

REPORT TO THE GENERAL ASSEMBLY ON PIPELINE PLACEMENT OF NATURAL GAS GATHERING LINES

As required by Act 13 of 2012



Submitted by:
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Office of Governor Tom Corbett
December 11, 2012

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December 11, 2012

Honorable Members of the General Assembly,

I am pleased to submit to you this report and my recommendations concerning the placement of pipelines for the gathering of natural gas throughout Pennsylvania. This report is required under Section 8 of Act 13 of 2012.

Pennsylvania's citizens, businesses, and communities have seen significant benefits associated with the development of unconventional natural gas and natural gas liquids, such as those contained in the Marcellus, Utica, and other shale formations. More than 240,000 jobs are either directly or indirectly associated with oil and gas development in the Commonwealth, with wages substantially greater than the average Pennsylvania job. Likewise, all Pennsylvanians – from homeowners to a rejuvenated industrial base – are benefitting from natural gas and electricity prices that are more than 40% lower than just four years ago.

Natural gas gathering lines are key components of the infrastructure needed to transport energy resources from the point of production to the point of consumption. Pennsylvanians rightly expect these pipelines to adhere to first-class environmental and public safety standards. Moreover, as focused upon in this report, they seek the deployment of pipelines in a smart and efficient manner that considers the economic realities of the industry, the geographic challenges of the Commonwealth, and the interests of local communities.

The General Assembly should be proud of the significant steps already taken to ensure pipelines are deployed safely and with respect for the environment. These steps include passage of Act 127 of 2011, which empowered the Pennsylvania Public Utility Commission (PA PUC) to enforce federal pipeline safety standards, and passage of Act 13 of 2012, which significantly enhanced environmental standards for oil and gas activities, extended certain PA One Call obligations to pipeline operators, and provided critical resources to local and state entities, including the PA PUC.

These recommendations were developed with input from a wide array of stakeholders. This report is intended to help inform the public and policymakers, to stimulate additional ideas, and to outline steps on how we can achieve our mutual goals.

Sincerely,

A handwritten signature in black ink that reads "Patrick Henderson".

PATRICK HENDERSON, ENERGY EXECUTIVE
Office of Governor Tom Corbett



1. SCOPE OF REPORT

Statutory Requirement

On February 14, 2012, Governor Tom Corbett signed Act 13 into law. Act 13 represented the first significant revision of Pennsylvania’s oil and natural gas development statutes since passage of the Oil and Gas Act in 1984 (Act 223). Among its chief provisions, Act 13 significantly enhanced the environmental and natural resource protection standards related to oil and natural gas development, with a particular emphasis on unconventional natural gas resources; authorized county governments to impose an impact fee on unconventional natural gas wells; allocated revenue to critical obligations of state and local governments to offset costs associated with unconventional natural gas development; and established standards applicable to local ordinances related to oil and gas operations.

Section 8 of Act 13 of 2012 requires the Energy Executive of the Governor to submit a report with accompanying recommendations concerning pipeline placement to the General Assembly within one year of the effective date of the section. Specifically, Section 8 requires the following:

The Energy Executive of the Governor shall consult with the Department of Environmental Protection, the Pennsylvania Public Utility Commission, State legislators, local government organizations, natural gas industry representatives, conservationists and other affected entities on the issue of pipeline placement for natural gas gathering lines in this Commonwealth. The Energy Executive of the Governor shall submit a report summarizing pipeline placement for natural gas gathering lines and make his recommendations to the General Assembly within one year of the effective date of this section.

The abundant natural gas resources currently being developed in Pennsylvania have the potential to fuel a new industrial revolution in the Commonwealth and beyond. Timely, efficient, and smart deployment of midstream infrastructure, including gathering lines, is crucial to maximizing this opportunity by creating jobs, lowering energy costs, and securing the nation’s energy independence.

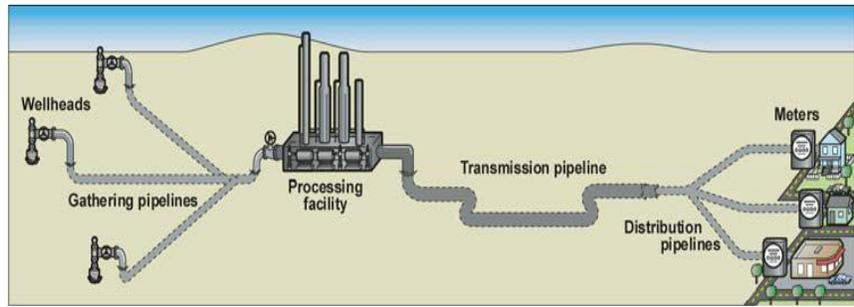
Natural Gas Gathering Lines

The term “gathering line” is not defined in either 58 Pa. C.S § 3203 (relating to definitions in Oil and Gas) or in Section 8 of Act 13 of 2012. However, the term is defined within 58 Pa. C.S. § 3218.5, which requires owners and operators of gathering lines to comply with certain requirements of the Underground Utility Line Protection Law (commonly referred to as the “PA One Call” system).



