

# WATERBODY DATA FORM

Centerline  Re-Route  Access Road  Ancillary Facility  Other:

**Feature ID #: S8AHK003**

Stream/Waterbody Name (if known): BRIDGER CR.

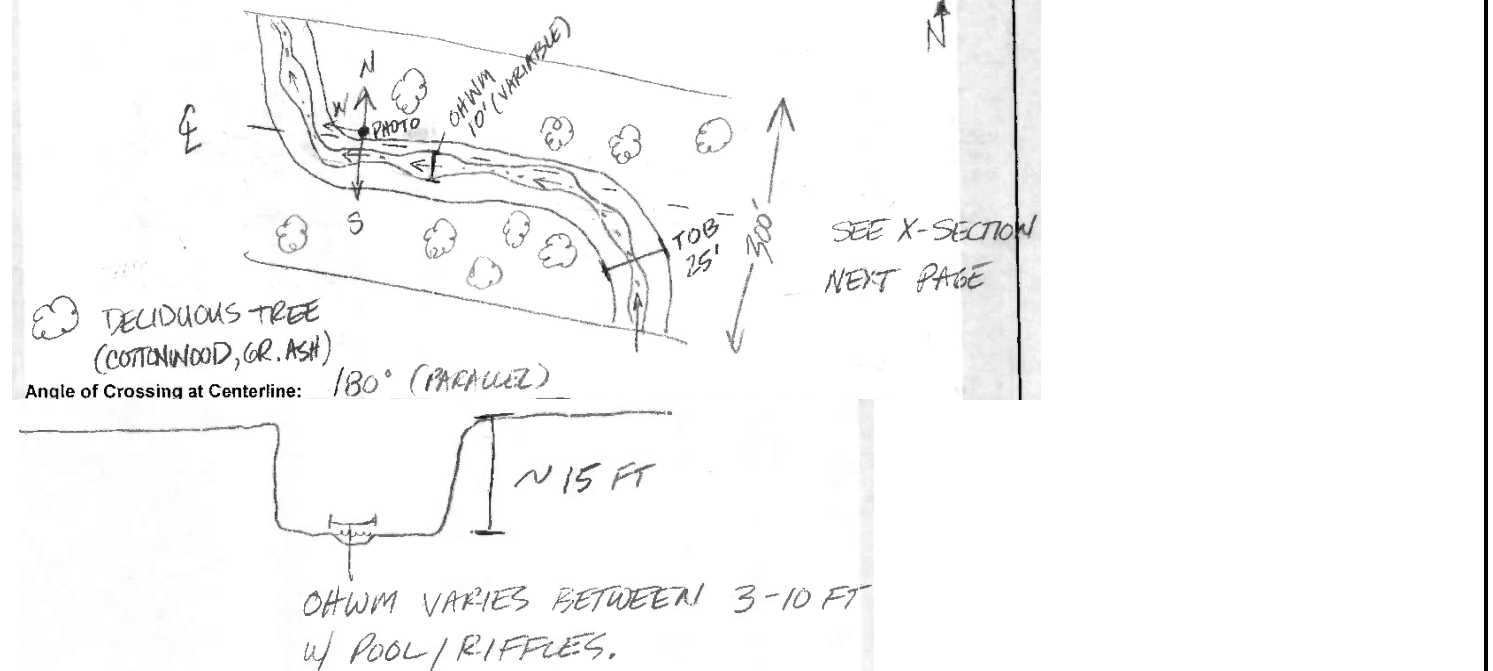
**Associated Wetland ID #:**

<b>Date:</b> 6/28/08	<b>Project Name &amp; No.:</b> Keystone XL-10623-007-803A	<b>Milepost:</b> 429.0
<b>Investigators:</b> 8A	<b>State/County:</b> SD/HK	<b>Quad Name:</b> HILLAND NW
<b>Logbook No.:</b> 2	<b>Logbook Page No.:</b> 47	<b>Tract No.:</b> ML-SD-HK-00110.000
		<b>Picture No.:</b> S8AHK003_N,W,S

