

Township's Top 5 Concerns about the Proposed PennEast Pipeline

- Lack of Demonstrated Need or Public Benefit
- Violations of the Clean Water Act and other Federal Regulations
- Impacts to ground water, wells and septic systems
- Violation of public funds to convert preserved farms and open space to commercial/industrial use
- Violation of the Constitution to use eminent domain for corporate gain (when there is NO public benefit)

Appendix A: Township Concerns Outline and Selected References

1. Lack of Public Need

- Existing pipelines are sufficient for current Marcellus production while proposed pipelines would greatly outpace gas production. (Source: FERC. 2014 State of the Markets: Item No. A-3. March 19, 2015. <http://www.ferc.gov/market-oversight/reports-analyses/st-mkt-ovr/2014-som.pdf>, website accessed 2/20/2016.)
- An economic benefit for the PennEast Pipeline cannot be established. (Source: Intervention on Penn East Pipeline: Docket CP15-558-000 Jeffrey R. Shafer. <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14129934>)
- PennEast would result in a surplus beyond current demand in Southeast PA and NJ. (Source: US Energy and Information Administration <http://eia.gov>, website accessed 2/25/2016.)
- Lack of real consideration of alternatives.
- Lack of comprehensive planning for energy needs.
- Need for a programmatic Environmental Impact Study to evaluate cumulative impacts of interconnected pipeline expansions (including Marc II pipeline, Garden State Expansion, Southern Reliability Link and BL England Electric Generation facility).

2. Eminent Domain is only permitted for Public Benefit

- The use of eminent domain must provide public benefit, but this pipeline fails to do so, as outlined here.
- Violates Private Property Rights.
- Seizure of open space and farmland preserved with public funds for private corporate gain violates the public trust and the purpose of the preservation.

3. Environmental Impacts

- **Surface Water:** Pipeline construction activities, such as removal of riparian vegetation, direct channel and streambank disturbance, damage to wetlands, and compaction of soils will result in increased runoff, erosion, sedimentation, and water temperature. We see BMPs fail frequently. Permanent impacts include increased water temperatures due to canopy removal; increase in flash flooding due to compromised buffers; increased erosion and sedimentation; and altered stream levels due to fill layer and gravel around pipe. **Mitigation cannot avoid violations of the Clean Water Act during and after construction because it will be impossible to maintain existing water quality.** Several of our streams are already impaired* and actions have been taken to improve water quality (funded by hundreds of thousands of dollars of Federal funds). However, the threat of the pipeline is delaying implementation of mitigation projects in the proposed pipeline route, **violating the Clean Water Act.** (*Source: NJDEP. Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List), <http://www.nj.gov/dep/wms/bears/assessment.htm>, website accessed 7/21/2016.)
- Disturbance of 1,907 acres of land, including forest, riparian habitats and wetlands, in the Delaware River basin may result in **violations of DRBC Special Protection Waters antidegradation regulations.** (Source of acreage figure: PennEast. September 2015. Resource Report 1 General Project Description, page 1-21.)
- Wetlands are important for recharge, filtration, flood prevention, wildlife and more. NJDEP has often issued Letters of Interpretation to landowners stating that wetlands “cannot support development of any kind.” This must apply to PennEast as stringently as to landowners. Research shows that mitigation doesn’t work. (Source: Moreno-Mateos, D., Power, M.E., Comín, F.A., and Yockteng, R. Structural and Functional Loss in Restored Wetland Ecosystems. PLoS Biol 10(1): e1001247. 2012. <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1001247>.) **Damage to wetlands is a violation of Section 404 of the Clean Water Act.**
- **Mitigation outside of the subwatersheds where damage occurs will not prevent violations of the Clean Water Act.**
- **Ground Water:** Disruption of bedrock can dry up and contaminate our only source of ground water, creating **violations of the federal Safe Drinking Water Act (SDWA).** Our bedrock is close to the surface and consists of extremely hard metamorphic rock. Installation of the pipeline at a depth of 84” will require blasting for nearly the entire length, disturbing the existing fracture patterns in the rock, causing changes in water movement patterns, contamination from new exposure to nearby sources in surface water or septic systems and from releasing arsenic and radon that is normally trapped in the rock layer and draining the wetlands that recharge our ground water. Water supplies that rely on bedrock fractures store less water and the water moves more quickly over greater distances, making these aquifers very vulnerable to

impacts from the proposed pipeline. This endangers the safety of our water, our health and the economic viability of our communities.