As used in Section 3218.5, the term “gathering line” means a pipeline used to transport natural gas from a production facility to a transmission line. This definition shall be used for purposes of this report with respect to gathering lines that transport natural gas

Figure 1: Production, Gathering, & Transmission Diagram



Source: Pipeline & Hazardous Materials Safety Administration

from an unconventional natural gas well to a compressor station, transmission line, or a natural gas and associated products processing facility. For purposes of this report, the term does not include conventional natural gas gathering lines, interstate or intrastate natural gas transmission pipelines, or any pipelines utilized to distribute natural gas to end-use consumers. As illustrated in Table 1, the anticipated startup of a significant number of natural gas transmission lines will facilitate the deployment of an increasing number of natural gas well pads and gathering lines.

Therefore, the purpose of this report is to advance the efficient and smart deployment of unconventional natural gas gathering lines to further minimize environmental, community and landowner impacts; to identify issues and factors that affect pipeline deployment; to maximize the economic production and recovery of the Commonwealth’s indigenous natural resources; to identify current barriers to achieving these goals; and to outline recommendations intended to alleviate or remove these barriers.

Table 1: Transmission Pipeline Projects Anticipated by Late 2012 & into 2013

Project	Operator	Capacity Mcf/d	State	Startup Date
Inergy Marc 1 Hub Line	Inergy Midstream	555	PA	Nov 2012
Ellisburg to Craigs	Dominion Transmission	150	PA	Nov 2012
Tetco Team 2012	Texas Eastern	200	PA	Late 2012
Northeast Supply Diversification Project	Tennessee Gas Pipeline	250	PA/NY	Nov 2012
Station 230C Project	Tennessee Gas Pipeline	320	PA/NY	Nov 2012
Line N Expansion	National Fuel Gas Supply Corp	150	PA	Nov 2012
Northeast Expansion Project	Dominion Transmission	200	PA	Nov 2012
Northern Access Expansion Project	National Fuel Gas Supply Corp	320	PA/NY	Fall 2012
Marcellus Expansion Phase	Equitrans	800	WV/PA	Late 2012
Northeast	Williams	100	PA/NJ	Late 2012
MPP Pipeline	Tennessee Gas Pipeline	100	PA	2013
Northeast Supply	Transcontinental Gas	250	PA	2013
Sabinsville to Morrisville	Dominion Transmission	92	PA	2013
TETCO Team 2013 Expansion	Texas Eastern	500	PA	2013
Tioga Area Expansion	Dominion Transmission	270	PA	2013
Dominion Keystone Pipeline	Dominion Transmission	500	PA	2013
Northeast Supply Link	Transcontinental Gas	250	PA/NJ/NY	2013
Northeast Upgrade	Tennessee Gas Pipeline	636	PA/NJ	2013

Source: Reuters – October 15, 2012



2. CHARACTERISTICS & CONSIDERATIONS IN SITING OF GATHERING LINES

Characteristics of Gathering Lines

Natural gas gathering lines are typically eight to 30 inches in diameter, constructed of steel, and have a cathodic protection applied to the exterior in order to protect the structural integrity of the pipeline and guard against corrosion. Line pressures for transporting unconventional natural gas from the wellhead can range from 70 to 1,100 pounds per square inch (psi). Pipelines are generally buried between three to five feet below the surface or deeper if an operator is boring underneath roadways, rail lines, or waterways. The width of a right-of-way is negotiated with the landowner but is typically between 50 to 75 feet wide and must generally remain clear of obstructions.

Considerations in Siting of Gathering Lines

There is an inherent interest in the owner or developer of the natural gas and natural gas liquids to deliver the extracted resource to the market in a timely, efficient, and cost-effective manner. While some fully-integrated companies continue to operate in Pennsylvania, the industry has also seen the emergence of stand-alone midstream operators that are focused solely on gathering natural gas as efficiently as possible, while still being responsive to the development plans of their clients. The placement of pipelines typically follows the development plans, needs, and opportunities of the exploration and production operator. Therefore, the considerations of gathering line placement are inextricably linked to the considerations of siting production wells. Among these considerations:



Completed Gathering Line & Right-of-Way – Eaton Twp., Wyoming County

Terms of Leases & Location of Producing Wells

A lease to explore and produce natural gas is for a primary, fixed length of time. Many leases are for three to five years, though the exact length and terms of a lease are subject to negotiation between the owner of the oil and natural gas resource and the exploration and production operator (operator). Under this scenario, the operator must initiate drilling activities or produce natural gas (depending on the specific terms of the lease) within the primary, fixed length of time or lose the exclusive right to develop the resources underlying the land.

Once these terms are met, the land under lease is considered “held by production,” allowing the operator to drill and operate additional wells for as long as the wells are

“producing in paying quantities.” (see *T.W. Phillips Gas & Oil Company & PC Exploration Inc. v. Ann Jedlicka*, No. 19 WAP 2009).

