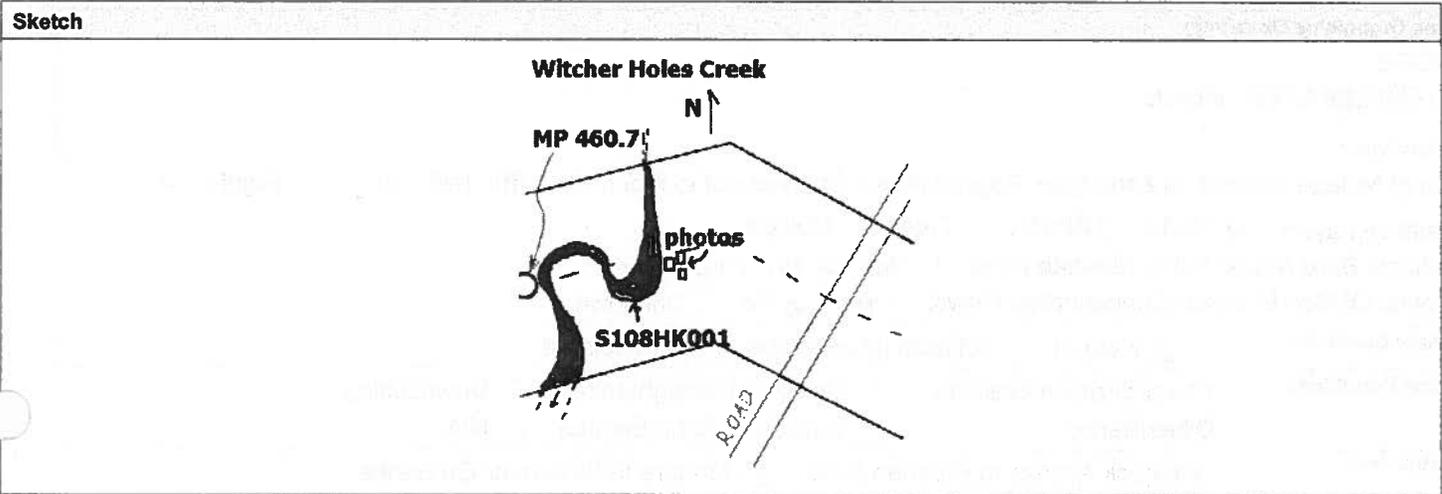


Waterbody Data Form

Feature ID: S108HK001
Witcher Holes

- Centerline Re-Route Access Road Ancillary Facility Transmission Line Other

Centerline ID: 2009215CL		Project Designated Name: N/A	
Date: 2009/04/24	Client/Project Name: Keystone XL- 10623-007	Milepost Enter/Exit: 460.72 - 460.75	
Team: 108	State/County: SD - Haakon	Quad Name: Powell NW	
Logbook No.: 1	Logbook Page No.: 30	Tract No.: ML-HK-SD-01140.000	



Waterbody Type:	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> Borrow Pit <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 checked="" type="checkbox"/> Slow <input type="checkbox"/> Very Slow <input type="checkbox"/> None					
Flow Type:	<input type="checkbox"/> Perennial (Flows year round) <input type="checkbox"/> Intermittent (Flows <3 month) <input type="checkbox"/> None <input checked="" type="checkbox"/> Seasonal (Continuous flow ≥ 3 months) <input type="checkbox"/> Ephemeral (Flows only in response to rainfall)					
Direction of Flow:	<input type="checkbox"/> N <input type="checkbox"/> NE <input type="checkbox"/> E <input type="checkbox"/> SE <input type="checkbox"/> S <input type="checkbox"/> SW <input checked="" type="checkbox"/> W <input type="checkbox"/> NW <input type="checkbox"/> No Flow					
OHWM Width (ft.):	10					
Sinuosity:	<input type="checkbox"/> Braided <input checked="" type="checkbox"/> Meandering <input type="checkbox"/> Straight <input type="checkbox"/> N/A					
Stream Width (ft.):	10		Water Surface (At Crossing Location):	10		
Stream Depth (in.):	<input type="checkbox"/> 0 <input type="checkbox"/> 1-3 <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 indicators:	CLEAR NATURAL LINE ON BANK					
Bank Height (ft.): (Looking Downstream)	Left:	<input checked="" type="checkbox"/> 0-2	<input 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 checked="" type="checkbox"/> 4:1	<input type="checkbox"/> 3:1	<input type="checkbox"/> 2:1	<input type="checkbox"/> 1:1	<input type="checkbox"/> Vertical
	Right:	<input type="checkbox"/> 4:1	<input checked="" type="checkbox"/> 3:1	<input type="checkbox"/> 2:1	<input type="checkbox"/> 1:1	<input type="checkbox"/> Vertical

Qualitative Attributes

Water Appearance:			
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Turbid	<input type="checkbox"/> Sheen on Surface	<input checked="" type="checkbox"/> Floating Algal Mats
<input type="checkbox"/> Slightly Turbid	<input type="checkbox"/> Very Turbid	<input type="checkbox"/> Greenish Color	<input type="checkbox"/> Obvious Surface Scum
<input type="checkbox"/> No Flow	<input type="checkbox"/> Other:		
Stream Substrate %:			
50% SANDS			
50% CLAY			
Aquatic Habitats:			
<input type="checkbox"/> Sand Bar	<input type="checkbox"/> Gravel Riffle	<input checked="" type="checkbox"/> In-stream Emergent Plant	% Cover: 10
<input type="checkbox"/> Gravel Bar	<input type="checkbox"/> Deep Pools	<input checked="" type="checkbox"/> In-stream Submerged Plants	% Cover: 5
<input type="checkbox"/> Mud Bar	<input type="checkbox"/> Bank Root Systems	<input type="checkbox"/> Fringing Wetlands	Characteristics: Typha species pockets.
<input type="checkbox"/> Undercut Banks	<input type="checkbox"/> Overhanging Trees/Shrubs	<input type="checkbox"/> None	
Aquatic Organisms Observed:			
FROGS			
INVERTEBRATES - insects			
Riparian Zone:			
Width of Natural Vegetation Zone from Edge of Active Channel out to Flood Plain (ft): Left - 10 Right - 10			
Vegetative Layers: <input checked="" type="checkbox"/> Herbs <input type="checkbox"/> Shrubs <input type="checkbox"/> Trees <input type="checkbox"/> Multiple			
Significant Bare Areas Within Riparian Zone: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown			
Evidence Of Non-Buffered Concentrated Flows: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown			
Tributary Condition: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial (Man-Made) <input type="checkbox"/> Manipulated			
Channel Condition:			
<input type="checkbox"/> Channelization/Braiding	<input type="checkbox"/> Unnatural Straightening	<input type="checkbox"/> Downcutting	
<input type="checkbox"/> Dikes/Berms	<input type="checkbox"/> Excessive Bank Erosion	<input type="checkbox"/> N/A	
Disturbances:			
<input type="checkbox"/> Livestock Access to Riparian Zone	<input type="checkbox"/> Manure In Stream or On Banks		
<input type="checkbox"/> Waste Discharge Pipes Present			
<input checked="" type="checkbox"/> Other: Livestock access and manure			

Habitat Characteristics, Aquatic, and Terrestrial Diversity Description:
Habitat ID Number

Comments:
Moderate species div, low structural diversity

Stream Quality: <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low
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