Pilgrim Pipeline Construction in the Highlands Region of New Jersey and New York

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PILGRIM PIPELINE Holdings, LLC

The Pilgrim Pipeline project is a proposed 178-mile dual pipeline that will run from Albany, NY to Linden, NJ. The pipelines will primarily be carrying Bakken Crude Oil products. The oil will be sent down to a refinery in one pipeline and the refined product will be sent back through the partner pipeline for distribution. The pipelines are proposed as an alternative to barge and rail methods of oil transportation. Pilgrim Pipeline Holdings, LLC positions the pipeline project as providing a more stable supply of oil products, as a way to relieve current barge traffic congestion, and as a safer and more environmentally sound way to deliver energy resources.

Request for Proposal:

The clients of this project seek a report that assess a wide range of potential consequences of the Pilgrim pipeline route, construction, operation, and the overall short-term and long-term potential impacts of this pipeline project. As outlined by the NEPA mandates, the study will include an analysis of the cumulative impacts of all existing and proposed pipelines on the socio-cultural, ecological and physical resources in the affected areas. The report will cover critical topic areas such as the region of water, including groundwater and surface water, cultural resources, loss of habitat and scenic value, affected threatened and endangered species, impacts of construction on areas including soil, geology, air and odor, noise and light, and will discuss the overall political aspects of this project.

Clients:

- The Ramapough Conservancy
- The New Jersey Highlands Coalition
- Orange Environment, Inc.

Proposed Route of the Pilgrim Pipeline

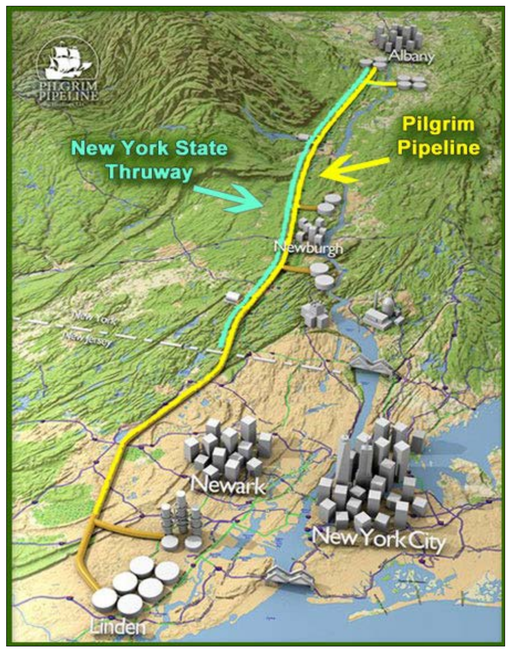


Figure 1: Proposed pipeline map provided by Pilgrim Pipeline Holdings, LLC.

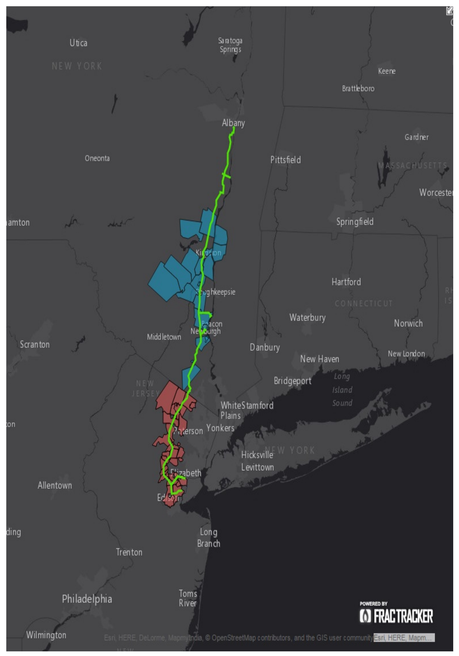


Figure 2: Map highlighting the towns with resolutions and/or ordinances against the Pilgrim Pipelines. New York in blue, New Jersey in Red. Map provided by Fractracker.org.

