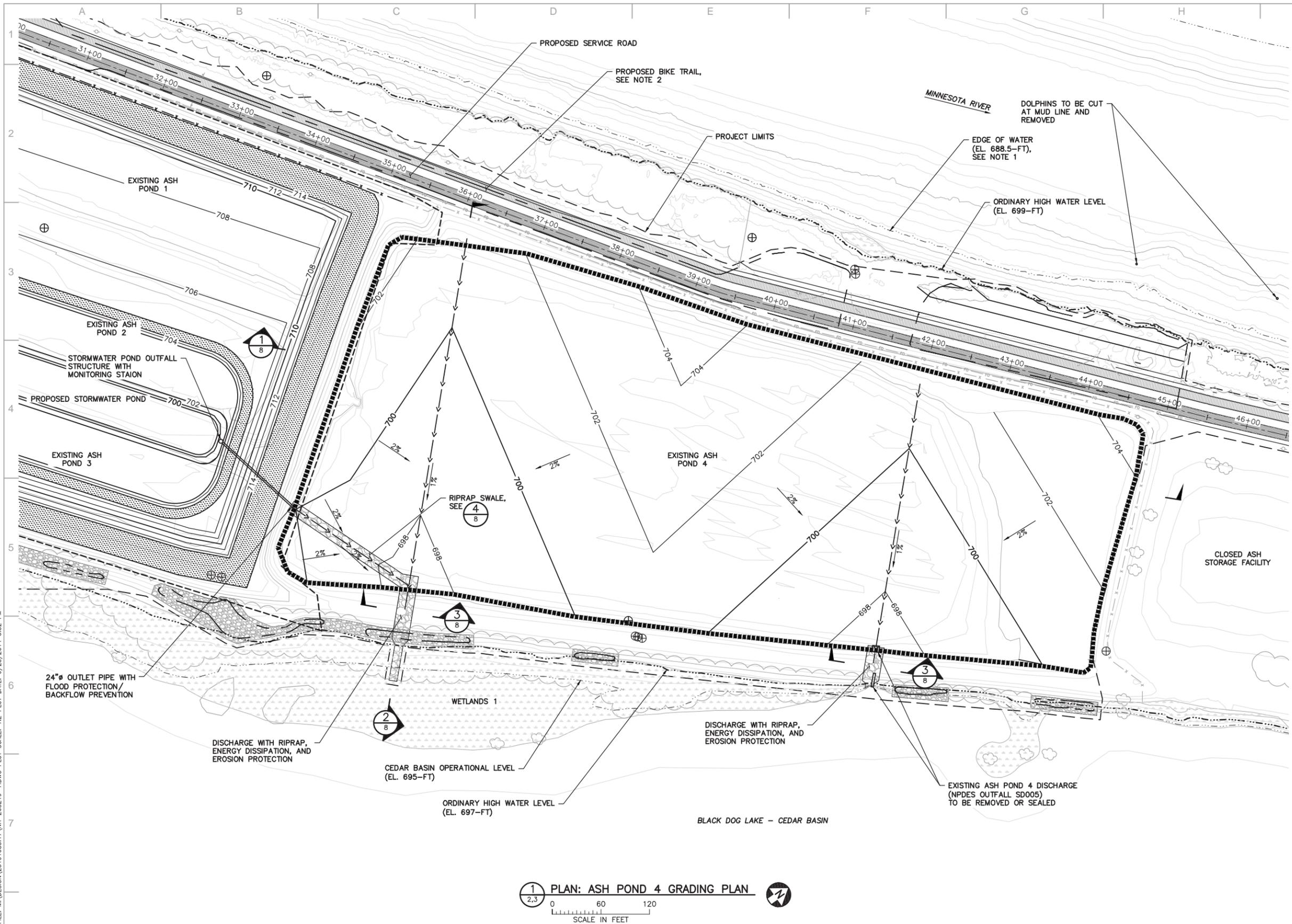
  

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINTED NAME: JEREMY J. GACNIK SIGNATURE: <i>[Signature]</i> DATE: 09-23-14 LICENSE #: 49292				 NORTHERN STATES POWER <b>BLACK DOG</b> CITY, STATE			
DWN: ATD	DATE: 07-17-14	CHK: RLG	DATE: 09-03-14	ENG: ATD	DATE: 07-17-14	CHK: PTS	DATE: 09-10-14
PM: JJG	DATE: 09-15-14	PROJ. NO: 23191085.17		APVD: ALP	DATE: 09-18-14	SCALE: AS SHOWN	

THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.	<b>UNIT 0</b> BLACK DOG ENVIRONMENTAL PERMITTING <b>MVP-2013-04869-RMM</b> Page 10 of 14
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CADD USER: Bryan D. Pitterle FILE: M:\DESIGN\23191085.17\NH-266219-6.DWG PLOT SCALE: 1:2 PLOT DATE: 9/23/2014 3:26 PM



**LEGEND**

- FLOODWAY LIMITS
- 700- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- - - - ORDINARY HIGH WATER LEVEL
- - - - WATER LEVEL
- EXISTING PAVED ROAD
- - - - EXISTING GRAVEL ROAD
- - - - EXISTING CULVERT
- ##### EXISTING RAILROAD
- x-x-x-x EXISTING FENCE
- o EXISTING ELECTRIC POLE
- ⊕ EXISTING MONITORING WELLS
- ▭ EXISTING BUILDING/STRUCTURE
- ▭ EXISTING EQUIPMENT
- EXISTING TREE LINE
- EXISTING DELINEATED WETLAND
- 700- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- - - - PROJECT LIMITS
- ▬ PROPOSED SERVICE ROAD
- ▬ PROPOSED BIKE TRAIL
- ▬ PROPOSED GRAVEL SURFACE
- ▬ PROPOSED RIPRAP
- ▬ PROPOSED SHEET PILING
- ▬ PROPOSED FORCEMAIN
- ▬ PROPOSED DITCH/SWALE
- x-x-x-x PROPOSED FENCE
- ▬ APPROXIMATE POND EXCAVATION LIMIT

- NOTES:**
1. EDGE OF WATER SHOWN IS FROM AUG. 1, 2013 SURVEY. RIVER LEVELS FLUCTUATE AND ARE SHOWN FOR REFERENCE ONLY.
  2. PROPOSED BIKE TRAIL TO BE BUILT BY CITY UNDER SEPARATE PROJECT - SHOWN FOR REFERENCE.
  3. FINAL POND DESIGN DETAILS TO BE DETERMINED SUBJECT TO FIELD CONDITIONS AND MPCA PERMITTING.
  4. MONITORING WELLS SHOWN FOR REFERENCE. MONITORING WELLS TO BE RAISED, SEALED, OR PROTECTED BASED ON FINAL GRADING DESIGN.
  5. THE LISTED CEDAR BASIN OPERATIONAL LEVEL OF 695'-FT IS A TYPICAL LEVEL IN THE UPPER PORTION OF A NORMAL OPERATING RANGE.
  6. SEVERAL MOORING DOLPHINS ARE OUT IN THE RIVER. EXAMPLES OF A SELECT FEW ARE ON THIS SHEET WITH A NOTE ABOUT REMOVAL. ALL COMPANY DOLPHINS ASSOCIATED WITH THE PLANT'S FORMER BARGE DOCK AND FORMER LEASED AREA WILL BE REMOVED TO THE MUD LINE, INCLUDING SEVERAL BEYOND DEPICTED AREAS. THERE ARE ALSO SEVERAL FOUNDATION POSTS THAT WERE A PART OF A LOADING STRUCTURE AT THE LEASED AREA THAT WILL ALSO BE REMOVED. THESE REMOVALS ARE PART OF THE PROJECT, BUT PROJECT LIMITS ARE NOT DRAWN AROUND EACH DOLPHIN OR POST FOR DRAWING PRACTICALITY.