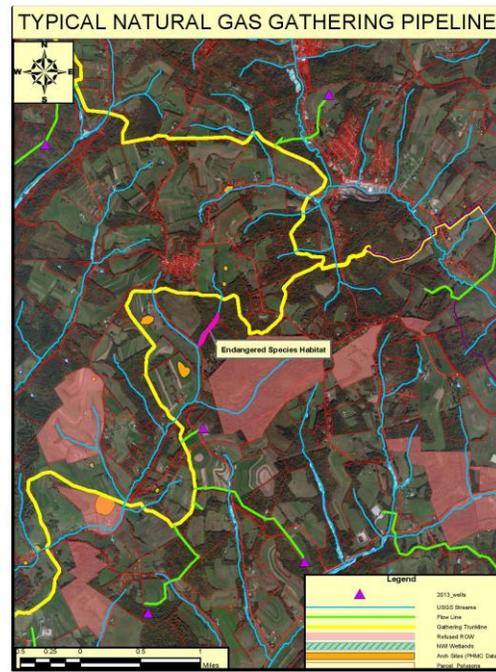
Operators therefore must be cognizant of the various terms and primary term expiration dates of their leases, and often make decisions upon where and when to drill a well to ensure that as much acreage as possible is “held by production.” Other ancillary factors can also effect and alter an operator’s original anticipated plan of development. Additionally, operators must be cognizant of their proximity to connect with intrastate and interstate transmission pipelines.

Securing Landowner Consent & Lack of Eminent Domain Power

The cooperation and willingness of property owners to enter into a right-of-way agreement is a critical consideration in determining the route of a gathering line. Property owners may also dictate where a pipeline is placed on their land. Pipeline operators must negotiate with multiple property owners in order to site a pipeline from the producing well to the ultimate delivery endpoint of the natural gas.

Natural gas gathering line operators are not currently granted the power of eminent domain. Therefore, the siting of gathering lines is dependent upon compliance with applicable state and federal permitting requirements, as well as the consent of the property owners over whose property the pipeline will traverse. Additionally, property owners willing to host a pipeline may specify where on their property they are willing to permit a pipeline. Consideration of private rights-of-way, such as those held by railroads or utility companies, must also be considered.

Figure 2: Gathering Line Schematic



Source: MarkWest Energy Partners, LP

Landowners who agree to host a pipeline sign a right-of-way agreement, or easement, which grants a limited property right to the pipeline operator. Typically, a temporary right-of-way will have a width of between 60-100 feet, with a corresponding permanent right-of-way having a width of 50-75 feet. The pipeline is placed underground after excavation. The right-of-way must be cleared of trees, brush, and other obstructions. Similar to leases for oil or natural gas exploration and production, pipeline right-of-way agreements may involve an up-front “bonus” payment to the landowner, in addition to a fixed dollar payment per linear foot.



Producing Formation Characteristics

The characteristics of unconventional shale gas formations in Pennsylvania vary, such as depth, pressure, tightness of formation, and other characteristics. Seismic testing is utilized by geologists and petroleum engineers to map and better understand the underground geologic characteristics of a particular leasehold. Testing involves emitting and evaluating the return of seismic waves sent from at or near the surface of the land to deep underground formations.

The test results assist the well operator in identifying the ideal location to drill and hydraulically fracture a production well. In addition, evaluating existing production characteristics informs operators on the performance of wells and assists in future development planning.

Environmental Permitting & Historical/Cultural Review

The siting of gathering lines requires adherence to numerous environmental and conservation laws intended to protect the air, water, and land quality of the Commonwealth, as well as wildlife, aquatic species, plant life, and sensitive habitat. Specific permitting standards are described in more detail in Section 5. For example, operators of proposed pipelines are required to utilize the Pennsylvania Natural Heritage Program's (PNHP) Pennsylvania Natural Diversity Inventory Environmental Review Tool to screen projects for potential impacts on threatened, endangered, and special concern species and resources. If a potential conflict is identified, efforts to avoid or mitigate impacts must be undertaken. Additionally, reviews to avoid or mitigate impacts on historical or culturally significant locations must be undertaken. These avoidance or mitigation efforts may include re-routing a proposed pipeline around or away from the potential conflict area. Additional environmental and safety permitting considerations apply to compressor stations and processing facilities and can impact pipeline placement.

Local Permitting & Zoning

Act 13 of 2012 established laws pertaining to local ordinances relating to oil and gas operations. Among its primary objectives, Chapter 33¹ of Act 13 seeks to establish uniformity among local zoning ordinances while recognizing state law as the exclusive authority for regulating oil and gas operations which are otherwise governed by the environmental statutes of the Commonwealth. Municipalities retain zoning authority, as outlined in 58 Pa. C.S. Chapter 33, and may impose certain general requirements on related facilities, such as natural gas compressor stations or processing facilities, that can significantly influence the siting and route selection of gathering lines.