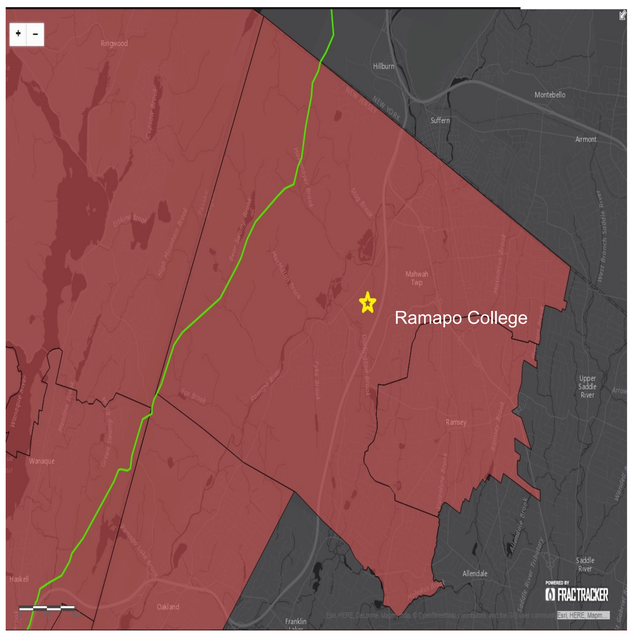
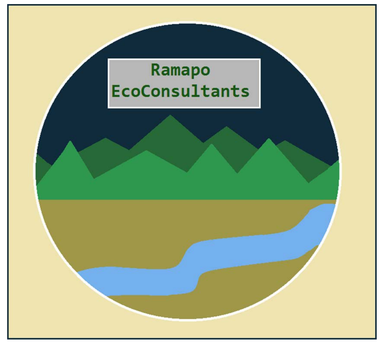
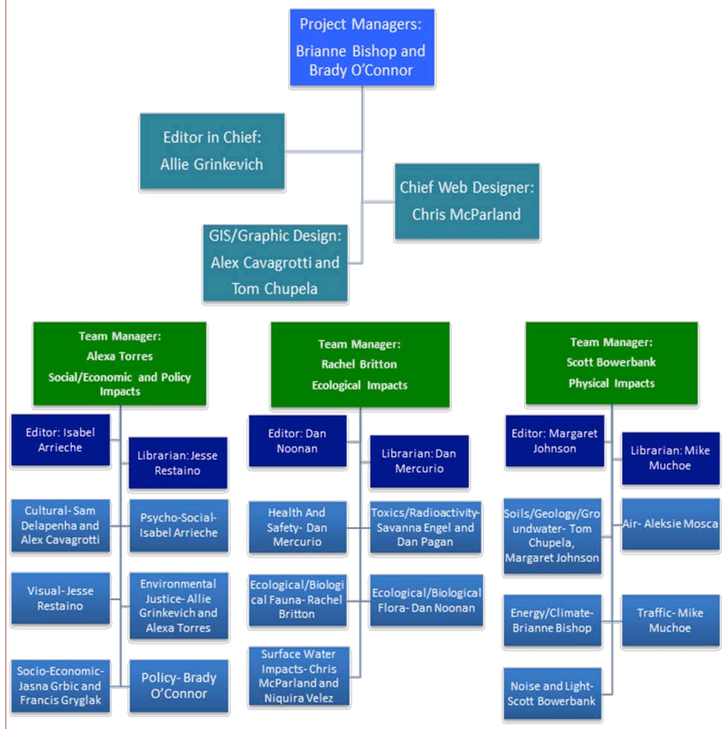


Figure 3: Map highlights the proposed path through Mahwah and its close proximity to Ramapo College and the Ramapo Reservation. Map provided by Fractracker.org



REC will provide a complete analysis of potential significant impacts of the study area. The analysis will cover three broad areas of assessment: ecological, physical and social. Each of these areas of assessment is broken down into impact indicators intended to cover issues raised in the scoping process. Indicators under ecological are health and safety, ecological/biological fauna, surface water, ecological/ biological flora and environmental hazards. Indicators under physical include air and odors, noise and light, traffic, energy and climate, geology, soils, and groundwater. Finally, social indicators are cultural, environmental justice, psychosocial, socioeconomic, visual, and policy.



Ramapo Ecoconsultants-*Social, Economic, and Policy Impacts Team*

Isabel Arrieche, Alex Cavagrotti, Sam Delapenha, Jasna Grbic, Allie Grinkevich, Francis Gryglak,
Brady O'Connor, Jesse Restaino, Alexa Torres
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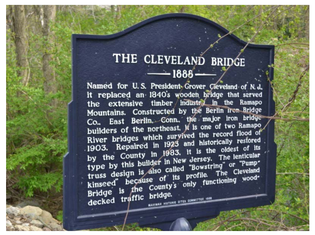
The Social, Economic, and Policy impacts team consists of the Cultural Resources, Environmental Justice, Psychosocial, Socioeconomic, Visual, and Policy indicators.

