

Pilgrim Pipeline and its Environmental and Regulatory Conflicts

June 14, 2016

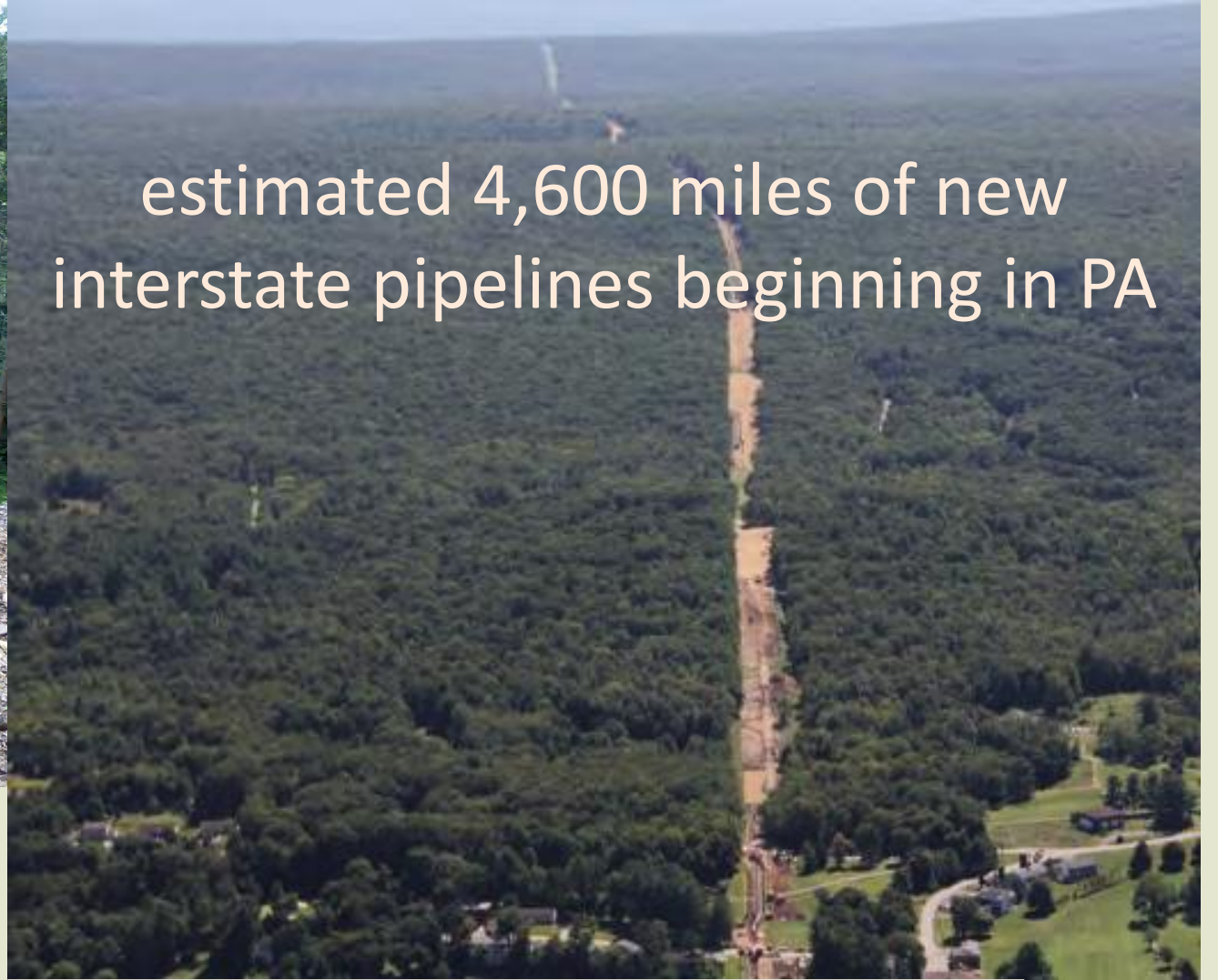


By
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Princeton Hydro LLC.