¹ On July 26, 2012 the PA Commonwealth Court enjoined certain Sections of Chapter 33. The matter is pending before the PA Supreme Court. *Robinson Twp. v. Commonwealth, _A.3.d_ (Pa. Cmwlth., No. 284 M.D. 2012).*



Topography, Geography, & Geology of Pennsylvania

The unique topography, geography, and geology of Pennsylvania significantly influences where production wells and associated gathering lines are placed. Unlike other large natural gas producing states, such as Texas or Oklahoma, Pennsylvania's terrain consists of major variations in elevation due to numerous mountain ranges, highlands, and foothills.



Steep Incline – Eaton Twp., Wyoming County

Additionally, with nearly 86,000 miles of rivers and streams, Pennsylvania has more stream miles than any other state, with the exception of Alaska. This abundance of water resources is critical to many aspects of Pennsylvania's economy and the quality of life enjoyed by the Commonwealth's citizens; however, it also presents a challenge when deciding where pipelines should be located. Crossing underneath a waterway or multiple waterways (including wetlands) or roadways can add significant costs, time, and added complexities to the deployment of gathering lines. Finally, engineering and hydraulics may effect routing and placement of gathering lines, compressor stations, and processing facilities.

Lack of Modern Voluntary & Compulsory Integration Statute

At the urging of the Interstate Oil and Gas Compact Commission, in 1961 the General Assembly enacted the Oil and Gas Conservation Law ("Conservation Law") to further the interests of correlative property rights and to prevent waste of oil or natural gas.

As written, the Conservation Law is only applicable to wells that penetrate the Onondaga Horizon, or 3,800 feet below the surface in areas of the Commonwealth where the Onondaga Horizon is closer to the surface than 3,800 feet. Therefore, while the Conservation Law is applicable to formations such as the Utica Shale, it is not applicable to wells that target the Marcellus Shale. Moreover, the law does not reflect the current methods and practices of unconventional gas development, specifically horizontal and directional drilling and pads hosting multiple wells.

3. CURRENT EFFICIENCIES OF UNCONVENTIONAL NATURAL GAS DEVELOPMENT

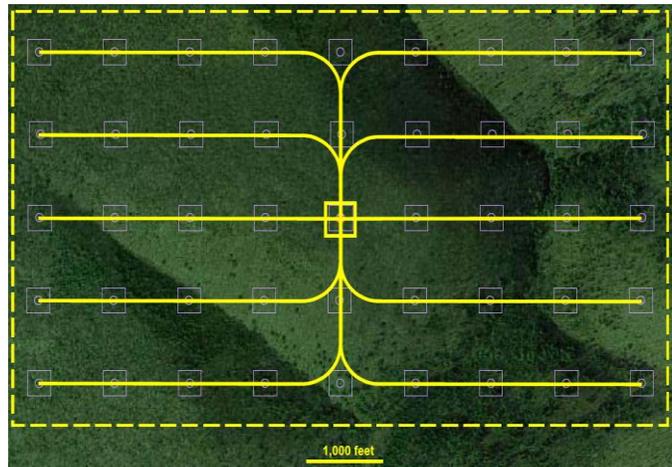
Compared to conventional, vertical drilling and production methods, the modern development of unconventional natural gas resources, such as the Marcellus, Utica, Burkett, and other shale strata, already provides significant efficiencies in the delivery of the resource to the market. Vertical drilling and production requires individual wells spaced in relatively close proximity to each other. For example, while a one square mile (640-acre) unit may require 30 to 40 vertical wells to fully extract the available resource, advances in directional and horizontal drilling and hydraulic fracturing mean that the same unit may be fully developed through as few as eight or 10 horizontal wells. These wells are drilled from the same well pad, with wells spaced as little as 15 feet apart.

Moreover, the modern well pad method provides for the natural gas from all wells located on the pad to be dispatched to a compressor station, processing or other facility from just one or two gathering lines. This has translated into a significantly higher amount of natural gas being transported to market utilizing fewer miles of pipeline compared to conventional, vertical well development.

Additionally, the evolution of the unconventional natural gas industry in Pennsylvania over the past several years has led to increased efficiencies through the sharing of pipeline capacity and the co-location of pipelines. The emergence of stand-alone mid-stream gathering line operators, which can spend between \$1 million to \$1.5 million per mile to construct gathering lines, has led to an increase in contracts to co-transport natural gas from several select producers to transmission pipelines as cost-efficiently as possible. This trend is also reflected in vertically integrated operators who both produce natural gas and transport their own natural gas as well as that of other nearby producers.

Finally, the higher pressure and larger diameter pipelines used to transport unconventional natural gas also contribute to increased efficiency by moving significantly greater quantities of natural gas to market compared to conventional pipelines. From a BTU-per-pipeline mile perspective, this efficiency is particularly true with the prolific production of natural gas liquids, such as ethane, propane, butane, and pentane, in western Pennsylvania.