- The cultural indicator will focus on the positive, negative, direct, indirect, cumulative, and irreversible impacts the construction and use of Pilgrim Pipeline could have on prehistoric and historic monuments and artifacts both designated in the national historic record according to the National Park Service and those not designated throughout the Highlands Region.
- The distribution of potential negative effects will be evaluated by the environmental justice indicator to ensure that vulnerable populations are not subject to any disproportionate environmental and health and other impacts. Vulnerable populations such as minorities, those living in low-income areas, elderly persons, children, and indigenous peoples will be identified through the use census and other demographic data.
- Taking a hard look at psychosocial effects of the project will necessitate an assessment of health and well-being, quality of life, social interaction, stress levels, and enjoyment of home of individuals and communities before and during construction, during operation and in the event of a worst-case scenario.
- Pilgrim Pipeline Project as any other development project can differentially impact the local, county, and state economy in terms of employment, income, taxes, revenues, land and property values, existing businesses, and possible clean ups in case of the spill.
- The Visual indicator will evaluate the potential visual impacts of the Pilgrim Pipeline of the New Jersey and New York Highlands, and propose mitigation techniques to reduce adverse visual impacts.
- The policy consultant will investigate potential land use conflicts, Rights-of-Way requests, regulatory oversight issues (both environmental permit compliance regimes) and the need for inspections of unregulated performance issues, mitigation monitoring, as well as construction, operation and maintenance policies that occur during the development of the Pilgrim Pipeline project in the New Jersey and New York Highlands. The policy consultant will consider all the current standing laws and agreements pertinent to the pipeline project with a focus on environmental laws, policies, and regulations.

Cultural Resources



Baseline

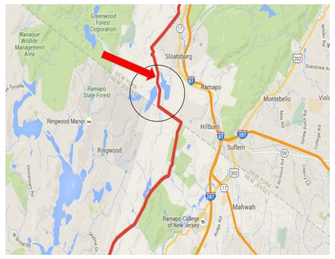
•New York and New Jersey hold great (pre)historic value. Cultural and historical sites within these states have provided the nation with a lot of what is known about the history of our country and beyond. Preserving the integrity and authenticity of such sites and monuments is crucial to historical understanding as well as cultural knowledge. State and federally recognized sites listed in the DEIS are those either directly or indirectly impacted by proposed Pilgrim Pipeline.

Impacts

•Under the Section 106 review process the ROI in New York State contains
- 0 Prehistoric
- 1 historic monuments
- 2 historic sites

•Under the Section 106 review process in the ROI in New Jersey contains
- 0 Prehistoric
- 1 Historic monuments
- 3 Historic sites

Numbers above for NY/NJ do not reflect sites that are not federally or state designated sites. Other sites are under review of designation or ineligible and can be found in the DEIS.



- The alternative route differs from the preferred route in the circled region.
- Sites impacted in preferred route that would not be impacted by the alternative route are Potake Lake and Cranberry Lake
- These lakes are culturally and historically significant to the Ramapough Lunaape Nation.
- Sites that would be impacted if alternative route is used:
  1. Wrightmans Field
  2. Dancing Rock
  3. Davidson Farmstead

Visual

Baseline
•273,457 acres of New Jersey land preserved as either open space or farmland in the Highlands Region
•In New York, Palisades Park System including Sterling Forest and Stewart State Forest are composed of 21,935 acres and 6,700 acres, respectively.
•Tourism second largest industry in New Jersey accounting for $36.3 billion and 472,326 jobs in 2005; in New York, tourism is at an alltime high of $100 billion as of 2015, and it is a steady part of New York economics.
•Highlands region within a day's drive for over 20 million people; home to 10 NJ and 8 NY State Parks, 4 NJ and 3 NY state forests, as well as historical sites and >620 miles of hiking trails, including Appalachian Trail
•Scenic sites are distinctive for geology and topography, including prominent ridgelines, mountainsides, panoramic vistas, community gateways and landmarks, river valleys, and farmscapes, also history, culture and aesthetics
Impacts
•Pilgrim Pipeline has potential for significant adverse visual impact to public parks, wildlife management areas, reservoir watershed lands, hiking and walking trails, Native American cultural sites, conservation areas, and agricultural lands
•Long term potential visual impact also for people in transit and for people at home and work
•"Nature of the Viewer"
•Who will be most significantly impacted? Where will the pipeline, during and post-construction, be visible and by whom?
•Pipeline Intersects Following Public Parks:
1. Schunemunk Park
2. Harriman Park
3. Tuxedo Park
4. Sterling Forest
5. Ramapo Valley County Conservation
1. Ringwood State Park
2. Mountainside Park