Pipelines in the Landscape



estimated 4,600 miles of new interstate pipelines beginning in PA



Both photographs attributed to Delaware Riverkeeper Network

My Objectives for this Evening

- Describe typical fallacies associated with the impact analyses related to pipeline projects
- Relate pipeline impacts to NJDEP's regulations and provide examples of impacts and failure to provide regulatory compliance
- Identify those areas that everyone needs to understand as it relates to identifying pipeline impacts and preparing comments related to this project.

Pilgrim Pipeline Project, NY DEIS

Fallacy #1

Pipeline projects never result in significant impacts, and if any impact is identified it will be mitigated

Table ES-2 Summary of Impacts		
Resource	Impacts	
	Construction Impacts	Operation Impacts
Regional Geologic Setting	<i>Bedrock geology: minor</i> <i>Surficial Geology: negligible</i>	<i>Bedrock geology: no impact</i> <i>Surficial geology: no impact</i>
Soils	<i>Contaminated soils: minor</i> <i>Highly erodible soils: negligible</i>	<i>Contaminated soils: no impact</i> <i>Highly erodible soils: no impact</i>
Water Quality - Groundwater	<i>Groundwater quantity and quality: minor</i> <i>Sole source aquifers: no impact</i>	<i>Groundwater quantity and quality: no impact</i> <i>Sole source aquifers: no impact</i>
Water Quality – Surface Water	<i>Surface water quantity and quality: minor to moderate</i> <i>Floodplains and floodways: negligible to minor</i> <i>Sensitive waterbodies: minor</i>	<i>Surface water quantity and quality: no impact</i> <i>Floodplains and floodways: no impact</i> <i>Sensitive waterbodies: no impact</i>
Air Quality	<i>Ambient Air Quality: negligible</i> <i>Greenhouse Gas: negligible</i>	<i>Ambient Air Quality: no impact</i> <i>Greenhouse Gas: potential indirect beneficial impact if pipelines replace some barge traffic</i>
Terrestrial Vegetation	<i>Vegetation: negligible to minor</i> <i>Invasive Plant species: no impact</i>	<i>Vegetation: minor due to permanent ROW maintenance</i> <i>Invasive Plant species: negligible</i>
Terrestrial Wildlife	<i>Wildlife: minor to moderate</i> <i>Sensitive or managed wildlife habitats: no impact</i>	<i>Existing wildlife: negligible</i> <i>Sensitive or managed wildlife habitats: no impact</i>
Aquatic Resources	<i>Aquatic habitats and communities: minor to moderate</i> <i>Fisheries Resources: minor to moderate</i>	<i>Aquatic habitats and communities: no impact</i> <i>Fisheries Resources: no impact</i>
Threatened and Endangered Species	<i>Plants: minor, if habitat is determined to be present</i> <i>Wildlife: minor, if habitat is determined to be present</i>	<i>Plants: no impact</i> <i>Wildlife: no impact</i>
Wetlands	Minor to moderate for all wetland types	<i>PEM and PSS wetlands: No impact</i> <i>Forested wetlands: moderate impact with proposed mitigation</i>

Natural Resource Impacts Associated with Pipelines



DRN, TGP Pike County, PA across the Sawkill Creek. June 2011

- Habitat Fragmentation
 - Fragmentation of core forest and impacts to areas sensitive species
 - Invasive species colonization
 - Loss of unique habitat
- Stream degradation
 - Direct, indirect and cumulative impacts
 - Additional impacts associated with loss of riparian zones, modified hydrology and increased water temperature
 - Impacts to antidegradation streams
- Impacts to soils through excavation and compaction
- Impacts to Human Use - Aesthetics and Wildlife Sanctuaries

Fallacy #2 The information provided is accurate

- Often there is a lot of paper but the detail is typically lacking and the conclusions unsupported by facts
- Wetlands and streams were not identified on the project plans
- Served to underestimate the area of impact to sensitive resources and to identify cumulative and secondary impacts.
- Frequent glossing over of inconvenient regulations