Figure 3: Reduced Surface Footprint – Horizontal vs. Vertical Drilling



Source: Range Resources

4. FEDERAL REGULATORY OVERVIEW OF GATHERING LINES

Pipelines subject to federal oversight are regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA), an agency within the U.S. Department of Transportation (U.S. DOT). Under federal law, principally the Pipeline Safety Law (49 U.S.C. § § 60101 *et seq.*) and associated regulations, the PHMSA has jurisdiction over specific pipelines related to the gathering and transporting of natural gas and hazardous liquids. Generally, federal jurisdiction is based upon class designation and limited to Class 2, 3, and 4 natural gas gathering lines. Class designations are as follows:

<u>Class designation</u>	<u>Location features</u>
<u>Class 1</u>	An offshore area or any location with 10 or fewer buildings intended for human occupancy within 220 yards on either side of the centerline of any continuous one mile length of pipeline.
<u>Class 2</u>	Any location with more than 10 but fewer than 46 buildings intended for human occupancy within 220 yards on either side of the centerline of any continuous one mile length of pipeline.
<u>Class 3</u>	Any location with more than 46 buildings intended for human occupancy within 220 yards on either side of the centerline of any continuous one mile length of pipeline or an area where the pipeline lies within 100 yards of either a building or a small, well-defined outside area (such as a playground) that is occupied by 20 or more persons at least five days a week for 10 weeks in any 12-month period.
<u>Class 4</u>	Any location where unit buildings with four or more stories above ground are prevalent.

Source: GAO Report (March 2012) & 49 C.F.R. §192.5

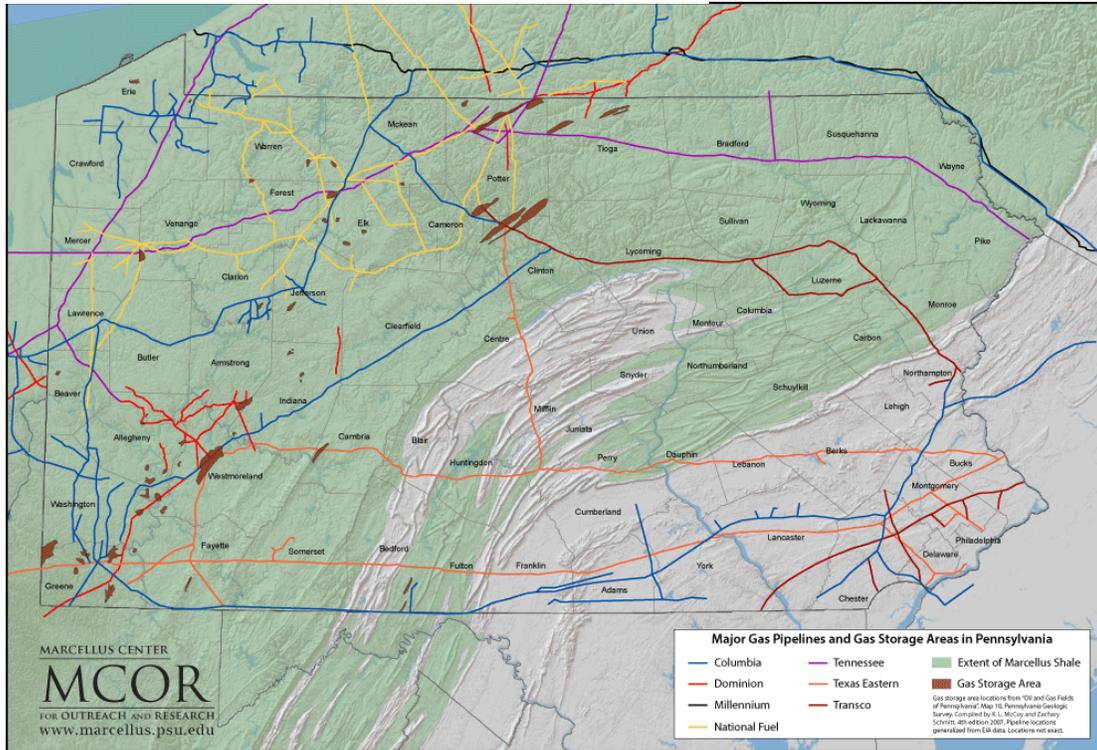
Jurisdictional pipelines, which are situated wholly within one state, are often overseen by the relevant state pipeline safety agency under a delegation agreement between the PHMSA and the state. The PHMSA exercises no jurisdiction over site selection or the route of a proposed pipeline.

According to a March 2012 report by the U.S. Government Accountability Office (GAO), there are over 2.5 million miles of pipeline throughout the United States, transporting nearly two-thirds of the domestic energy resources in the nation. Of this total, approximately 200,000 miles or more are on-shore gathering lines within the United States. Many of these pipelines (up to 90%) are classified as “Class 1” gathering lines, and therefore not subject to federal



regulation and oversight. See Section 6 for a discussion regarding the number of unconventional natural gas gathering line miles in Pennsylvania.