CADD USER: Bryan D. Pitterle FILE: M:\DESIGN\23191085.17\NH-266219-7.DWG PLOT SCALE: 1:2 PLOT DATE: 9/23/2014 3:32 PM

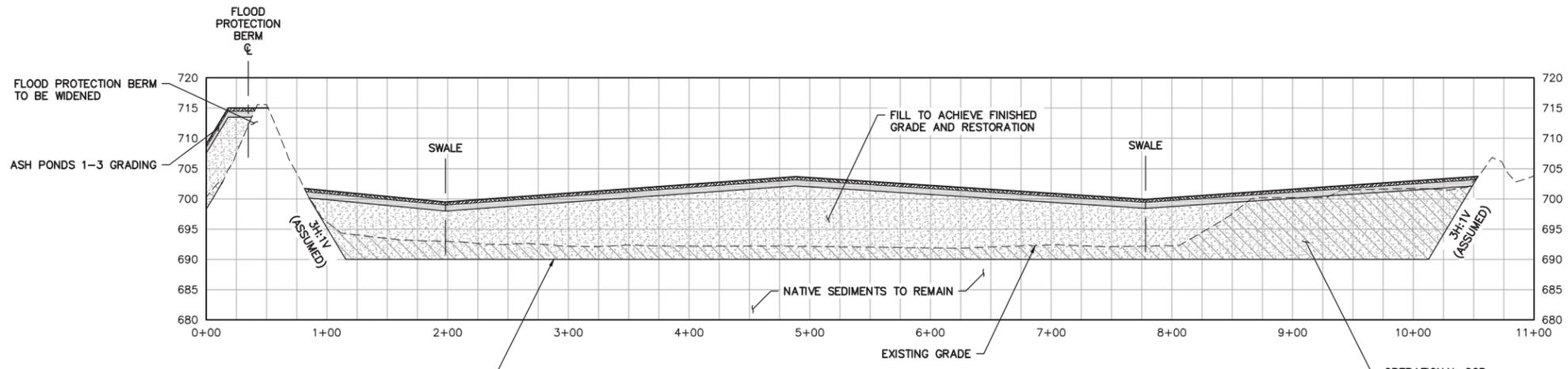
**1 PLAN: ASH POND 4 GRADING PLAN**

0 60 120  
SCALE IN FEET

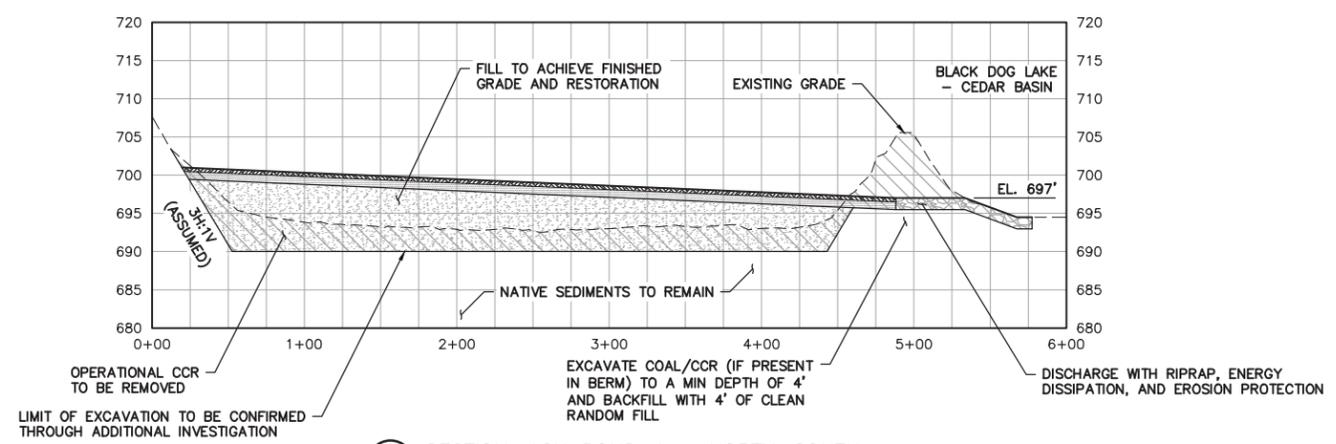
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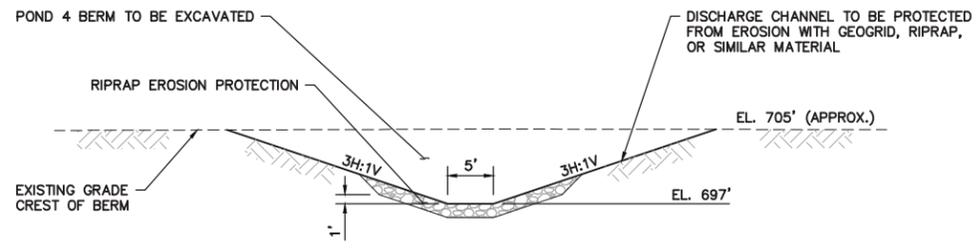
REVISION							REVISION							REFERENCE DRAWINGS			 NORTHERN STATES POWER <b>BLACK DOG</b> <small>CITY, STATE</small>	<small>THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.</small>
NO	DATE	BY	CHK	ENG	NO	NO	DATE	BY	CHK	ENG	DWG NO.	MANUFACTURER	DESCRIPTION	DWN: BDP	DATE: 07-18-14	CHK: RLG		
<small>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</small> PRINTED NAME: JEREMY J. GACNIK SIGNATURE: DATE: 09-23-14 LICENSE #: 49292														ENGINEERING & CONSTRUCTION <b>ENERGY SUPPLY</b>	<b>UNIT 0</b> BLACK DOG ENVIRONMENTAL PERMITTING <b>MVP-2013-04869-RMM</b> Page 11 of 14			