Psychosocial

Baseline
•Highest Concern: WATER
1.Highlands region supplies water for 5 million people in NJ, more than half of the state's population
2.Ramapo River Basin Aquifer System is the sole source of water for Mahwah, Ramsey, Oakland, Franklin Lakes, Allendale, Pompton Lakes and Wayne and supplies either all or part of the water for 8 communities in NY
•If this water system is polluted, these towns will have little to no access to clean drinking water!
•Impacts evident from Past Pipeline projects (e.g., TGPL)
1.Grassroots mobilization
2.Stop the Tennessee Gas Pipeline Facebook group (1,414 likes)
3.Documented psychological effects of proposed construction (evidenced on facebook)
Direct Impacts
•Emotions: Fear/Anger/Sadness
•Disruption of daily life- may lead to physical and mental health issues
•Noise and Visual impact
•Loss of recreational space and space to de-stress
•Traffic- longer commute times
•Concern for property
•Financial worry, decrease in property value
•Potential property loss and need for relocation

Cumulative Impacts
- Stress
- Worry over consequences of spill or accident (loss of water supply, contamination of soils, relocation, illness death or serious injury of self, family and community)
- Resulting in decreased enjoyment of home, life
- Distrust of/lack of faith in:

1. Local and state officials/government
2. Emergency services (not trained in petroleum related accidents)
3. Pilgrim Pipeline company, workers to respond to accidents/monitor
4. Possibly leading to feelings of hopelessness and powerlessness. These feelings may cause people to become passive and decrease the likelihood of civic involvement. On the contrary, few people may become more civically involved.

Socio-Economic

Baseline:
•Jobs created by the project will not have significant effect since there are many other projects under construction in the area, and the economy is recovering slowly
•Socio-economic status of NJ and NY proposed area show that pipeline is a long term investment in the fossil fuel economy.
•Pilgrim proposed that pipeline is more attractive alternative to other ways of oil transportation, however barge transportation is more competitive with fluctuating oil prices and rail transportation is still cost effective and more geographically extensive
• The studies show that there is no need for more oil transportation

Impacts:
- Negatively impacts the value of public and/or private properties (8%-40%)
- it is expected that any new tax dollars paid by Pilgrim may be partially or completely offset by offsetting reductions in tax payment by the current property owners upon whose property Pilgrim will seek easements.
- Places a financial burden of equipment on local emergency response units
- Property, public safety and security expenses may increase
- The high financial risk of oil spills is placed on local communities.
- Increased costs of invasive species removal carried by others

Environmental Justice

Baseline

•Analysis of 1-mile area surrounding the Newburgh Lateral
1. Block Groups up to 98% minority, 97% low income, 34% linguistically isolated
2. Prior contamination

•Superfund sites: Consolidated Iron and Metal (NPL) (heavy metals, lead contamination, PAHs, pesticides, PCBs), Dupont Stauffer Duramate (nitrocellulose, metals, PVC sheeting) Newburgh Landfill (pharmaceutical and industrial chemicals)
•Ramapough Lunaape
1. Ford Toxic Paint Sludge, SPECTRA Pipeline

Impacts
•Children
- 10 known preschools along the Newburgh Lateral
- More vulnerable to air pollution due to developing lungs and increased exposure to environmental pollutants due to outdoors play, as pollutants tend to concentrate at ground level.
- Continuous noise caused by construction can manifest itself into emotional responses and behaviors and impact attention spans in school

•Homeless
1. We have isolated 6 homeless shelters, transitional housing units, and violence centers in the Newburgh area.
2. Disproportionately impacted due to their reliance upon assistance/shelters, little to no money, lack of social network, and lack of access to transportation in emergency situations.