Figure 4: Major Gas Pipelines & Gas Storage Areas in Pennsylvania



Source: Marcellus Center for Outreach & Research (MCOR)

The GAO notes that the safety risks of unregulated pipelines are generally considered to be lower than for other types of pipelines, but that the PHMSA does not collect comprehensive data to identify the safety risks associated with these pipelines. While the GAO provides recommendations on data collection and information sharing to better identify and mitigate safety risks, the GAO also states that “pipelines are a relatively safe mode of transportation for hazardous liquid and natural gas.” (*Pipeline safety – Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety – U.S. Government Accountability Office – March 2012 – GAO-12-388*) (Emphasis added). The GAO notes concerns with the lack of safety data, unknown locations of pipeline installations, and maintenance procedures. However, given the increased pipeline diameter and pressure associated with gathering lines in unconventional shale plays like the Marcellus Shale and Utica Shale, the PHMSA is presently contemplating extending jurisdiction to these currently unregulated lines.

The Federal Energy Regulatory Commission (FERC) generally has jurisdiction over the interstate transmission and sale of natural gas for resale. However, the FERC does not have jurisdiction over the siting of gathering lines.



5. ENVIRONMENTAL STANDARDS FOR NATURAL GAS GATHERING LINES

Clean Streams Law

The Clean Streams Law (Act 394 of 1937, as amended) is Pennsylvania's primary water quality protection statute, intended to not only prevent further pollution of waters of the Commonwealth but to also reclaim and restore presently polluted waterways. To implement



20" Pipelines Awaiting Installation –
Smith Township, Washington County

this goal, under the authority of the Clean Streams Law the Pennsylvania Department of Environmental Protection (PA DEP) requires certain projects to obtain an erosion and sediment control permit.

The erosion and sediment control regulations (25 Pa. Code Ch. 102) require anyone conducting earth disturbance activities to develop, implement, and maintain best management practices to minimize the potential for accelerated erosion and sedimentation, as well as effective management of post-construction stormwater. The permitting threshold of earth disturbance for oil and gas activities, which includes construction of gas pipelines, is five acres (two hectares) over the life of the project.

Dam Safety & Encroachments Act

The Dam Safety and Encroachments Act (Act 325 of 1978, as amended) is Pennsylvania's statute regulating dams, encroachments, and other water obstructions to ensure protection of water quality, prevent unreasonable interference with waterflow, and protect navigation.

Natural gas gathering lines which seek to cross a waterway, including wetlands, of the Commonwealth are required to obtain a water obstruction and encroachment permit. Specific regulatory requirements are found at 25 Pa. Code Chapter 105 (Relating to Dam Safety and Waterway Management).

Pennsylvania Natural Heritage Program

The Pennsylvania Natural Heritage Program (PNHP) oversees and manages the collection of data related to the native biological diversity of the Commonwealth's wildlife, aquatic species, flora and fauna, habitat, and other critical natural resources. The PNHP, through utilization of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool, provides screening of proposed projects such as the construction of natural gas gathering lines to identify, avoid, or mitigate impacts on state or federal threatened or endangered species.

As part of the environmental permitting processes, including the erosion and sediment control and dam safety and encroachment permit processes, project applicants are required to utilize

the PNDI Environmental Review Tool and consult with the relevant state and federal agencies to identify, avoid or mitigate impacts on state or federal threatened or endangered species. Agencies involved in this review include the PA DEP, PA Department of Conservation and Natural Resources, PA Game Commission, PA Fish and Boat Commission, and the U.S. Fish and Wildlife Service.

U.S. Army Corps of Engineers' Role & Process

The federal Clean Water Act (CWA) is the primary federal law that protects water quality, and regulates the placement of structures such as dams and other fill into the waters of the United States. The primary CWA provision applicable to natural gas pipelines is the Section 404 requirement to obtain a permit for the discharge of dredge or fill material. This permit is administered by the U.S. Army Corps of Engineers (Corps).

In states with comprehensive regulatory programs similar to the section 404 federal program, the Corps has developed "State Programmatic General Permits." These State Programmatic General Permits (SPGP) are typically developed in coordination with the states and are structured in a manner that facilitates streamlined/integrated administration of the federal and state law authorizations. Where the Corps has issued such SPGPs, the federal authorization is provided by the terms of the federal permit when the state issues its authorization for the activities specified in the SPGP, either with no review, or notice to or review by the Corps.



**Right-of-Way Reclamation
Smith Township, Washington County**

The Corps issued the first Pennsylvania SPGP in 1995, for certain categories of dredge and fill activities also regulated under Pennsylvania's state regulatory program. The activities identified by the Corps as qualifying for federal CWA permit coverage under PA-SPGP are many of the activities that qualify for a state permit, general permit, or waiver under the Chapter 105 program.