**PHYSICAL ATTRIBUTES**

**Waterbody Sketch Plan**

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



<b>Waterbody Type</b>	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> Borrow Pit <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ag. Ditch <input type="checkbox"/> Other:
<b>Stream Flow</b>	<input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow <input type="checkbox"/> Very Slow <input type="checkbox"/> None <b>Flow type</b> <input checked="" type="checkbox"/> Perennial (Flows year round) <input type="checkbox"/> Seasonal (Continuous flow ≥ 3 months) <input type="checkbox"/> Intermittent (Flows <3 months) <input type="checkbox"/> Ephemeral (Flows only in response to rainfall)
<b>Subsurface Flow?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown Direction of Flow where it crosses CL: <b>N</b> (N, NE, E, SE, S, SW, W, NW)
<b>OHWM Width (ft.):</b>	10 (VARIES) Sinuosity <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering
<b>Stream Width (ft.)</b>	Top of Bank (at crossing location): 25 Water Surface (at crossing location): 9
<b>Stream Depth (in.)</b>	<input type="checkbox"/> 0-3 <input type="checkbox"/> 3-6 <input checked="" type="checkbox"/> 6-12 <input type="checkbox"/> 12-18 <input type="checkbox"/> 18-24 <input type="checkbox"/> 24-36 <input type="checkbox"/> 36-48 <input type="checkbox"/> 48-60 <input type="checkbox"/> 60+
<b>OHWM Indicator</b>	<input type="checkbox"/> Clear natural line on bank <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Shelving <input type="checkbox"/> Scour <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Bent, matted or missing vegetation <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Water staining <input type="checkbox"/> Soil character changes <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Sediment sorting <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Leaf litter disturbed <input type="checkbox"/> Other:
<b>Bank Height (ft.) (looking downstream)</b>	Left: <input type="checkbox"/> 0-2 <input type="checkbox"/> 2-4 <input type="checkbox"/> 4-6 <input type="checkbox"/> 6-8 <input checked="" type="checkbox"/> 8+ Right: <input type="checkbox"/> 0-2 <input type="checkbox"/> 2-4 <input type="checkbox"/> 4-6 <input type="checkbox"/> 6-8 <input checked="" type="checkbox"/> 8+
<b>Bank Slope (looking downstream)</b>	Left: <input type="checkbox"/> 4:1 <input type="checkbox"/> 3:1 <input type="checkbox"/> 2:1 <input type="checkbox"/> 1:1 <input checked="" type="checkbox"/> Vertical Right: <input type="checkbox"/> 4:1 <input type="checkbox"/> 3:1 <input type="checkbox"/> 2:1 <input type="checkbox"/> 1:1 <input checked="" type="checkbox"/> Vertical

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**QUALITATIVE ATTRIBUTES**

<b>Water Appearance (check all that apply)</b>	Clear <input type="checkbox"/> Slightly Turbid <input checked="" type="checkbox"/>	Turbid <input type="checkbox"/> Very Turbid <input type="checkbox"/>	Sheen on surface <input type="checkbox"/> Greenish color <input type="checkbox"/>	Floating algal mats <input type="checkbox"/> Obvious surface scum <input type="checkbox"/>	Water Color: LIGHT OLIVE-BROWN
	Other:				
<b>Stream Substrate %</b>	Silts/Clay 60 Concrete Other:	Cobbles 10 Muck Explain:	Bedrock Vegetation:	Sands 20 Gravel 10	
<b>Aquatic Habitats (check all that apply)</b>	Sand Bar <input checked="" type="checkbox"/> Gravel Bar <input checked="" type="checkbox"/> Mud Bar <input type="checkbox"/> Undercut Banks <input type="checkbox"/>	Gravel Riffles <input checked="" type="checkbox"/> Deep Pools <input checked="" type="checkbox"/> Bank root systems <input checked="" type="checkbox"/> Overhanging trees/shrubs <input checked="" type="checkbox"/>	In-stream emergent plants: <input type="checkbox"/> In-stream submerged plants: <input type="checkbox"/> Fringing Wetlands: <input type="checkbox"/>		
<b>Aquatic Organisms Observed (check all that apply)</b>	Waterfowl <input type="checkbox"/> Snakes <input type="checkbox"/>	Fish (adult) <input type="checkbox"/> Fish (juvenile) <input type="checkbox"/>	Turtles <input type="checkbox"/> Frogs <input type="checkbox"/>	Other:	
	Invertebrates:				
<b>Riparian Zone</b>	Width of natural vegetation zone from edge of active channel out onto flood plain (FT): Circle vegetative layers: trees <input checked="" type="checkbox"/> shrubs <input checked="" type="checkbox"/> herbs <input checked="" type="checkbox"/> <input type="checkbox"/> Significant bare areas within riparian zone <input type="checkbox"/> Evidence of non-buffered concentrated flows				
<b>Tributary is</b>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial (Man-Made) <input type="checkbox"/> Manipulated				
<b>Channel Condition:</b>	Channelization or Braiding <input type="checkbox"/>	Unnatural straightening <input type="checkbox"/>	Downcutting <input checked="" type="checkbox"/>	Dikes/Berms <input type="checkbox"/>	Excessive bank erosion <input checked="" type="checkbox"/> Other
<b>Disturbances</b>	Livestock access to riparian zone <input checked="" type="checkbox"/> Waste discharge pipes present <input type="checkbox"/>		Manure in stream or on banks <input checked="" type="checkbox"/> Other:		

Describe Habitat Characteristics, Aquatic & Terrestrial Diversity:	Habitat ID No.:
SEVERLY DOWNCUT CHANNEL-(ABOUT 15FT DEEP); ACTIVE BANK FAILURE IS CAUSING TREES TO FALL; STREAM HAS SMALL RIFFLES & POOLS, WIDENS & NARROWS. VEG. COMMUNITY: MIXED GRASSLAND & DECIDUOUS FOREST (BROJAP, PASSMI, COTTONWOOD, GREEN ASH & HACKBERRY OR ELM SP?)	

Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, and meanders)
VERY STEEP (VERTICAL) BANKS, HIGHLY ERODIBLE SOILS? ABOUT 400' OF CREEK RUNS RIGHT DOWN CL.
<b>STREAM QUALITY</b> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <input type="checkbox"/>