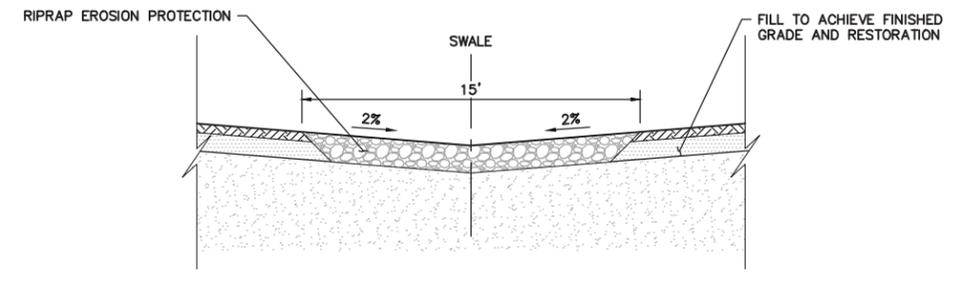
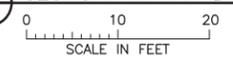
1 SECTION: ASH POND 4 - WEST-EAST



2 SECTION: ASH POND 4 - NORTH-SOUTH



3 SECTION: RIPRAP DISCHARGE (TYP.)



4 SECTION: RIPRAP SWALE (TYP.)

NOT TO SCALE

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CADD USER: Byron D. Pitterle FILE: M:\DESIGN\23191085.17\NH-266219-8.DWG PLOT SCALE: 1:2 PLOT DATE: 9/23/2014 3:17 PM

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PRINTED NAME: JEREMY J. GACNIK  
SIGNATURE: *[Signature]*  
DATE: 09-23-14 LICENSE #: 49292

