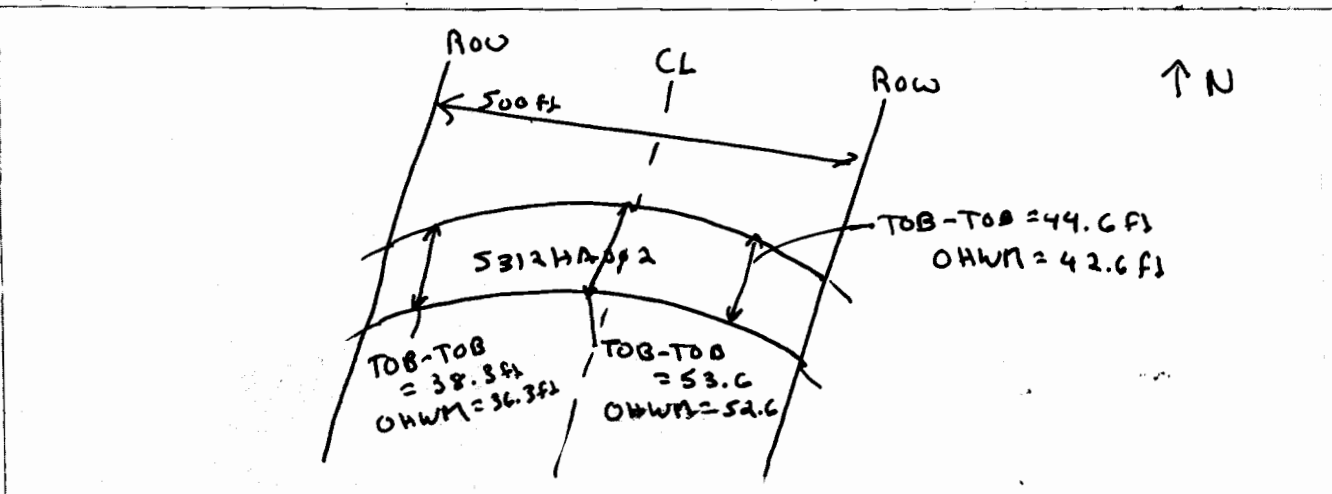


Waterbody Data Form

Centerline
 Re-Route
 Access Road
 Ancillary Facility
 Transmission Line
 Other

Centerline ID: S312HA002		Project Designated Name: Spring Creek	
Date: 10-3-12	Client/Project Name: Keystone XL	Milepost Enter/Exit: 351.73	
Team: 312	State/County: SD/HA	Quad Name:	
Logbook No.: 1	Logbook Page No.:	Tract No.: ML-SD-HA-03330.000	

Drawing (Please provide orientation arrow, all features identified, location to centerline, etc.)



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 type="checkbox"/> Slow <input type="checkbox"/> Very Slow <input checked="" type="checkbox"/> None
Flow Type:	<input type="checkbox"/> Perennial (Flows year round) <input checked="" type="checkbox"/> Intermittent (Flows <3 month) <input type="checkbox"/> None <input 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 checked="" type="checkbox"/> S <input type="checkbox"/> SW <input type="checkbox"/> W <input type="checkbox"/> NW <input checked="" type="checkbox"/> No Flow
OHWM Width (ft.):	at CL = 51.6 ft
Sinuosity:	<input type="checkbox"/> Braided <input checked="" type="checkbox"/> Meandering <input checked="" type="checkbox"/> Straight <input type="checkbox"/> N/A
Stream Width (ft.):	TOB-TOB 53.6 ft at CL
Stream Depth (ft.):	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-6 <input 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:	bent vegetation
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 checked="" type="checkbox"/> 0-2 <input 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 checked="" type="checkbox"/> 4:1 <input type="checkbox"/> 3:1 <input type="checkbox"/> 2:1 <input type="checkbox"/> 1:1 <input type="checkbox"/> Vertical

Qualitative Attributes

Water Appearance:			
<input type="checkbox"/> Clear	<input type="checkbox"/> Turbid	<input type="checkbox"/> Sheen on Surface	<input 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 %:			
Aquatic Habitats:			
<input type="checkbox"/> Sand Bar	<input type="checkbox"/> Gravel Riffle	<input type="checkbox"/> In-stream Emergent Plant % Cover:	
<input type="checkbox"/> Gravel Bar	<input type="checkbox"/> Deep Pools	<input type="checkbox"/> In-stream Submerged Plant % Cover:	
<input type="checkbox"/> Mud Bar	<input type="checkbox"/> Bank Root Systems	<input type="checkbox"/> Fringing Wetlands Characteristics:	
<input type="checkbox"/> Undercut Banks	<input type="checkbox"/> Overhanging Trees/Shrubs	<input type="checkbox"/> None	
Aquatic Organisms Observed:			
Riparian Zone:			
Width of Natural Vegetation Zone from Edge of Active Channel out to Flood Plain (ft): Left - 50+ Right - 50+			
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 type="checkbox"/> Natural <input type="checkbox"/> Artificial (Man-Made) <input checked="" 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 checked="" type="checkbox"/> Livestock Access to Riparian Zone	<input checked="" type="checkbox"/> Manure In Stream or On Banks		
<input type="checkbox"/> Waste Discharge Pipes Present			
<input type="checkbox"/> Other:			

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

Comments:
 -cattle access to stream
 - earthwork and modification by landowner evident

Stream Quality: High Moderate Low