

# WATERBODY DATA FORM

Centerline  Re-Route  Access Road  Ancillary Facility  Other:

Feature ID #: S7ATR003

Stream/Waterbody Name (if known): MUD CREEK

Associated Wetland ID #:

Date: 7/9/08		Project Name & No.: Keystone XL-10623-007-803A		Milepost: 564.9	
Investigators: 7A			State/County: SD/ TRIPP		Quad Name: DOG EAR BUTTES
Logbook No.:	Logbook Page No.: 56	Tract No.: ML-SD-TR-11050.000		Picture No.: S7ATR003_S,2W,3N	
PHYSICAL ATTRIBUTES					
<b>Waterbody Sketch Plan</b>					
Please include: Directional & North Arrow, Centerline, Length of feature, Distances from Centerline, Photo Locations, and Survey corridor					
Angle of Crossing at Centerline: _____					
Waterbody Type	<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:				
Stream Flow	<input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow <input type="checkbox"/> Very Slow <input checked="" type="checkbox"/> None		Flow type	<input type="checkbox"/> Perennial (Flows year round) <input type="checkbox"/> Seasonal (Continuous flow ≥ 3 months) <input checked="" type="checkbox"/> Intermittent (Flows <3 months) <input type="checkbox"/> Ephemeral (Flows only in response to rainfall)	
Subsurface Flow?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown		Direction of Flow where it crosses CL: NE (N, NE, E, SE, S, SW, W, NW)		
OHWM Width (ft.):	3-4'		Sinuosity	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	
Stream Width (ft.)	Top of Bank (at crossing location): 15'			Water Surface (at crossing location): 3'	
Stream Depth (in.)	<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+				
OHWM Indicator	<input checked="" type="checkbox"/> Clear natural line on bank <input type="checkbox"/> Wrack line <input type="checkbox"/> Shelving <input type="checkbox"/> Scour <input type="checkbox"/> Abrupt plant community change <input 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 type="checkbox"/> Litter and debris <input type="checkbox"/> Leaf litter disturbed <input type="checkbox"/> Other:				
Bank Height (ft.) (looking downstream)	Left:	<input type="checkbox"/> 0-2 <input checked="" type="checkbox"/> 2-4 <input type="checkbox"/> 4-6 <input type="checkbox"/> 6-8 <input type="checkbox"/> 8+			
	Right:	<input type="checkbox"/> 0-2 <input checked="" type="checkbox"/> 2-4 <input type="checkbox"/> 4-6 <input type="checkbox"/> 6-8 <input type="checkbox"/> 8+			
Bank Slope (looking downstream)	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"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Floating algal mats <input checked="" type="checkbox"/> Water Color: Slightly Turbid <input type="checkbox"/> Very Turbid <input type="checkbox"/> Greenish color <input type="checkbox"/> Obvious surface scum <input type="checkbox"/> Other:
<b>Stream Substrate %</b>	Silts                      Cobbles                      Bedrock                      Sands                      Gravel Concrete                      Muck <input checked="" type="checkbox"/> Vegetation: Other: <input checked="" type="checkbox"/> Explain: CLAY
<b>Aquatic Habitats (check all that apply)</b>	Sand Bar <input type="checkbox"/> Gravel Riffles <input type="checkbox"/> In-stream emergent plants: <input type="checkbox"/> Gravel Bar <input type="checkbox"/> Deep Pools <input type="checkbox"/> In-stream submerged plants: <input type="checkbox"/> Mud Bar <input type="checkbox"/> Bank root systems <input checked="" type="checkbox"/> Fringing Wetlands: <input type="checkbox"/> Undercut Banks <input type="checkbox"/> Overhanging trees/shrubs <input checked="" type="checkbox"/>
<b>Aquatic Organisms Observed (check all that apply)</b>	Waterfowl <input type="checkbox"/> Fish (adult) <input type="checkbox"/> Turtles <input type="checkbox"/> Other: Snakes <input type="checkbox"/> Fish (juvenile) <input type="checkbox"/> Frogs <input type="checkbox"/> Invertebrates:
<b>Riparian Zone</b>	Width of natural vegetation zone from edge of active channel out onto flood plain (FT): 15 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 checked="" type="checkbox"/> Unnatural straightening <input type="checkbox"/> Downcutting <input type="checkbox"/> Dikes/Berms <input type="checkbox"/> Excessive bank erosion <input type="checkbox"/> Other
<b>Disturbances</b>	Livestock access to riparian zone <input type="checkbox"/> NO, WHEAT FIELD ON BOTH SIDES Waste discharge pipes present <input type="checkbox"/> Manure in stream or on banks <input type="checkbox"/> Other:

Describe Habitat Characteristics, Aquatic & Terrestrial Diversity:	Habitat ID No.:
CAREX, WILLOW LINE BOTH BANKS. SMOOTH BORME ON OUTER EDGE. WINTER WHEAT FIELD 20' AWAY FROM EACH BANK.	

Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, and meanders) CL CROSSES AT NEAR 90 DEGREE ANGLE
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<b>STREAM QUALITY</b> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input checked="" type="checkbox"/>
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