Research and development of the Chester County Pipeline Notification Protocol was made possible by a United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Technical Assistance Grant.
Preface:
Chester County, Pennsylvania is a nexus of aging interstate pipeline infrastructure poised for expansion to accommodate transport of vast Marcellus Shale gas to market.

In response to observed gaps in communications of pipeline planning notifications between pipeline operators (Operators) and Chester County officials, a collaborative effort developed between the Pennsylvania Chester County Commissioners, East Brandywine Township and Pipeline Safety Coalition1.

Apart from the US Department of Transportation Pipeline and Hazardous Materials Administration (PHMSA) Pipelines and Informed Planning Alliance (PIPA)2 recommendations, pre-grant research indicated a national absence of a standardized notification protocol. On behalf of the partnership, PHMSA’s Technical Assistance Grant (TAG) program funds were awarded to East Brandywine Township for the purpose of research and development of an established notification protocol for informing Chester County officials of projected or planned pipeline projects. The goals were to address the observed absence of notification protocol by Operators when planning pipeline projects in Chester County and to improve pipeline, community and environmental safety over time through improved communications and collaborative information sharing.

Chester County was selected for research and development of an established notification protocol for its status as an area that exemplifies a region in which a pipeline incident could pose significant risk to people and the environment. Located in the Greater Philadelphia Region, the first railroads of 1828 traversed Chester County, as did the first coast to coast roadways in the early 1900s. Known as Lincoln Highway, the still active U.S. Route 30 spans the East to West coasts. Gas pipeline infrastructure constructed in the 1950’s followed much the same paths, burying pipelines below sparsely populated and often remote areas of Chester County that are now intertwined with urban and suburban populations.

As reported by PHMSA 2012 data,3 Chester County represented 1% of Pennsylvania’s total square miles and ranked 3rd highest of Pennsylvania’s 67 counties for percent of miles4. In 20095, Chester County’s 750.51 square miles contained 560 linear miles of pipeline infrastructure which included 336 gas miles and 224 liquid miles. In the two year period of 2010-2012, the density of Chester County pipeline infrastructure increased by 6.07% while population slowed from the 2009 US Census rate of 15.1% to 1.278%. While population growth as slowed to 1.278% the 6.07% pipeline infrastructure increase may

1 Pipeline Safety Coalition: PSC: a Pennsylvania Non Profit dedicated to pipeline safety
2 Pipelines and Informed Planning Alliance
3 PHMSA
4 The two counties ranking above Chester County, Washington 6.2%, Greene 5.5%, Chester 4.5%, are located in Marcellus Shale drilling regional
5 Source: PHMSA
contribute to increased High Consequence Areas (HCA). Using available data, the Chester County Planning Commission (CCPC) has identified 59 of 73 municipalities impacted by pipeline infrastructure.

Additionally, Chester County’s sensitive environmental areas\(^6\) include 16 Exceptional Value Waters (EV) and 33 High Quality Waters (HQ); cold water and warm water fish migratory and trout stocking waters; wetlands, abundant farmland and steep slopes abutting community water intakes which affect Community Water Systems (CWS) and/or Non-transient Non-community Water Systems (NTNCWS)\(^7\). Many of these sole source aquifer recharge areas are karst aquifers, a soluble carbonate geology sensitive to activities such as land development which impacts groundwater filtration and groundwater flow.

Methodologies of the Chester County initiative drew from communication principles of PIPA, initiation of full stakeholder participation, adherence to policies and principals of Chester County’s Comprehensive Policy Plan *Landscapes 2*\(^8\) and recommendations to PHMSA\(^9\), by the Transportation Research Board (TRB) of the National Academies\(^10\). Models for web based implementation of a notification process were vetted through two Technical Assistance Grant models: “Georgia Public Services Commission Gas Pipeline Construction Notification and Evaluation of Pipeline Construction 11” and “Brookings County, South Dakota.12” CCPC additionally vetted a Strathcona County, Alberta Canada model.

Under the auspices of the County Commissioners, the project shared the PIPA goal of fostering early communication in the land development process among all stakeholders and sought to establish a standardized notification process for Operators and local stakeholders to use early in land use planning associated with pipeline infrastructure.

The TAG program was first authorized in the Pipeline Safety Improvement Act of 2002\(^13\) and offers technical assistance funding opportunities to communities for projects that result in promoting and strengthening the quality of public participation in official proceedings in pipeline issues.