- Horizontal directional drilling uses vast amounts of water in the drilling process (a stress to our water supply, which is already depleted) (Source: NJ Geological and Water Supply (NJGWS). DGS14-1 Computer Workbook Investigating Water Availability in New Jersey on a Watershed Management Area Basis. July 2014. <http://www.nj.gov/dep/njgs/geodata/dgs14-1.htm>), while the soil slurry used to lubricate the drill may introduce contaminants from the soil, both during drilling and in disposal of the slurry. Hydraulic testing of the pipeline poses the same concerns.
- Destruction of forests and wetland habitats (including fragmentation, degradation and change in type) will impact rare, endangered and migratory species that rely on these critical habitats and may **violate the Endangered Species Act and Migratory Bird Treaty Act** which mitigation cannot avoid, particularly since PennEast's idea of restoration is, "Upon completion of the Project, these areas will be allowed to revert to prior land uses through natural successional processes..." (Source: PennEast. September 2015. Resource Report 8 Land Use, Recreation & Aesthetics, Page 8-29; similar statements 8-136, 8-137, & RR2, page 2-32.)
- Unfortunately, invasive species and deer will prevent natural revegetation and result in failure of mitigation efforts.
- Increased edge habitats will lead to an increase in deer populations, increasing impacts to farming, landscaping and deer/vehicle collisions and impact biodiversity and forest regeneration.

4. Corporate Responsibility (can DEP trust an industry that has habitually lied and misrepresented their ability to mitigate sufficiently)?

- From the beginning, PennEast has refused to hold public meetings, and has used threats and strong-arm tactics. 70% of NJ landowners on the proposed route have denied access, and yet PennEast has repeatedly trespassed and obtained surveys illegally. PennEast's resource reports are inadequate and error-filled and PennEast has not addressed concerns and factual inadequacies, and failed to truthfully evaluate resources and impacts. If approved based on the resulting inadequate planning and evaluation, the same violations of regulations and public trust will occur as has in other pipeline projects, including: possible future reroutes onto un-evaluated properties, where property owners have no opportunity to comment and resources have not been evaluated; possible future renegeing on promised construction methods (such as HDD) and mitigation; and possible future violations, while monetary fines do nothing to mitigate the actual environmental, economic and health damages.
- We have the same hard Hornsfel bedrock that the Transco Leidy Line recently encountered when attempting to drill through Princeton Ridge. The formation runs west from Princeton Ridge all through our area. How will the same problems be avoided here?
- In the last couple of years, pipeline mitigation promises in NJ have been a failure. An example is the Tennessee Gas pipeline mitigation that has left the Highlands with dying trees planted on steep ridges.
- The route and alternatives are supposed to be complete and submitted with the application. PennEast has released more route deviations on Monday - 5 months after they filed the application, in addition to changes released in December. This evidence of PennEast's lack of preparation should result in a suspension of the application process. Homeowners newly on the changed routes were never previously contacted by PennEast, and have had no notice or opportunity to be part of the process.
- Multiple "alternatives" are not real alternatives, just tiny wiggles based on inconsistent criteria (more or less wetlands, more or less stream crossings, avoiding some but not all open space etc.).
- Failure to answer FERC's information requests, failure to communicate with landowners and communities, failure to address communities questions and concerns.
- NJDEP should not grant any permits conditionally or based on surveys obtained by trespassing or aerial surveys, including by drones. This harmful project should receive no special treatment: No NJ property owner would be granted permits with an incomplete application.
- For the above reasons, neither the EIA nor any applications for water quality permits should be considered final until all the surveys are legally obtained; all information is complete; and all mitigation and methods are PROVEN able to prevent violations of Federal Regulations.

5. Pipelines Incidents are a Hazard to Public Safety

- According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), 11,195 pipeline incidents have resulted in 362 fatalities, 1,381 injuries and over \$6.6 billion in costs between 1996 and

2015. (Source: PHMSA. Pipeline Incident 20 Year Trends. http://opsweb.phmsa.dot.gov/primis_pdm/all_reported_inc_trend.asp, website accessed 7/21/2016.)

- PennEast plans to use “Class 1” in much of the route, which is the lowest safety factor. (Source: PennEast, September 2015. Resource Report 11 Reliability & Safety, pages 11-3 through 11-6.)
- The average number of incidents annually per 10,000 miles of pipeline has increased drastically in pipelines installed in the 2010’s. (Source: Pipeline Safety Trust. Are Old Pipelines Really More Dangerous? <http://pstrust.org/wp-content/uploads/2013/03/Incidents-by-age-of-pipes-PST-spring2015-newsletter-excerpt.pdf>, website accessed 7/21/2016.)
- An incident on the PennEast pipeline could endanger the water supply for millions of people.