L.L. NO. 1-13
 BLOCK 501, LOT 1
 CONSTRUCTION METHOD:
 N,W,R (SEE NOTE 1 SHEET 2 OF 2)

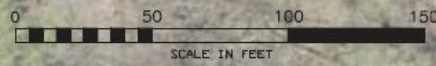
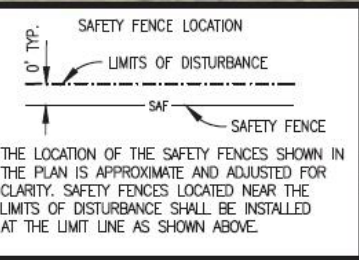


PHOTO AERIAL PROVIDED BY
 TRANSCONTINENTAL GAS PIPE LINE,
 DATED: APRIL, 2012.

LEGEND	
	PROPOSED 42" SKILLMAN LOOP
	EXISTING TGPL 36" CALDWELL "B" LOOP
	EXISTING TGPL R/W
	PROPOSED TGPL R/W
	PROPERTY LINE
	ROAD R/W
	LIMITS OF DISTURBANCE
	WETLAND
	CONSTRUCTION SAFETY FENCE
	RESIDENTIAL STRUCTURE WITHIN 50' OF CONSTRUCTION
	SINGLE TREE
	TREE LINE
	EXISTING FENCE
	SANITARY SEWER
	WATER LINE
	UTILITY POLE



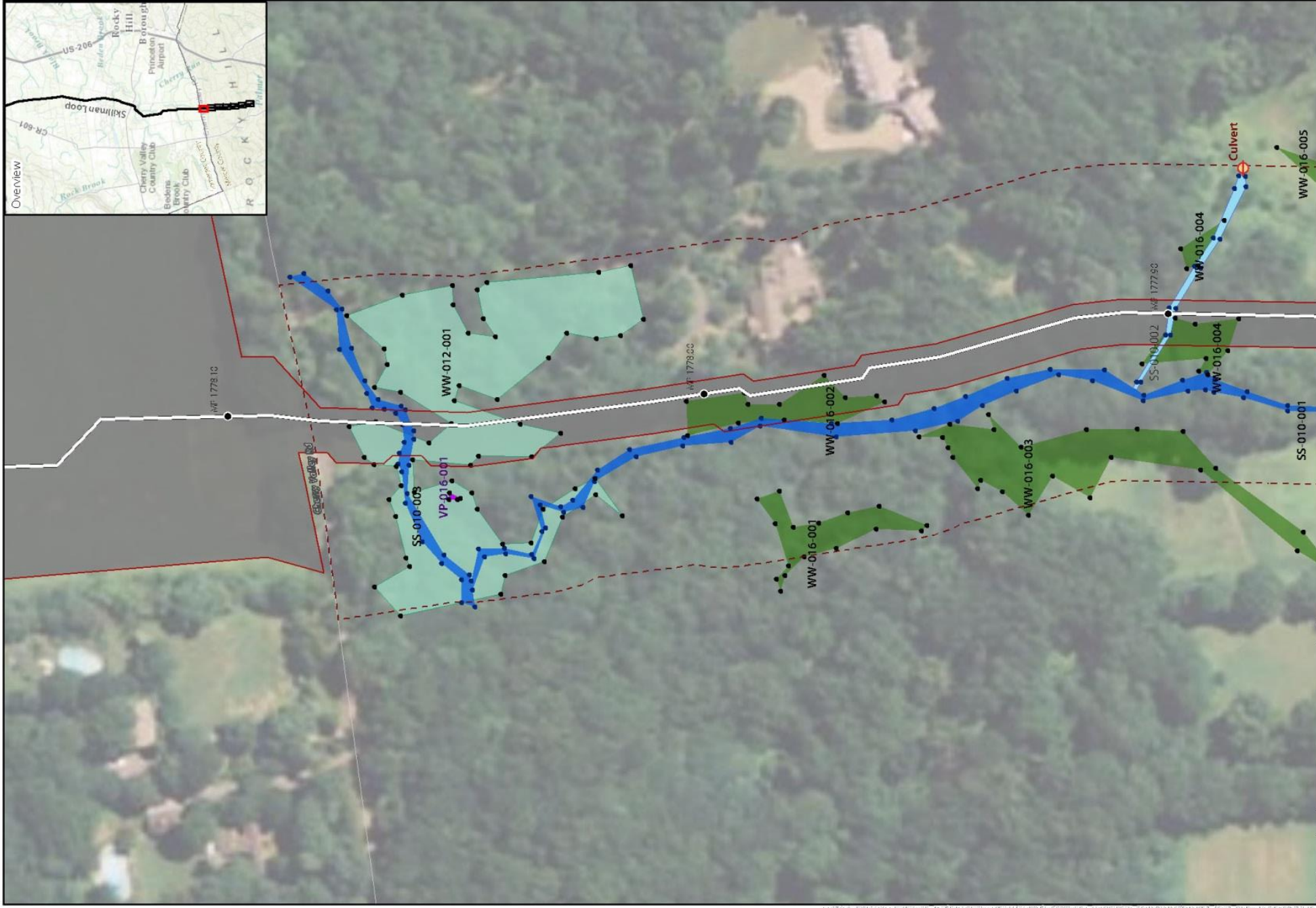
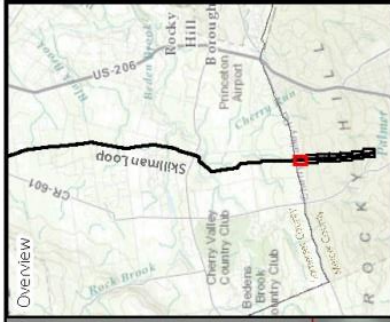
DRAWING NO.	REFERENCE TITLE