The Chester County Pipeline Notification Procedure (PNP) is intended to ensure collaborative risk assessment and to serve as a transferable prototype. The PNP is a recommended notification protocol and not mandated by any public or private entity.

\(^6\) as defined in 49 CFR 195.6

\(^7\) as defined in 49 CFR 195.6

\(^8\) *Landscapes 2*


\(^10\) Transportation Research Board

\(^11\) The Georgia Public Services Commission Gas Pipeline Construction Notification and Evaluation of Pipeline Construction

\(^12\) http://puc.sd.gov/pipelinesafety/

**Acronyms:**

CZs: Consultation Zones  
CCCD: Chester County Conservation District  
CCPC: Chester County Planning Commission  
CWS: Community Water Systems  
EV: Exceptional Value Waters  
HCA: High Consequence Area  
HQ: High Quality Waters  
INGAA: Interstate Natural Gas Association of America  
FERC: Federal Energy Regulation Commission  
MOU: Memorandum of Understanding  
NTNCWS: Non-transient Non-community Water Systems  
NTSB: The National Transportation Safety Board  
PHMSA: Pipeline and Hazardous Materials Safety Administration  
PI: Principal Investigator: Lynda Farrell, Executive Director Pipeline Safety Coalition  
PIPA: Pipeline Informed Planning Alliance  
PNP: Pipeline Notification Protocol  
PSC: Pipeline Safety Coalition  
ROW: Right of Way  
TAG: Technical Assistance Grant  
TRB: Transportation Research Board of the National Academies
**Glossary:**

**Building Setback** – See “Setback”

**Consultation Zone** – Reference Recommended Practice BL05. An area extending from each side of a transmission pipeline, the distance of which should be defined by local governments, to describe when a property developer/owner, who is planning new property development in the vicinity of an existing transmission pipeline, should initiate a dialogue with a transmission pipeline operator.

**Damage** – Any impact or exposure that results in the need to repair an underground facility due to a weakening or the partial or complete destruction of the facility, including, but not limited to, the protective coating, lateral support, cathodic protection or the housing for the line, device or facility.

**Developer** – An individual or group of individuals who apply for permits to alter, construct and install buildings or improvements or change the grade on a specific piece of property.

**Distribution Pipeline** – A natural gas pipeline other than a gathering or transmission line (reference 49 CFR 192.3). A distribution pipeline is generally used to supply natural gas to the consumer and is found in a network of piping located downstream of a natural gas transmission line.

**Easement** – (1) A legal instrument giving a transmission pipeline operator a temporary or permanent right to use a right-of-way for the construction, operation, and maintenance of a pipeline. It may also include temporary permits, licenses, and other agreements allowing the use of one’s property. (2) An easement is an acquired privilege or right, such as a right-of-way, afforded a person or company to make limited use of another person or company’s real property. For example, the municipal water company may have an easement across your property for the purpose of installing and maintaining a water line. Similarly, oil and natural gas pipeline companies acquire easements from property owners to establish rights-of-way for construction, maintenance and operation of their pipelines. (3) A legal right, acquired from a property owner, to use a strip of land for installation, operation and maintenance of a transmission pipeline.

**Emergency Preparedness** – The act or state of being prepared to respond to and handle a pipeline emergency. Pipeline operators are required to have emergency preparedness programs, plans, and procedures in place to implement during pipeline emergencies.

**Emergency Response** – The actual response taken to address an emergency. The response to a pipeline emergency should be consistent with the pipeline operator’s and other emergency responders’ programs, plans, and procedures.

**Encroachment** – (1) A human activity, structure, facility, or other physical improvement that intrudes onto a transmission pipeline right-of-way. (2) Encroachment refers to the unauthorized use of a right-of-way in violation of the easement terms.

**Facility** – A buried or aboveground conductor, pipe, or structure used to provide utility services, such as electricity, natural gas, liquids refined from oil, oil, telecommunications, water, sewerage, or storm water.

**Feather Cut** - A method to trim trees to create a natural looking profile. (Also see Hard Cut.)
Gas – Natural gas, flammable gas, or gas which is toxic or corrosive. (Reference 49 CFR 192.3) Gases are normally compared to air in terms of density. The specific gravity of air is 1.0. Any gas with a specific gravity less than 1.0 (such as natural gas) will rise and usually disperse. Any gas having a specific gravity greater than 1.0 will fall and collect near the ground or in low-lying areas such as trenches, vaults, ditches, and bell holes – such occurrences can be hazardous to human health and safety.