•Elderly
1. Pre-existing health conditions and limited social contacts, isolated with limited mobility, property loss can be a life concern

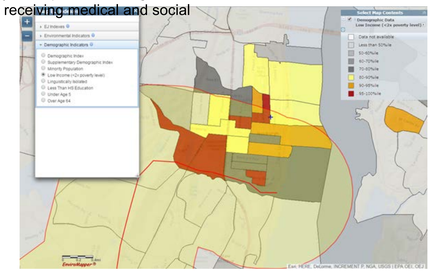
•Linguistically Isolated populations
1. limits understanding of project and lack of proper representation
2. Linguistically isolated populations may not receive emergency communication or assistance, this may impact the entire household's ability to respond to emergencies and is a barrier to receiving medical and social services

Impacts
•Housing
1. lack of disposable income
   Evacuation - evacuation plans rely upon residents having private automobiles

•Health Impact
1. less likely to be able to afford treatment, paying out of pocket can result in increased debt
2. Ramapough Lunaape Tribe has experienced high rates of cancer, skin disease, low birth weight, premature birth, and cervical cancer in part due to continued exposure to toxins.

•Mobility
1. lower-income families cannot afford to relocate
2. Ramapough Lunaape:
   directly exposed, traditional hunting/ gathering, noise/vibrations, traffic, culturally and spiritually tied to sacred lands
3. Subsistence Resources - access to water and fishing, tribal collection of cedar pine needles

Cumulative Impacts
•Newburgh:
1. Intersection of pipeline, rail and barge- triple threat to Newburgh
   Barge spills to date have just 5% oil recovery rate
2. Train derailment can cause massive fireballs that have possibility of burning for days
3. Pipelines release a higher quantity of oil in a spill
- Both Newburgh and Ramapo's have prior contamination that could worsen due to pipeline
  Existing elevated illness related to environmental exposures



Policy

Baseline
•Current movement of crude oil and finished oil products in New York and New Jersey is by rail, barge and truck
•Truck transportation is regulated by NJ DOT/NY DOT/Rail transportation is regulated by NJ Transit/NY DOT/Barge transportation is regulated by the Port Authority of New York and New Jersey
•None of this transportation involves fixed infrastructure and, therefore, it does not require permits
Impacts
•Confused regulatory framework raises potential for litigation over permits required, utility status, eminent domain and local jurisdiction
•Issue of takings of public lands raises 4F questions. (Section 4(f) of the Department of Transportation Act of 1966 prohibits FHWA and other USDOT agencies from approving the use of land from a publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site.)
•39 New Jersey and 23 New York communities within the ROI have passed local resolutions and 11 Municipal ordinances have passed to block or regulate oil pipelines since the first proposal by Pilgrim.
•NY state Transportation Corporations Law requires 2/3 local municipal approval for pipeline corporations

Ecological Impacts

Rachel Britton, Dan Mercurio, Dan Noonan, Chris McParland, Niquira Velez, Savanna Engel & Dan Pagan
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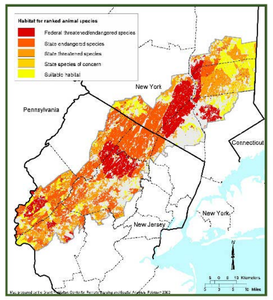
Direct Faunal Impacts

- Habitat loss
- Alteration of habitat
- Habitat fragmentation
- Disturbance due to noise and/or vibrations
- Interference in migration patterns
- Disturbance of breeding
- Human disturbances
- Risk of leak or spills
- Increase of edge species



Cumulative Faunal Impacts

- Reduced habitat variety likely to cause loss of biodiversity
- Alteration of habitat favors increase in invasive species
- Pipeline construction may result in loss of endangered, threatened, or species of concern
- Leak or spill may result in biomagnification of contaminants up food chain
- Increase in grasslands and edge environments favors increase in population of some species and population loss of other species

Mitigation of Faunal Impact

- Create "feathered edges" to minimize the loss of core forest
- Reduce width of ROW to reduce forest impact to minimum practical size
- Prevent construction trenches from being left open overnight
- Avoid clearing activities or noise generation within peak breeding season
- Restrict vehicular access to ROW
- Require replacement of cleared ROW with successful replacement interior habitat before construction commences
- Require performance bonding, independent monitoring and evaluation to assure successful habitat restoration

Fragmentation of Algonquin/Tennessee Gas Pipeline

Direct Floral Impacts

- Clearing ROW will cause fragmentation
- Fragmentation will increase wind and sun exposure, degrade animal habitat, and promote invasive species
- Introduction of heavy equipment will compact, erode, and degrade soil quality, impeding regrowth of flora
- Cleared areas will be subject to rainwater runoff and thus soil erosion
- Changes in the ROW will alter microclimate, altering forest conditions and natural forest succession

Cumulative Floral Impacts

- Fragmentation will increase forest edge habitat
- Populations of edge species such as deer will increase to unsafe numbers due to a greater amount of low-lying woody plants
- Impact positive feedback loop will develop whereby invasive species will quickly spread beyond ROW aided by changes in edge microclimate
- ROW maintenance will introduce pesticides which will be washed into wider areas and affect water sources

Low-lying plants along a forest edge.