NO.	DATE	BY	REVISION DESCRIPTION	W/L NO.	CHK.	APR.	DRAWN BY	WGMI	DATE	ISSUED FOR
0	9/03/13	WGM	ISSUED FOR SUBMITTAL	1129995	BB	MJH	CHECKED BY: JD		8/03/13	ISSUED FOR BID
1	9/10/13	WGM	ISSUED FOR FINAL REVIEW	1129995	BB	MJH			1/17/14	ISSUED FOR CONSTRUCTION
2	9/18/13	WGM	ISSUED FOR FERC FILING	1129995	BB	MJH	APPROVED BY: MJH		1/17/14	
3	1/17/14	WGM	ISSUED FOR SUPPLEMENTAL FILING	1129995	JD	MJH		1129995		

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
 LEIDY SOUTHEAST PROJECT
 RESIDENTIAL CONSTRUCTION PLAN
 PROPOSED 42" SKILLMAN LOOP
 FOR PROPERTY OF L.L. NO. 1-13
 MERCER COUNTY, NEW JERSEY

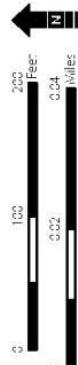
SCALE: 1" = 50'

DRAWING NUMBER: 25-06-80/1777.97-D SHEET 1 OF 2

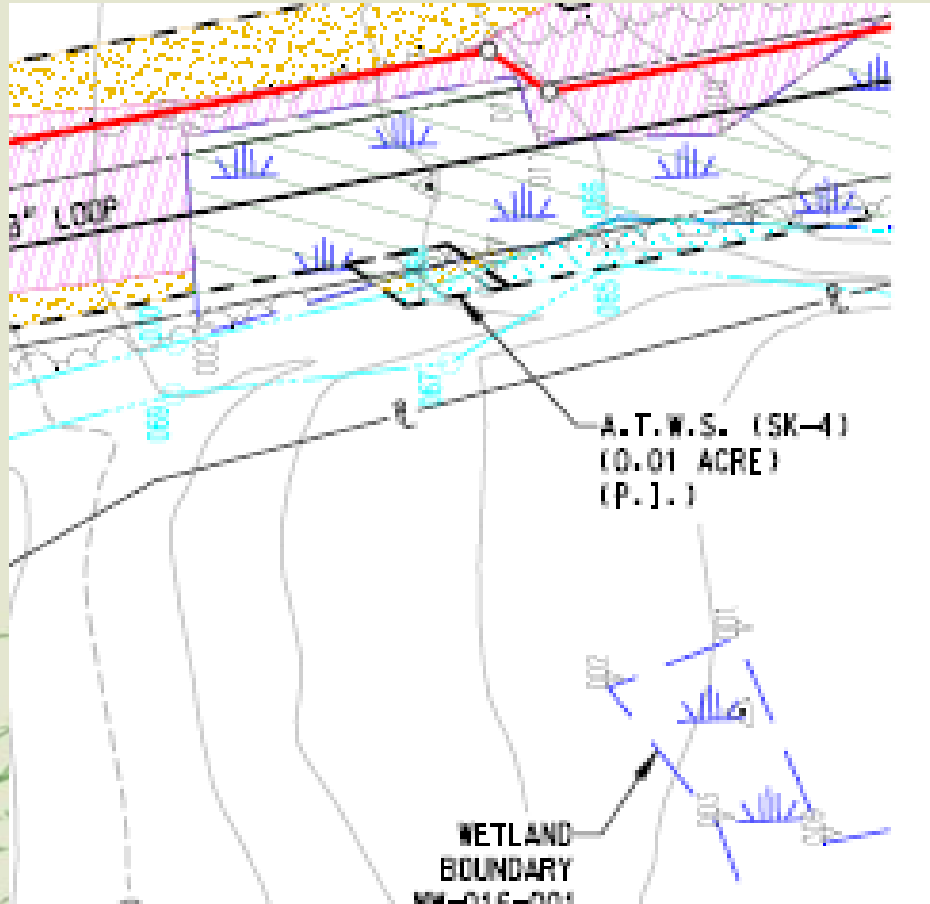


**Survey Area, Skillman Loop, Mileposts 1776.79 - 1778.10
Leidy Southeast
Mercer County, New Jersey**

- Mileposts (Jan 16, 2014)
- Proposed Loop (Jan 16, 2014)
- ▭ Limits of Disturbance
- ▭ Limits of Disturbance 150 F Buffer
- Culvert
- ▭ EASC Delineated
- ▭ Wetland Flag
- ▭ Stream Flag
- ▭ EASC Field Stream
- ▭ EASC Field Wetland
- ▭ EASC Field Stream
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Need to Pay Attention to Detail



Key Regulations Applicable to the Pilgrim Pipeline

- FERC is not involved
- Federal and State Endangered Species Regulations
- National Historic Preservation Act
- NJ Freshwater Wetlands Protection Act Clean Water Act (EPA review over 5 acres of impact)
 - Section 401 Water Quality Certification
 - Compliance with NJ Water Quality Standards
- Flood Hazard Area Control Act
- Federal Executive Orders

Freshwater Wetlands Protection Act