Gas Transmission Pipeline – A pipeline, other than a gathering line, that 1) transports gas from a gathering line or storage facility to a distribution center, storage facility, or large-volume customer that is not downstream from a distribution center; 2) operates at a hoop stress of 20 percent or more of specified minimum yield strength; or, 3) transports gas within a storage field. (Reference 49 CFR 192.3) A gas transmission pipeline includes all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.

Geographic Information System (GIS) – An organized collection of computer hardware, software, and geographic data used to capture, store, update, maintain, analyze, and display all forms of geographically referenced information.

General Route Evaluation and Project Feasibility Analysis: as stated in PIPA, Operators “connect point ‘A’ to point ‘B’ (and) evaluate potential routes from ‘A’ to ‘B’...”

Hazardous Liquid – Includes petroleum, petroleum products, anhydrous ammonia, and carbon dioxide. (Reference 49 CFR 195.2)

Hazardous Liquid Pipeline – All parts of a pipeline facility through which a hazardous liquids move in transportation, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

High Consequence Area – A location that is specially defined in pipeline safety regulations as an area where transmission pipeline releases could have greater consequences to health and safety or the environment. Regulations require a transmission pipeline operator to take specific steps to ensure the integrity of a transmission pipeline for which a release could affect an HCA and, thereby, the protection of the HCA.

MAOP – See Maximum Allowable Operating Pressure

Maximum Allowable Operating Pressure – The maximum pressure at which a gas transmission pipeline or segment of a pipeline may be operated under federal pipeline safety regulations (29 CFR Part 192).

Mitigation – Actions taken to alleviate, reduce the severity of, or moderate the consequences of failure.

14 PIPA: Appendix G, page 1-2
NPMS – National Pipeline Mapping System – a geographic information system (GIS) database that contains the locations and attributes of hazardous liquid and gas transmission pipelines operating in the United States. The NPMS also includes data on the locations of other geographic features throughout the U.S. The NPMS supports queries by the public and local governments to determine if transmission pipelines are located near their communities and to determine areas that could be impacted by releases from these pipelines. The NPMS may be accessed at http://www.npms.phmsa.dot.gov/.

One-call Center – An entity that administers a one-call system through which a person can notify transmission pipeline operators of proposed excavations.

One-call System – A system that enables an excavator to communicate through a one-call center to transmission pipeline operators to provide notification of intent to excavate. The one-call center will gather information about the intended excavation and then issue tickets to notify affected member transmission pipeline operators. The operators can then clear the tickets or locate and mark the location of their pipelines before the excavation begins. Excavators can then take care when excavating to avoid damaging the transmission pipelines. All 50 states within the U.S. are covered by one-call systems. Most states have laws requiring the use of the one-call system at least 48 hours before beginning an excavation.

Operator – Any person, utility, municipality, authority, political subdivision or other person or entity who operates or controls the operation of an underground line/facility.

Ordinance – An authoritative public rule, law or regulation, such as a zoning ordinance, issued by a local community government. A zoning ordinance is a device of land use planning used by local governments to designate permitted uses of land based on mapped zones which separate one set of land uses from another. Zoning may be use-based (regulating the uses to which land may be put), or it may regulate building height, lot coverage, and similar characteristics, or some combination of these.

Person – Any individual or legal entity, public or private.

Petroleum Products – Flammable, toxic, or corrosive products obtained from distilling and processing of crude oil, unfinished oils, natural gas liquids, blend stocks and other miscellaneous hydrocarbon compounds.

Pipeline – Used broadly, pipeline includes all parts of those physical facilities through which gas, hazardous liquid, or carbon dioxide moves in transportation.

Pipeline Easement – See “Easement”

Pipeline Operator – For natural gas transmission pipelines, a person who engages in the transportation of gas (reference 49 CFR 192.3). For hazardous liquid pipelines, a person who owns or operates pipeline facilities (reference 49 CFR 195.2). Generally, an operator is a company or person responsible for the operation, maintenance and management of the transmission pipeline.
Planning – An activity at the beginning of a project where information is gathered and decisions are made regarding the route or location of a proposed excavation based on constraints including the locations of existing facilities, anticipated conflicts and the relative costs of relocating existing facilities or more expensive construction for the proposed facility.