Floral Mitigation

- Native groundcover seeded immediately after ROW cleared to maintain soil integrity and prevent the establishment of invasive plants
- Manual vegetation removal employed and use of pesticides not permitted
- Trees felled inwards towards the center of the ROW to minimize damage to remaining flora
- Vehicles, machinery, and equipment shall be cleaned thoroughly before being brought into the ROI to minimize transport of invasive seeds
- Monitoring for invasives shall commence immediately after site clearance both in the ROW and the adjacent forest borders

Example of poor mitigation methods used by Tennessee Gas Pipeline in West Milford.

Direct Surface Water Impacts

- Loose sediment from road construction will create sedimentation in nearby water bodies
- Runoff from construction may carry surface contaminants into surface waters.
- Potential for major or minor oil spill from a burst pipeline or from construction equipment
- Releases of polluted test water into the Ramapo River will increase turbidity and stream channelization
- Extreme sensitivity of feeder streams and reservoirs along the two Newburgh laterals makes vulnerable the direct water source for 30,000 people

Ecological Impacts Baseline

- 62% (874,000 acres) "important wildlife habitat"
- About 75 animal species and six plant species listed as federal or state endangered, threatened, or species of concern
- Primarily upland deciduous hardwood forest
- An important component of upland hardwood forest ecosystems is the amount of unfragmented forest cover
- Explosion/fire and oil spill/leak are two of the major types of release that may occur from pipelines
- In the ROI, the pipeline will pass through an area that already has experienced various types of contamination

Fauna - Rachel Britton

- 62% (874,000 acres) "important wildlife habitat"
- About 75 animal species listed as federal or state endangered, threatened, or species of concern
- 50% land is crucial habitat for species with special federal status
- State listed endangered and threatened species include timber rattlesnake, wood turtle, red-shouldered hawk, barred owl, great blue heron (breeding), and eastern wood rat

Flora - Daniel Noonan

- Primarily upland deciduous hardwood forest
- Dense canopy crucial for controlling light intensity
- Multiple endangered plants present in the ROI

(*Sphagnum contorum, Sphagnum majus ssp. nonvegicum, Hemicarpha micrantha, Pycnanthemum clinoponoides, Pycnanthemum torrei, Schoenoplectus torreyi*).

- Invasive plants pervasive due to ornamental plantings, imported products, animal dispersal, wind dispersal and use of unclean equipment

Surface Water - Chris McParland and Niquira Velez

- Pilgrim pipeline will intersect at least eight segments of the Ramapo River classified as highly sensitive and/or trout habitat
- Contains at least 27 category 1 and 2 waters, 12 that directly intersect the ROW and at least 15 that are within a half mile
- Includes at least 4 lakes, 2 impoundments/reservoirs, 2 of which directly intersect the ROW and 4 that are within a half mile
- Contains at least twelve 100 year old floodplains and hundreds of acres of wetlands
- Mainlines, laterals, and pump stations are near the Ramapo River Basin Aquifer System

Health and Safety - Daniel Mercurio

According to EPA, Scorecard, American Lung Association and other sources, there are several baseline health issues of note in ROI. These include:

- Lung Cancer, Aggravated Asthma, COPD (Chronic Obstructive Pulmonary Disease)

Explosion/fire and oil spill/leak are two of the major types of release that may occur from pipelines. Figure 1 reveals the number of these incidents in the ROI during the past 35 years. Concerns have been fueled by rail incidents involving Bakken Crude.

	Bergen	Passaic	Morris	Orange	Rockland
Explosion/fire in fuel source	1	1	0	0	1
Oil or fuel leak or spill	16	9	14	6	15

Point: These were the reported incidents over the last 35 years pertaining to pipeline spills, leaks, and explosions. Even though spills don't occur everyday, there were still a fair number over the course of this 35 year period. Most of these were caused by corrosion and equipment failure of the aging pipeline. Moreover, there were not many explosions in the region of interest.