This project will require an Individual Freshwater Wetland Permit

- Has no practicable alternatives which would have less adverse impact on the aquatic environment or would not involve a freshwater wetland or SOW.
- Would not violate an applicable water quality standard
 - At least 13 Category 1 antidegradation streams along route
- Is in the public interest as it relates to the public's interest in natural resource preservation as well as in the interest of the property owner/applicant.
-and other issues including but not limited to conflicts with endangered species and historic and archaeological sites

Alternatives Analysis

Key elements to regulatory review and compliance

- 404B(1) Guidelines – regulatory basis for the preparation of an alternatives analysis. *This is a minimum requirement/standard.*
- Avoid, minimize and as a last resort mitigate impacts
- Also requires an analysis of impacts based on “factual determinations”
- Lets look at a few examples

Pilgrim's NY DEIS Wetland Impact Analysis

- Temporary minor impacts to wetlands and adjacent areas resulting from Project construction could include soil disturbance, temporary alteration of hydrology, and loss of vegetation.
- Although wetlands would be directly affected by trenching and other construction activities, they would be restored in-place upon completion of construction.
- Impact minimization techniques would vary and would be employed based on the methodology used to construct the wetland crossing. No overall loss of wetland resources would occur, since restoration of workspaces following construction would restore soils, hydrology and allow for the re-growth of wetland vegetation.