Planning Area – See Recommended Practice BL06. An area surrounding a transmission pipeline that is defined by ordinance and is based on characteristics of the pipeline and the area surrounding the pipeline. Local governments and property developers/owners should consider implementing a planning area to protect communities where new development is planned near transmission pipelines.

Plat – A map or representation on paper of a piece of land subdivided into lots, with streets, alleys, etc., usually drawn to a scale.

Project – An activity or task (or set of related activities or tasks) that is contemplated, devised, or planned and carried out for the purpose of accomplishing a goal. For example, a communication project could involve a planned set of activities to communicate the PIPA recommended practices to affected stakeholders. Usually thought of as affecting construction, maintenance or development activities, projects that could affect a transmission pipeline could be as simple as the planting of a tree or as complex as multi-million dollar construction projects.

Reverse 911 - Communication system in which DES or an Operator contacts potentially affected citizens in the case of an incident requiring evacuation or immediate response by those citizens

Right-of-way (ROW) – (1) Property, usually consisting of a narrow, unobstructed strip or corridor of land of a specific width, which a pipeline company and the fee simple landowners have legal rights to use and occupy. A ROW is a string of contiguous properties on which easements have been acquired along which the pipeline operator has rights to construct, operate and maintain a pipeline. (2) A defined strip of land on which an operator has the right to construct, operate and maintain a pipeline. The operator may own a right-of-way outright or an easement may be acquired for specific use of the right-of-way. (Also see Rights-of-way.)


Risk – the product of the probability or likelihood of an undesired event occurring and the consequences that may result from that event.

Risk Informed – Having adequate knowledge of associated risk to be able to make appropriate decisions relative to the risk.

Risk Reduction – Measures taken to minimize the probability or likelihood and/or consequences of risk.

Rural – An area outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, or community development. (Reference 49 CFR 195.2)

Setback – The minimum distance between a pipeline or the edge of a pipeline easement, and a building or other structure. A line established by local government ordinance, within a property, defining the
minimum distance between any building or structure or portion thereof to be erected or altered, and an adjacent right-of-way, street or property line. The setback is usually expressed as the minimum distance between the line of demarcation (e.g., a pipeline or the edge of a pipeline easement) and a building or other structure.

**Stakeholders** - landowners, municipalities, government and non government entities, pipeline operators.

**Temporary Work Space** – An area of land within which certain activities are authorized for a specified purpose and period of time, typically of short duration.

**Third-party Damage** – Third-party damage includes outside force damage to underground facilities (e.g., transmission pipelines) that can occur during excavation activities and is caused by someone other than the facility operator or its contractors.

**Transmission Pipeline** – When not specified includes both hazardous liquid and gas transmission pipelines. Transmission pipelines carry oil, petroleum products, natural gas, natural gas liquids, anhydrous ammonia and carbon dioxide from producing regions of the country to markets.

**Transmission Pipeline Corridor** – A pipeline corridor is a linear area where two or more pipelines (either part of the same or different pipeline systems) are closely grouped in a single right-of-way.

**Urban** – 1) Relating to or concerned with a city or densely populated area (e.g., "urban development"); 2) Located in or characteristic of a city or city life (e.g., "urban property owners").
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Executive Summary:
The Chester County Pipeline Notification Protocol (PNP) is an initiative of the Chester County Commissioners, East Brandywine Township and Pipeline Safety Coalition. Employing PHMSA’s 2010 Pipelines and Informed Planning Alliance (PIPA) report as its basis, the partnership sought to produce a template for bilateral notification procedures to be used by pipeline operators (Operators) and the County early on in land use planning. The purpose was to address a confluence of pipeline related risk management factors in Chester County which included:

1. the observed absence of a standard notification process when Operators planned pipeline projects
2. the observed absence of an identified point of contact (POC) for communications for both Operators and the County to use in pipeline matters
3. an increasing density of pipelines
4. an increasing number of High Consequence Areas (HCAs)
5. the function of Chester County as a nexus of existing Northeast/Gulf supply and demand infrastructure in relation to an imminent expansion of Pennsylvania’s existing pipeline infrastructure for transport of vast Marcellus Shale resources
6. concerns of the integrity of an aging pipeline infrastructure
7. increased public awareness and participation in pipeline matters

