

# Aquatic Resources Report

## Susquehanna West Project –

March 2015

**Prepared for:**

Tennessee Gas Pipeline Company, LLC  
1001 Louisiana Street, Suite 1000  
Houston, Texas 77002



**Prepared by:**

Tetra Tech, Inc.  
285 Ellicott Street  
Buffalo, NY 14203



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: SUSQUEHANNA WEST City/County: ASAPH / TIOGA Sampling Date: 10/13/14  
 Applicant/Owner: KINDER MORGAN State: PA Sampling Point: W10-WET1  
 Investigator(s): S. GROVE Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): NONE Slope (%): 0  
 Subregion (LRR or MLRA): LRR R Lat: 41.822541 Long: -77.380649 Datum: WGS84  
 Soil Map Unit Name: MARDIN CHANNERY SILT LOAM 3-8% SLOPES NWI classification: PEMIC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><b>LARGE PEM COMPLEX WITH PFO FRINGE IN TOPOGRAPHIC DEPRESSION,</b></p> <p align="center"><b>PHOTOS 3743 - 3747 N, E, S, W SOIL</b></p>	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks: <p align="center"><b>FORMER STREAM FROM COMPLEX HIGHLY IMPACTED BY ROW, NOW BARELY DISCERNABLE, SHEET FLOW ON ROW</b></p> <p align="center"><b>HIGH WATER TABLE ELSEWHERE IN <math>\downarrow</math> @ 4"</b></p>	