In reality there are many impacts

- Disturbance associated with the installation of the pipeline. 296 wetland crossings (9.2 linear miles), 29.7 acres forested wetland, 564.7 acres of forest removal
- Habitat conversion, edge impacts including cowbird parasitism and invasive plant species
 - increased light and higher temperature
 - Modified soil structure as a result of compaction. Olson and Doherty (University of Wisconsin, 2011) found that soils within pipeline corridors had higher bulk density, lower depth to refusal and lower soil moisture.
 - Increased stormwater runoff
 - Loss of carbon sequestration services of forest/trees

Increased runoff from forest loss

BASE COMPARISON

DESCRIPTION	HSG	CN	AREA (AC)
FOREST (EXISTING)	B	55	1.000
MEADOW (PROPOSED)	B	58	1.000

RUNOFF GENERATED

	VOLUME (GAL)
FOREST (EXISTING)	3,584
MEADOW (PROPOSED)	20,203

IMPACT

RUNOFF VOLUME INCREASE PER STORM (GALLONS)	16,618
RUNOFF VOLUME INCREASE PER STORM (%)	464%

Runoff volume calculated using HydroCAD 10.00 for a typical 1-year storm event with 2.73 inches of rainfall over a 24 hour period.

Minimal to no
impacts?



DRN, TGP Pike County, PA across the Sawkill Creek. June 2011

Highlands Council has new requirements regarding stream corridors

Stream Corridor Guidance, January 2014

- Part 1: Functional Value Assessment Methodology
- Part 2: Protection and Restoration Planning

This guidance addresses both stream and riparian zone quality.

404(b)1 Guidelines require a factual based assessment of impacts

- *Cumulative impact* is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Fallacy #3 All impacts can be mitigated



Transco Mitigation Planting near Clinton, NJ



**Dead, as were
most of the
plantings**

TGP's Northeast Upgrade Pipeline Project

Boilerplate approach to analysis

“Because the waterbody crossings would be completed in accordance with the construction and restoration methods described above and detailed in TGP's ECPs and any site-specific measures that may be required by state permitting agencies or the COE, we conclude that impacts on waterbodies would be minor and temporary”.

This exact wording was used in the EA for Transco's Leidy Southeast Upgrade Pipeline



Delaware Riverkeeper Photograph

Antidegradation Streams in NJ

NJAC 7:9B Surface Water Quality Standards

- Category One (C1). C1 waters are designated through rulemaking for protection **from measurable changes in water quality** because of their Exceptional Ecological Significance, Exceptional Water Supply, Exceptional Recreation, and Exceptional Fisheries to protect and maintain their water quality, aesthetic value, and ecological integrity.

Antidegradation Streams

7:9B Surface Water Quality Standards

- *“During construction, clearing and grading of vegetative cover could increase erosion along stream banks. Alteration of the natural drainage or compaction of soils by heavy equipment near stream banks during construction may accelerate erosion of the banks and the transportation of sediment carried by overland flow into the waterbodies.”* Transco NJDEP Application
- FHA section 11.9 states that the applicant in order to trench through a regulated water (default approach) the applicant “must demonstrate that it is not feasible to directionally drill or jack the proposed utility under the channel or water.” Eventually they were strong-armed by NJDEP into doing HDD.....which failed

Special Aquatic Sites

- **Sec. 230.40 Sanctuaries and refuges.**
- (a) Sanctuaries and refuges consist of areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources.
Such as the Great Swamp NWR
- practicable alternatives that do not involve special aquatic sites are presumed to be available

High Quality Sites

- Plant communities with a high floristic quality index (FQI) tend to possess relatively specialized plant species that have narrow habitat requirements, and thus are found in places of high habitat quality and ecosystem health. Remnant natural communities in New Jersey typically result in high FQI scores. It is these communities with high FQI scores that are not possible to replicate. It is due to their very narrow habitat requirements cannot be replaced. It is these rare communities that the pipeline companies do not adequately characterize and simply indicate can be replaced by mitigation.