Environmental Hazards - Savanna Engel and Daniel Pagan

- NJ had over 10 million lbs of toxic releases and NY had over 16 million lbs of toxic releases in 2014
- In 2013, 815 individual sites in NJ generated, managed, shipped and/or received hazardous waste. In NY, there are 3,097 sites and over 230,000 tons of waste were produced.
- In ROI, the pipeline will be going through 120 Superfund sites and 15 Brownfields

Cumulative Surface Water Impacts

- Loss and fragmentation of wetlands in New York and New Jersey
- If post-construction maintenance procedures are insufficient, invasive species may colonize disturbed areas
- Erosion of stream banks may lead to siltation further downstream (in slope areas)
- Decline in stream quality due to typical pollutants associated with run-off (oil, grease, herbicides and pesticides)

Surface Water Mitigation

Pamona, NY Pipeline Procedures in an upslope wetland area

- Implementation of erosion and sedimentation control plans, which will encompass clearing vegetation and maintaining erosion and sedimentation systems as well as replanting during the post construction period.
- The first arrow points to wooden planks that are laid for vehicular travel and prevents soil compaction
- In this picture the siltation fence is steaked in backward so water is running off from the ridge into the water supply (second arrow)

Direct Health and Safety Impacts

- Pipeline ruptures may result in serious injuries to workers
- Pipeline spills and leaks may impact the quality of human drinking water
- Oil products released to the environment may cause adverse health effects in humans when exposure occurs
- Ineffective emergency response plans can fail to assure protective response to hazardous release

Lac-Mégantic rail disaster

Cumulative Health and Safety Impacts

- People with asthma ages (0-4) had a 33.6% hospitalization rate for every 10,000 people in the population for Orange County, New York. For the ages of (5-14), there was a 13.7% hospitalization rate per every 10,000 people in Orange County, New York. Newburgh had 40,115 episodes of respiratory related cases. The presence of the Newburgh/New Windsor lateral along the southern border, another lateral to the north, the Thruway main corridor to the west and rail and barge movement of oil products to the east offers a potential for exacerbating the existing problem.
- Exit 16 on the New York State Thruway leads onto Rt 17/6 and is subject to high levels of peak traffic with resulting periodic traffic jams. The Woodbury Common Premium Outlets is located at this exit and attracts 11 million visitors per year, contributing to the congestion issue. The construction of the Pilgrim Pipeline along the NYS Thruway with a pumping station in Harriman just south of the I-287 intersection with Rt. 17/6 creates the potential for traffic to snarl emergency response.

Health and Safety Mitigation

- Potential for explosion/fire or spill/leak pathways to health and safety impacts will be mitigated according to an Emergency Response Plan filed by Pilgrim in compliance with 49 CFR 195 and regulations set by the National and Area Contingency Plans and reviewed by the USDOT OPS; approval will grant Pilgrim permission to handle, store, and transport oil
- In order to address the concerns of local fire companies and emergency responders, as well as government officials and the public, it is recommended that the ERP and health and safety filings will additionally be subject to public hearing in each community impacted by the pipeline with a side agreement reached by Pilgrim with the Town Board of each community in order to address issues raised

Direct Environmental Hazard Impacts

- Oil pipelines, oil storage, oil transport and oil product distribution and use are known to have resulted in environmental releases with adverse results
- Pipeline construction is an additional source of hazardous materials release
- Interruption of pipeline flow can result in an explosion hazard
- Bakken crude and other oil products represent hazards with known toxicity along multiple exposure pathways; a danger to humans and the environment
- Due to existing contamination in the ROI, the pipeline will be adding a risk of further contamination

Cumulative Environmental Hazard Impacts

- Risk of more accumulation of contamination in environment (i.e soils, groundwater, surface water, air, flora, fauna)
- Potential for fires/explosions when pipeline is not running
- Properties can be destroyed by an oil spill which will reduce their values

Environmental Hazard Mitigation

- Pilgrim should train, equip and finance response by local first responders
- Pilgrim should require an emergency responder to be onside with in 12 hours instead of 24
- Proper signage along the ROW
- Education/training of all pipeline construction employees
- Routine inspections of the pipeline during construction to reduce human error

Physical Impacts

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Physical impacts include Traffic, Noise and light, Air, Geology and groundwater, and Climate and Energy.

