

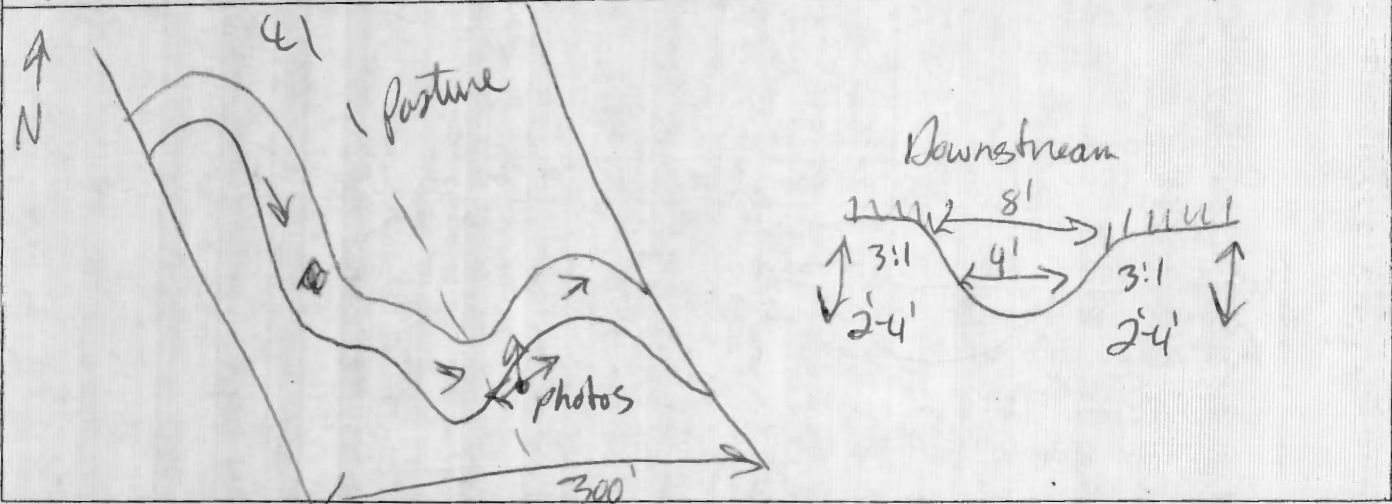
Waterbody Data Form

S500 HA009
Trib to Wolf Creek

Centerline
 Re-Route
 Access Road
 Ancillary Facility
 Transmission Line
 Other *RV 179*

Centerline ID: <i>3/26/10</i>	Project Designated Name: <i>Keystone XL Phase IV</i>
Date: <i>11/2/10</i>	Client/Project Name: <i>TransCanada - Trow - KXL</i>
Team: <i>B500</i>	Milepost Enter/Exit: <i>NA</i>
State/County: <i>SD - Harding</i>	Quad Name: <i>NA</i>
Logbook No.: <i>1</i>	Logbook Page No.: <i>13</i>
Tract No.: <i>ML-SD-HA-02612</i>	

Drawing (Please provide orientation arrow, all features identified, location to centerline, etc.) *Photos: 001W, 002N, 003E*



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 checked="" type="checkbox"/> E <input type="checkbox"/> SE <input type="checkbox"/> S <input type="checkbox"/> SW <input type="checkbox"/> W <input type="checkbox"/> NW <input type="checkbox"/> No Flow
OHWM Width (ft.):	<i>4'</i>
Sinuosity:	<input type="checkbox"/> Braided <input checked="" type="checkbox"/> Meandering <input type="checkbox"/> Straight <input type="checkbox"/> N/A
Stream Width (ft.):	<i>Top 2-9'</i>
Water Surface (At Crossing Location)	<i>2'</i>
Stream Depth (ft.):	<input type="checkbox"/> 0 <input checked="" 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:	<i>Bent rebar, Scour</i>
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 checked="" 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

3500HA009

Water Appearance:
 Clear Turbid Sheen on Surface Floating Algal Mats
 Slightly Turbid Very Turbid Greenish Color Obvious Surface Scum
 No Flow Other:

Stream Substrate %: *Sandy Clay*

Aquatic Habitats:
 Sand Bar Gravel Riffle In-stream Emergent Plant % Cover: *30%*
 Gravel Bar Deep Pools In-stream Submerged Plant % Cover:
 Mud Bar Bank Root Systems Fringing Wetlands Characteristics:
 Undercut Banks Overhanging Trees/Shrubs None

Aquatic Organisms Observed: *Frogs*

Riparian Zone:
 Width of Natural Vegetation Zone from Edge of Active Channel out to Flood Plain (ft): Left - *5'* Right - *5'*
 Vegetative Layers: Herbs Shrubs Trees Multiple
 Significant Bare Areas Within Riparian Zone Yes No Unknown
 Evidence Of Non-Buffered Concentrated Flows: Yes No Unknown

Tributary Condition: Natural Artificial (Man-Made) Manipulated *← Fence bisects Stream*

Channel Condition:
Stream ← Channelization/Braiding Unnatural Straightening Downcutting
 Dikes/Berms Excessive Bank Erosion N/A

Disturbances: *King* Livestock Access to Riparian Zone Manure In Stream or On Banks
 Waste Discharge Pipes Present
 Other: *Stream King*

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

Comments:
*discontinuous in places (Bed & Bank disrupted).
 Cattle Pasture. - Buffalo grass, green needle grass, Sage, 3-awn.*

Stream Quality: High Moderate Low