

WATERBODY DATA FORM

Centerline Re-Route Access Road Ancillary Facility Other:

Feature ID #: 58AHK008

Stream/Waterbody Name (if known): BAD RIVER

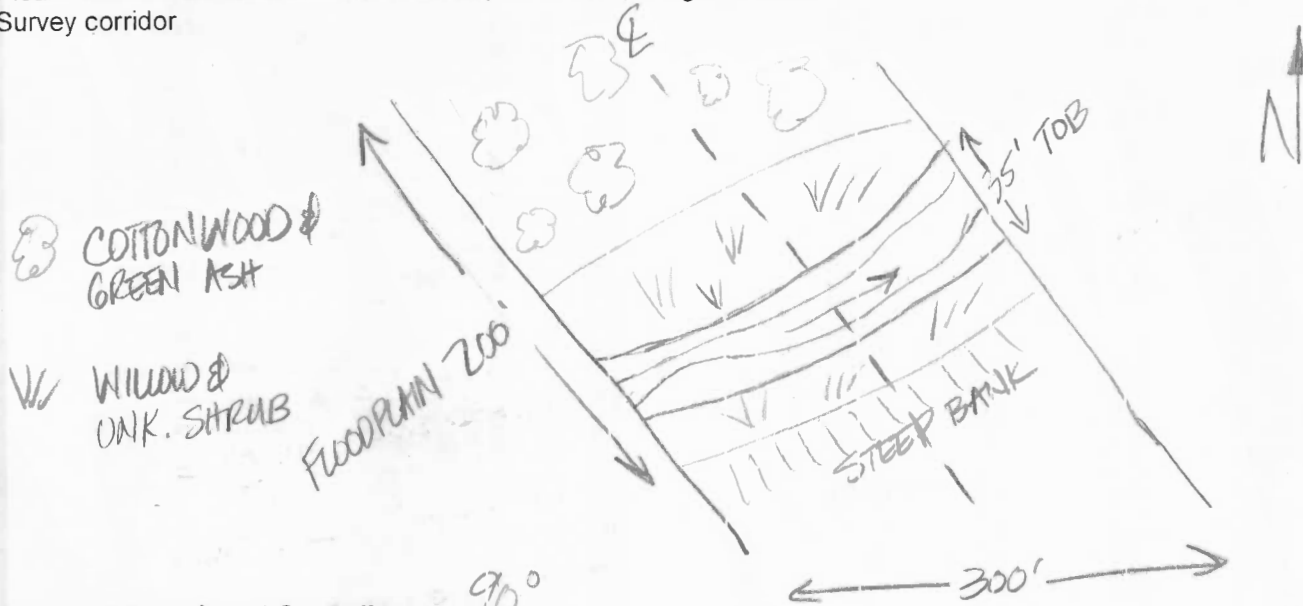
Associated Wetland ID #: _____

Date: <u>7/5/08</u>	Project Name & No.: Keystone XL - 10623-007-803A	Milepost: <u>481.2</u>
Investigators: <u>BA</u>	State/County: <u>SD/HK</u>	Quad Name: _____
Logbook No.: <u>2</u>	Logbook Page No.: <u>117</u>	Tract No.: <u>ML-SD-HK-11840</u>
Picture No.: <u>58AHK008</u>		FORGOT TO TAKE PHOTO *?G!

PHYSICAL ATTRIBUTES

Waterbody Sketch Plan

Please include: Directional & North Arrow, Centerline, Length of feature, Distances from Centerline, Photo Locations, and Survey corridor