6. PUBLIC SAFETY STANDARDS FOR NATURAL GAS GATHERING LINES

Gas & Hazardous Liquids Pipelines Act

Act 127 of 2011, known as the Gas and Hazardous Liquids Pipelines Act, was signed by Governor Tom Corbett on December 22, 2011. The Act requires all pipeline operators within the Commonwealth to register with the Pennsylvania Public Utility Commission (PA PUC). A pipeline operator is defined as a person that owns or operates equipment or facilities within the Commonwealth for the transportation of gas or hazardous liquids by pipeline or pipeline facilities that are regulated under Federal pipeline safety laws. Pipelines and pipeline facilities regulated under Federal pipeline safety laws include gathering and transmission pipelines within Class 2, 3, and 4 as well as transmission pipelines within Class 1 locations. The term does not include a public utility or an ultimate consumer who owns a service line on his or her real property. The PA PUC does not have jurisdiction over the siting of natural gas gathering lines.

Pipeline operators in Class 1 locations that transport natural gas from unconventional gas wells are required to report the location of pipelines by class location and approximate aggregate miles to the PA PUC. This information must be updated annually. According to the PA PUC, as of October 1, 2012, 43 unconventional pipeline operators have reported a total of 2535.5 miles of unconventional pipelines. Of this, 1727.8 miles are non-jurisdictional Class 1 unconventional gathering lines, while 807.7 miles fall under the jurisdiction of the PA PUC as either Class 1 transmission or Class 2, 3, or 4 non-transmission pipelines.

Table 2: Top 10 Counties – Class 1 Unconventional Gathering Lines

County	Class 1 Unconventional Gathering Line Miles
Indiana	351.5
Bradford	244.5
Susquehanna	160.1
Tioga	150.5
Lycoming	128.1
Washington	119.1
Greene	111.4
Westmoreland	90.4
Clearfield	79.3
Jefferson	62.7

Federal pipeline safety laws are incorporated by reference, and the PA PUC is authorized to supervise, regulate, inspect and enforce federal pipeline safety laws and associated regulations, including:

- The provisions of 49 U.S.C. Ch. 601 (relating to safety)
- The Hazardous Liquid Pipeline Safety Act of 1979 (Public Law 96-129, 93 Stat. 989)

Source: PA Public Utility Commission

- The Pipeline Safety Improvement Act of 2002 (Public Law 107-355, 116 Stat. 2985)

PA PUC Gas Safety Section

The PA PUC's Gas Safety Section is responsible for enforcing state and federal pipeline safety regulations as they apply to natural gas utilities, pipelines, and pipeline facilities in Pennsylvania. The Gas Safety Section acts as an agent for the federal Office of Pipeline Safety



and the U.S. DOT and enforces federal pipeline safety regulations as adopted by the PA PUC or incorporated by state law. The Gas Safety Section conducts inspections of pipelines and pipeline facilities and investigates any incidents related to the construction or operation of jurisdictional pipelines and pipeline facilities.

Underground Utility Line Protection Law

Act 13 of 2012 created Section 3218.5 within Title 58 of Pennsylvania’s consolidated statutes (58 Pa. C.S. § 3218.5, Oil and Gas). This section requires owners and operators of gathering lines to comply with certain requirements of the Underground Utility Line Protection Law (commonly referred to as the “PA One Call” system). Specifically, owners and operators of gathering lines must adhere to Section 2(5) (i.1) of the law, which provides that each facility owner, who owns or operators a pipeline, shall:

Identify the location of an actually known facility's point of connection to its facilities, where the point of connection is not owned or operated by the facility owner. A facility owner may identify the location of a known facility connected to its facilities, but not owned or operated by the facility owner, as a helpful guide to the excavator or owner. The identification shall not be deemed to impose any liability upon the facility owner for the accuracy of the other facility's identification.

The provisions of Section 3218.5 are intended to protect against future excavation activities occurring in proximity to existing gathering lines, so as to avoid conflicts that may result in damaging or compromising the integrity of the underground gathering line, harming the environment or creating a potentially serious and dangerous safety situation that endangers those conducting, or in proximity to, the excavation.



Right-of-Way Marker

Third-party damage from excavation and corrosion are regarded as the greatest safety challenges of pipeline integrity. It should be noted that pipeline transport of natural gas and hazardous liquids is considered the safest mode of transportation compared to truck or rail transport. (*Pipeline safety – Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety – U.S. Government Accountability Office – March 2012 – GAO-12-388.*) Although Class 1 gathering lines are not required to register with PA One Call, many gathering line operators voluntarily comply with registration provisions of PA One Call as a prudent standard business practice to enhance public safety and better protect against damage or compromise of the underground pipeline.

Section 3218.4 of Act 13 of 2012 also requires all buried metallic pipelines to be installed and placed in operation in accordance with federal pipeline corrosion control regulations. All procedures must be carried out under the direction of a person qualified in corrosion methods.