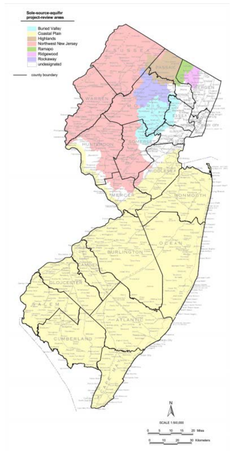
1. The Traffic indicator will focus on traffic caused by both the construction and operation of Pilgrim Pipeline. Since the pipeline is proposed to travel alongside the New York State Thruway, which is already a heavily traveled road, traffic conditions will increase due to the increase of workers and vehicles.

2. The Noise and Light indicator focuses on the noise aspect of the construction and operation of the pipeline. Construction vehicles can be very noisy and cause a disturbance to the surrounding areas. On top of the vehicles, the pumping stations used to keep the product flowing through the pipeline, generate a constant noise due to the fact that they need to be running nonstop

3. With a strong emphasis on pollution, the air indicator will focus on air pollutants caused by pipeline construction and operation. Air pollutants such as carbon dioxide, methane, VOC's and other greenhouse gases will be emitted into the atmosphere.

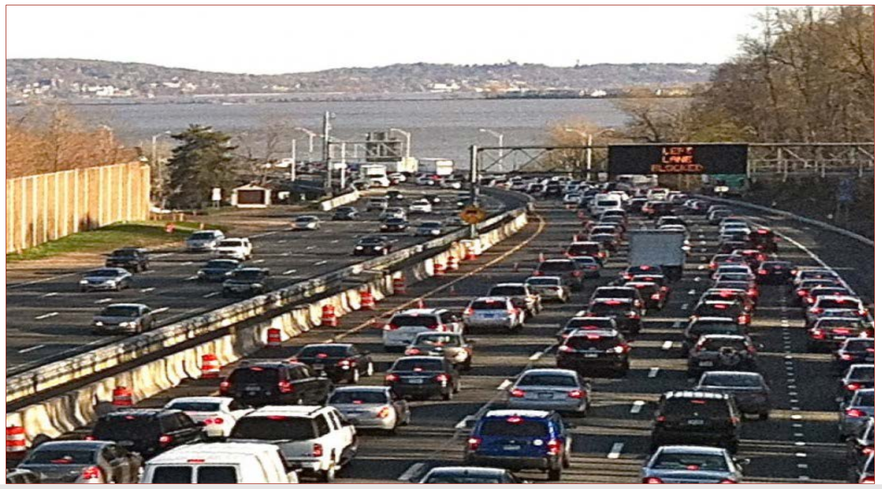
4. Groundwater and Geology will focus on the effects if there were to be a spill or a leak along the pipeline. If there were to be a spill, millions of people will be impacted because the contaminants will seep into people's drinking water, creating a much bigger problem.

5. Climate and Energy will focus on the effects that the pipeline construction and operation has on the climate. A focus will also be placed on how much energy is required in order to successfully complete this project. Short and long term impacts on the climate will be assessed.



Proposed Pump Stations, and Estimated Ambient Noise Levels (dBA)

Milepost (MP)	Thruway Mile Marker (TMM)	Pump Station	Distance to Nearest NSA (Feet)	Corresponding Estimated Ambient Daytime Leq Noise Level	Corresponding Estimated Ambient Nighttime Leq Noise Level
0.0	---	Albany Pump Station	2,000	61	54
1.6	---	Gorman Pump Station	1,800	61	54
51.85	93.7	Kingston Pump Station	200	61	54
101.8	44.6	Harriman Pump Station	1,100	61	54



Impacts

1. Traffic will affect the response time of emergency vehicles. There will be longer travel times due to increased traffic from construction vehicles.

2. Noise can affect the quality and quantity of sleep in Humans.
- Can cause permanent hearing damage
- Extended exposure can cause mental and bodily fatigue

Noise effects to wildlife
- Causes the temporary or permanent displacement of various animals and birds
- High levels of noise can potentially hide communications by wildlife that are used to attract mates and defend territories

3. Health Issues as a result of Greenhouse Gas Emissions include Leukemia, Cancer and Respiratory Problems.

4. Drilling and blasting may cause already fractured bedrock to fracture even more. Due to the overlying soil quality and geology, petroleum products would easily flow into groundwater resources. Toxins such as benzene, toluene, xylene, and ethylbenzene have the potential to contaminate aquifers.

5. Greenhouse gases emitted from construction vehicles will impact the climate. There will also be short and long term climate impacts.