404(b)1 Subpart H

Actions to minimize adverse impacts

§ 230.75 Actions affecting plant and animal populations.

Minimization of adverse effects on populations of plants and animals can be achieved by:

- (a) Avoiding changes in water current and circulation patterns which would interfere with the movement of animals;
- (b) Selecting sites or managing discharges to prevent or avoid creating habitat conducive to the development of undesirable predators or species which have a competitive edge ecologically over indigenous plants or animals;
- (c) Avoiding sites having unique habitat or other value, including habitat of threatened or endangered species;

Why are These Details Important?

- Ultimately all projects reviewed under section 404 of the CWA will need a 401 water quality certificate
- Can be the basis for a denial. **Connecticut denied a major pipeline, Islander East Pipeline, as a result conflicts with the state's water quality standards, which are federally required by the Clean Water Act.**
 - The pipeline co. twice applied for – and twice was denied – a water quality certification from Connecticut.
 - The Second Circuit held supported Connecticut's finding that the techniques proposed for installation of the pipeline violated state water quality standards by eliminating a significant area of nearshore waters from their existing and designated use.

NYDEC and the Constitution Pipeline

- “For the reasons articulated above, the Department hereby denies Constitution's WQC Application because it does not supply adequate information to determine whether the Application demonstrates compliance with the above stated State water quality standards and other applicable State statutes and regulations.” April 22, 2016
- http://www.dec.ny.gov/docs/administration_pdf/constitutionwc42016.pdf

A few quotes from NYDEC's 401 denial

- Cumulatively, within such areas, as well as the ROW generally, impacts to both small and large streams from the construction and operation of the Project can be profound and could include loss of available water body habitat, changes in thermal conditions, increased erosion, and creation of stream instability and turbidity.
- As a result of chronic erosion from disturbed stream banks and hill slopes, consistent degradation of water quality may occur. Changes in rain runoff along ROW may change flooding intensity and alter stream channel morphology.
- The tree felling was conducted near streams and directly on the banks of some streams, and in one instance has resulted in trees and brush being deposited directly in a stream, partially damming it.

Wetlands and Surface Water Impacts

Sadly, these impacts are not uncommon

- Pennsylvania - Tennessee Gas Pipeline Company, a subsidiary of Kinder Morgan, was fined \$800,000 by the PA DEP for multiple violations of Pennsylvania's Clean Streams Law.
- Wisconsin - Enbridge Energy Partners (an oil pipeline) with a Notice of Violation for repeated failure to comply with the wetland and waterway permit, the Wisconsin Department of Natural Resources (WDNR). Fined over 1 million dollars <http://www.wisconsinwetlands.org/enbridge.htm> #201405Department of Justice (DOJ). 1.1 million dollar penalty



.....and more

- The state of New Jersey has fined the Tennessee Gas Pipeline Company (TGP) \$175,000 for failure to replant vegetation in areas impacted by the company's pipeline expansion project.
- Problems associated with trench dewatering activities being conducted by Tennessee Gas Pipeline Company, Highland Lake in Sussex County experienced a significant influx of sediment.
- Pike County, numerous Erosion and sediment control violations.
- Transco Leidy Line in for Permit mod because of HDD failure

Temporary Work Spaces and New Jersey's stormwater rules



Review of Recent Pipeline Project's

- It is apparent that the submissions are typically designed to be apologies for projects that are assumed to receive a finding of no significant impact or an approval.
- The position that mitigation will solve all of the pipelines impacts is not only unrealistic it is highly inaccurate and serves to mislead the general public.
- Numerous regulatory compliance errors. Just words on paper. All of us need to make sure that the regulatory process works as envisioned.

THANK YOU



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