Tubular Steel Country of Manufacture

In addition to authorizing the PA PUC to enforce federal pipeline safety laws, the Gas and Hazardous Liquids Pipelines Act also requires pipeline operators to annually disclose to the PA PUC the country of manufacture for all tubular steel products used in the exploration, gathering, or transportation of natural gas or hazardous liquids. (Act 127 of 2011, § 301(d)).

Similarly, Act 13 of 2012 requires well operators to include the country of origin and manufacture of tubular steel products used in the construction of the well within the well report filed with the PA DEP. (58 Pa. C.S. §3222(b.1)(2)(ii)).

Both provisions incorporate recommendations put forth by the Governor's Marcellus Shale Advisory Commission (MSAC), which was created by Governor Tom Corbett under Executive Order 2011-01. The stated purpose of each of these recommendations put forth by the MSAC was to *"ensure the safety, integrity and use of high quality steel...in the exploration, gathering and transmission of natural gas."* (Recommendations 9.1.11 & 9.1.12, Pg. 104, MSAC Report, July 22, 2012)(Emphasis added).



7. RECOMMENDATIONS

- 1) *Legal impediments to the sharing of State and local roadway rights-of-way should be repealed or modified to allow for and encourage the use of existing rights-of-way and minimize new surface disturbances. For example, Section 3 of the Limited Access Highway Law (Act 402 of 1945)), was repealed in part by Act 88 of 2012 to encourage the creation of Public-Private Partnerships and should be further repealed so as to permit the sharing of rights-of-way where appropriate.*
- 2) *The Public Utility Code should be amended to clarify that the sharing of pipeline capacity, for purposes of increased efficiency and smarter deployment of gathering lines, shall not constitute public utility status.*
- 3) *In conjunction with the U.S. Army Corps of Engineers, State and federal stream-crossing permits, including those required in 25 Pa. Code Chapter 105 and the Pennsylvania State Programmatic General Permit-4, should be aligned to remove existing duplications related to the protection and preservation of historic, cultural and natural resources while increasing predictability in planning and permit processing time.*
- 4) *The Department of Environmental Protection should regularly review its Permit Decision Guarantee policy to ensure that administratively complete permits are reviewed in a timely manner, and where able, consider providing expedited review for projects that share rights-of-way or otherwise demonstrate steps that minimize conflicts with historic, cultural or natural resources.*
- 5) *The Pennsylvania Natural Diversity Inventory environmental review tool should continue to be enhanced so as to assist in the up-front avoidance of conflicts with threatened and endangered species, flora, fauna, habitat and other sensitive natural resources and increase certainty in decision making and long-term planning of pipeline operators.*
- 6) *The Underground Utility Line Protection Law, commonly referred to as “PA One Call,” should be amended to include mandatory participation beyond the requirements of 58 Pa. C.S. § 3218.5, including specific location registration of all gathering lines.*
- 7) *The Public Utility Commission should work with PA One Call for purposes of creating a state map of unconventional natural gas pipelines.*
- 8) *County planning offices should be encouraged to work with drilling operators and gathering line companies so that operators and companies understand current and future development plans and can seek to maximize opportunities to share rights-of-way and pipeline capacity.*



- 9) *In accordance with standards adopted by the Department of Environmental Protection that ensure the protection of water quality, permits seeking to utilize horizontal directional drilling to cross under waterways and other topographic land features, such as steep inclines and declines, should be prioritized during review to recognize their potential to avoid surface disturbances, impacts on sensitive lands, forest fragmentation, viewsheds, and direct intersection with waterways.*
- 10) *Pipeline operators should collaborate to standardize right-of-way markers, including the spacing of markers, contact information for the pipeline operator, location of the pipeline, notation to contact PA One Call prior to any excavation, and other critical information. Multiple pipelines in a common right-of-way should be noted on the marker.*
- 11) *Landowner outreach efforts, such as those of the county extension offices, should be enhanced to expand landowner awareness of the opportunities, implications, standard terms and conditions and other important information related to engaging in the leasing of pipeline rights-of-way.*
- 12) *County and municipal governments should be encouraged to consult with gathering line operators to better understand the implications of a proposed project on a county or municipal comprehensive plan.*
- 13) *The Public Utility Commission and the Department of Environmental Protection should continue their efforts at coordination and public outreach to further citizens' understanding of the respective roles each agency plays in the review of permitting, siting, and placement of natural gas gathering lines.*
- 14) *The Governor's Center for Local Government Services, in cooperation with the Public Utility Commission and the Department of Environmental Protection, should work with local government associations and county planning offices to assist in disseminating information on applicable laws, regulations and other standards related to the construction and installation of natural gas gathering lines.*
- 15) *Pipeline operators should be encouraged to consult with the appropriate experts to replant right-of-ways with vegetation that fosters habitat development for wildlife.*
- 16) *Consideration should be given to utilization of existing or new pipeline pathways near existing or potential industrial development to maximize job creation, lower energy costs, and secure the nation's energy independence.*