Angle of Crossing at Centerline: 90°

Waterbody Type	Lake	Pond	Borrow Pit	<u>River</u>	Stream	Ag. Ditch	Other:		
Stream Flow	Fast	<u>Moderate</u>	<u>Slow</u>	Flow type	<u>Perennial</u> (Flows year round)	Direction of Flow where it crosses CL: _____ (N, NE, E, SE, S, SW, W, NW)			
	Very Slow	<u>RIFLE</u>	<u>POOL</u>		<u>Seasonal</u> (Continuous flow ≥ 3 months)				
Subsurface Flow?	Yes	No	<u>Unknown</u>		<u>Intermittent</u> (Flows < 3 months)				
					<u>Ephemeral</u> (Flows only in response to rainfall)				
OHWM Width (ft.):	<u>25</u>			Sinuosity	Straight	<u>Meandering</u>			
Stream Width (ft.)	Top of Bank (at crossing location): <u>35</u>			Water Surface (at crossing location): <u>20</u>					
Stream Depth (in.)	0-3	3-6	<u>6-12</u>	12-18	18-24	24-36	36-48	48-60	60+
OHWM Indicator	Clear natural line on bank			Wrack line	<u>Shelving</u>	<u>Scour</u>			
	<u>Abrupt plant community change</u>			Bent, matted or missing vegetation	Wrested vegetation	Water staining			
	Soil character changes			Sediment deposition	Sediment sorting				
	Litter and debris			Leaf litter disturbed	Other:				
Bank Height (ft.) (looking downstream)	Left:	0-2	2-4	<u>4-6</u>	6-8	8+			
	Right:	0-2	2-4	<u>4-6</u>	6-8	8+			
Bank Slope (looking downstream)	Left:	4:1	<u>3:1</u>	2:1	1:1	Vertical			
	Right:	4:1	3:1	<u>2:1</u>	1:1	Vertical			

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QUALITATIVE ATTRIBUTES

Water Appearance (check all that apply)	Clear Slightly Turbid	Turbid <u>Very Turbid</u>	Sheen on surface <u>Greenish color</u>	Floating algal mats Obvious surface scum	Water Color: <u>OLIVE-BROWN</u>
Stream Substrate %	Silts <u>CLAY 70</u>	Cobbles _____	Bedrock _____	Sands <u>10</u>	Gravel <u>20</u>
Aquatic Habitats (check all that apply)	Sand Bar <u>Gravel Bar</u> Mud Bar Undercut Banks	<u>Gravel Riffles</u> Deep Pools <u>Bank root systems</u> <u>Overhanging trees/shrubs</u>	In-stream emergent plants: <u>✓ FEW ELEGANTIS</u> In-stream submerged plants: Fringing Wetlands:		
Aquatic Organisms Observed (check all that apply)	Waterfowl Snakes	Fish (adult) Fish (juvenile)	Turtles Frogs	Other:	
Riparian Zone	Width of natural vegetation zone from edge of active channel out onto flood plain: <u>300</u> (ft)				
	Circle vegetative layers: <u>trees</u> <u>shrubs</u> <u>herbs</u>				
	Significant bare areas within riparian zone _____ Evidence of non-buffered concentrated flows _____				
Tributary is	<u>Natural</u>		Artificial (Man-Made)	Manipulated	
Channel Condition:	Channelization/Braiding	Unnatural straightening	Downcutting	Dikes/Berms	Excessive bank erosion
Disturbances	Livestock access to riparian zone <u>✓</u> Waste discharge pipes present		Manure in stream or on banks <u>✓</u> Other: _____		

GREEN ASH

Describe Habitat Characteristics, Aquatic & Terrestrial Diversity:	Habitat ID No.:
<p><u>COTTONWOOD FLOODPLAIN w/ GOOD STRUCTURAL/SPP. DIVERSITY:</u> <u>SALIX EXIGUA & UNK. SHRUBS ALONG GRAVEL/MUD BARS. HEALTHY</u> <u>COTTONWOOD REGEN. WESTERN WHEAT GRASS UNDER COTTONWOOD.</u></p>	

Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, and meanders)			
<table style="width:100%;"> <tr> <td style="width:33%;">STREAM QUALITY High</td> <td style="width:33%; text-align: center;"><u>Moderate</u></td> <td style="width:33%;">Low</td> </tr> </table>	STREAM QUALITY High	<u>Moderate</u>	Low
STREAM QUALITY High	<u>Moderate</u>	Low	