**XcelEnergy**  
NORTHERN STATES POWER  
**BLACK DOG**  
CITY, STATE

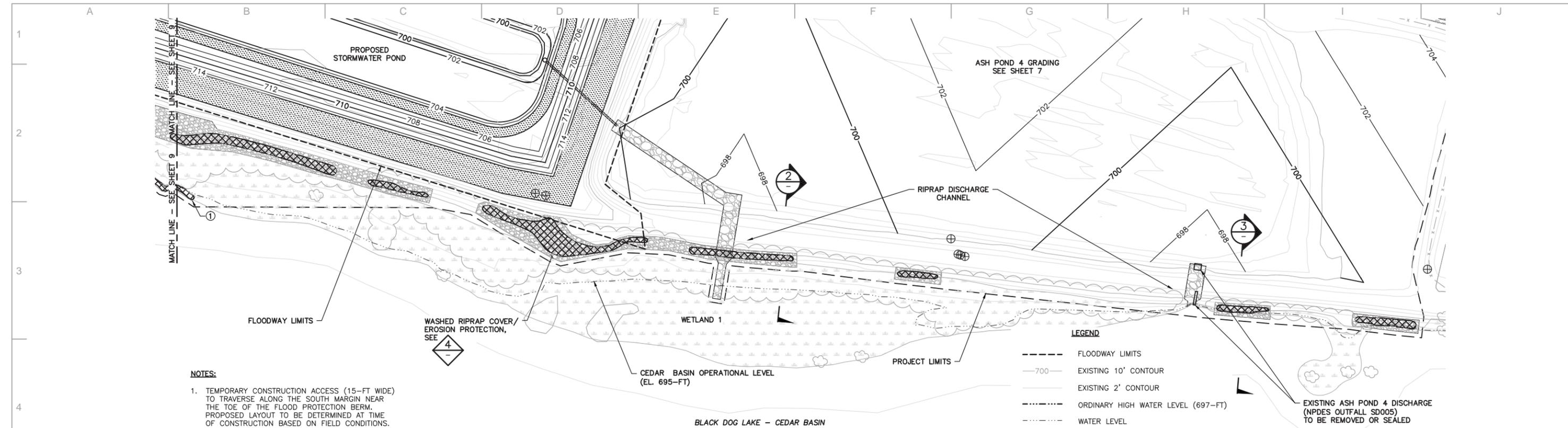
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ENG: BDP	DATE: 07-18-14	CHK: PTS	DATE: 09-10-14
PM: JYG	DATE: 09-15-14	PROJ. NO: 23191085.17	
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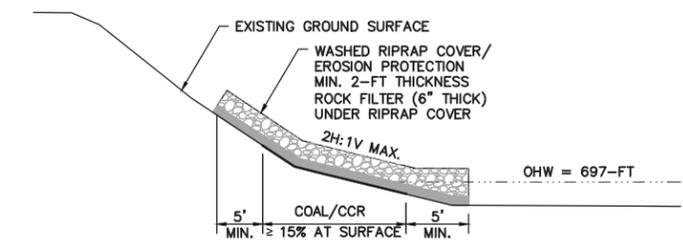
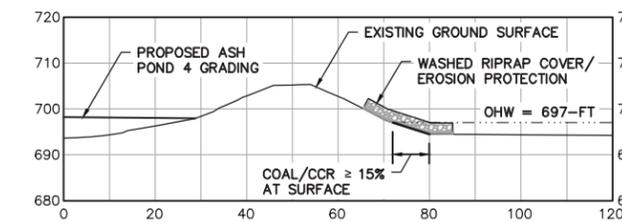
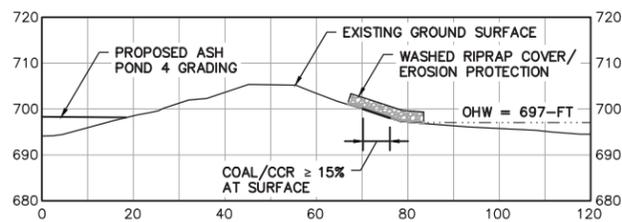
ENERGY SUPPLY  
ENGINEERING & CONSTRUCTION

UNIT 0  
BLACK DOG ENVIRONMENTAL PERMITTING  
ASH POND 4  
MVP-2013-04869-RMM  
Page 12 of 14





- NOTES:**
1. TEMPORARY CONSTRUCTION ACCESS (15-FT WIDE) TO TRAVERSE ALONG THE SOUTH MARGIN NEAR THE TOE OF THE FLOOD PROTECTION BERM. PROPOSED LAYOUT TO BE DETERMINED AT TIME OF CONSTRUCTION BASED ON FIELD CONDITIONS.
  2. MONITORING WELLS SHOWN FOR REFERENCE. MONITORING WELLS TO BE RAISED, SEALED, OR PROTECTED BASED ON FINAL GRADING DESIGN.
  3. THE LISTED CEDAR BASIN OPERATIONAL LEVEL OF 695-FT IS A TYPICAL LEVEL IN THE UPPER PORTION OF A NORMAL OPERATING RANGE.



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DWG NO.	MANUFACTURER	DESCRIPTION	DWN: ATD	DATE: 07-18-14	CHK: RLG	DATE: 09-03-14	ENG: ATD	DATE: 07-18-14	CHK: PTS	DATE: 09-10-14	PM: JYG	DATE: 09-15-14	PROJ. NO: 23191085.17	ENERGY SUPPLY ENGINEERING & CONSTRUCTION			
																	<b>MVP-2013-04869-RMM</b> Page 14 of 14

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