6. Economic Impacts

- PennEast job claims are inflated by 55% or more. Most jobs would last only 5 months, $\geq 50\%$ of which would go to out-of-state residents, and there would only be 10 ongoing jobs in NJ. (Source: The Goodman Group. November 4, 2015. Expert Report on the PennEast Pipeline Project Economic Impact Analysis for New Jersey and Pennsylvania <http://njconservation.org/docs/PennEastEconomicReport.pdf>)
- May result in loss of local jobs related to farming, forestry and tourism.
- The renewable energy industry creates more than 3 times as many jobs as producing an equivalent amount of electricity from fossil fuels. (Source: Union of Concerned Scientists. 2009. Clean Power Green Jobs. http://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/Clean-Power-Green-Jobs-25-RES.pdf)
- Decreased property values and reduced farm productivity.
- Infrastructure damage (blasting impacts on structures, wells and septic systems); construction vehicle impacts on roads & bridges; potential need for installation of arsenic removal and other water purification systems.
- Cost of building the pipeline will be passed on to ratepayers.
- NJ’s gas prices are already very now, but new pipeline construction is expected to increase gas prices. (Source: PSEG. 3/2/2015. 2015 PSEG message to investors. http://investor.pseg.com/sites/pseg.investorhq.businesswire.com/files/doc_library/file/PSEG-2015INVESTOR-FINAL_WEB_1.pdf, page 76.)
- Potential impacts to water quality in the D&R Canal and Delaware River could lead to increased costs and of water treatment and potential health effects for 700,000 people in central NJ & millions in south Jersey.
- Potential impact on local tax revenues. Declining property values will result in decreased property tax.

7. Climate Change has Negative Impacts on Public Health, the Economy and the Environment

- Fracked natural gas is NOT cleaner than other fossil fuels. (Source: Howarth, R. W., R. Santoro, and A. Ingraffea. 2011. Methane and the greenhouse gas footprint of natural gas from shale formations. Climatic Change Letters, DOI: 10.1007/s10584-011-0061-5 http://www.eeb.cornell.edu/howarth/publications/GHG_update_April_11_2011.pdf and Howarth, R. W., R. Santoro, and A. Ingraffea. 2012. Venting and leakage of methane from shale gas development: Reply to Cathles et al. Climatic Change. doi:10.1007/s10584-012-0401-0. http://www.eeb.cornell.edu/howarth/publications/Howarthetal2012_Final.pdf)
- 1-9% of all natural gas produced escapes into the atmosphere. That’s equivalent to the heat trapping emissions from 35-314 average coal power plants. Natural gas is 84x more potent at trapping heat than carbon dioxide over a 20 year period, and a 24x more potent warmer in a 100 year time frame. (Sources: Union of Concerned Scientists. The Climate Risks of Natural Gas. <http://www.ucsusa.org/fugitiveemissions>; Environmental Defense Fund. Methane: The other important greenhouse gas. <https://www.edf.org/methane-other-important-greenhouse-gas>, websites accessed 7/25/2016).
- The EPA estimates that starting now to significantly reduce Green House Gas (GHG) would, by the year 2100, annually: save ~ 57,000 lives (due to cleaner air quality); save ~\$2.6-\$3.0 billion in avoided damages from poor water quality; save \$2.8 billion in avoided flood damages; and result in ~40%-59% fewer severe and extreme droughts (among other benefits). (Source: EPA. 2015. Climate Change in the United States: Benefits of Global Action, EPA 430-R-15-001. <http://www.epa.gov/cira>.)
- There is overwhelming public support for clean/renewable energy and overwhelming public opposition to pipeline development. (Source: New Jersey Conservation Foundation Energy Survey, September 2015. <http://njconservation.org/docs/NJEnergyPoll.pdf>.)
- The New Jersey Global Warming Response Act (N.J.S.A 26:2C-37) requires an 80% reduction of Green House Gas (GHG) emissions by 2050, which will require a substantially decreased reliance on natural gas. (Source: NJDEP Air Quality, Energy & Sustainability. <http://www.nj.gov/dep/ages/sqgi.html>, website accessed 7/21/2016.)
- More pipelines will consign us to many more decades of increased Green House Gas (GHG) emissions and lock in increased climate change at this critical juncture when we need to be reducing GHG.

8. Cultural Impacts

- Destruction of cultural resources including Native American artifacts and village and Agricultural Districts is not acceptable; there is no possible mitigation.