The landscape and age of Chester County pipeline infrastructure alone begat query of a need for improved Operator/County communications in order to address pipeline related risk management. Anecdotally, the need for a standard notification protocol had been evidenced in public awareness and participation during proposed pipeline projects in 2006, 2008 and most recently in a 2012 proposed pipeline through Chester County’s Hopewell Big Woods\(^{15}\). In the absence of a standard notification procedure, the Commissioners had not received notification by Operators of these planned pipelines in Chester County. The resulting inability to address needs and concerns of constituents from an informed perspective incentivized this project. The Commissioners also observed acute public awareness of the potential impacts to personal property, property values, quality of life, natural habitats, environment and the unique characteristics of Chester County resources. A result of public awareness was public willingness to participate in a collective community approach to decision making in pipeline/land use planning. Additionally, while Chester County has not experienced a significant pipeline incident to date, the Commissioners opined a prudent course of action to be proactive participation in risk management.

The project began with an end in mind approach to creating a notification protocol that would produce mutual benefits for all stakeholders thereby incentivizing broad community participation, increased

\(^{15}\) Hopewell Big Woods
pipeline safety awareness, proactive land use planning and a resulting improvement in Operator/Community relationships.

Research and definition of an established notification protocol sought to fill gaps of currently varied planning notifications that, based on study survey results\textsuperscript{16}, are unclear to both Operators, county and local officials and the community. Through establishment of “Notification” as the first step in Operator and local land use planning, the PNP seeks to address the bilaterally recognized concerns of encroachment and to produce mutually beneficial improvements in community communications, land use planning and pipeline safety in Chester County.

The PNP promotes inclusion of regional expertise early in pipeline and land use planning, through communications with a centralized County Point of Contact (POC). For their comprehensive land use planning expertise and overall county function, the study recommended the Chester County Planning Commission (CCPC) as PNP POC. The recommended means, or vehicle, of notification is a webpage addition to the CCPC website where Operators, municipalities and community register, provide input and gather information. A webpage provides verifiable notifications, secure registration and information sharing as requested by Operators during this study.

Key to a PNP is the study recommendation for adaption and adoption of PIPA Consultation Zones (CZs). For Chester County, density of existing pipeline infrastructure prompted adaption of CZs to include new pipeline infrastructure projects, expansions and maintenance. A risk management approach to pipeline and land use planning developed by PIPA and Industry, CZs are generically defined as: “an area extending from each side of a transmission pipeline, the distance of which should be defined by local governments, to describe when a property developer/owner, who is planning new property development in the vicinity of an existing transmission pipeline, should initiate a dialogue with a transmission pipeline operator.”

The PNP definition for Chester County CZs was determined to be: “an area extending 1,000 ft from each side of a transmission pipeline or a proposed transmission pipeline to describe when an operator or property developer/owner, who is planning land use activity should initiate a dialogue with the County through PNP.”

For Chester County, the recommended PNP design is for Operator initial notification in the first stages of their “General Route Evaluation and Project Feasibility Analysis,\textsuperscript{17}” when, as stated in PIPA, Operators “connect point ‘A’ to point ‘B’ (and) evaluate potential routes from ‘A’ to ‘B’...\textsuperscript{18}” Notification in a pre-

\textsuperscript{16} See Appendix A: Survey Response Report: Page 37
\textsuperscript{17} PIPA, Appendix G, Page 5
\textsuperscript{18} PIPA: Appendix G, page 1-2
application period of the proposed route, when Operators are conducting their general route evaluation
and feasibility analysis, affords regional input in the route planning process, land use planning and
promotes pipeline safety in the County. PNP and CZs may also provide Operators the opportunity to
contribute technical assistance to the CCPC in land use planning in proximity to pipelines. Through use
of the PNP recommended practices, Operators, developers, community and federal agencies may reduce
time, cost and the need for dispute resolution.

Notably, these PNP recommendations were created in the Commonwealth of Pennsylvania. Pennsylvania
is one of four states designated as a Commonwealth19. The word *commonwealth* refers to the common
"wealth", or welfare, of the public and emphasizes a government based on the common consent of the
people. The Pennsylvania Municipal Planning Code,20 Article VI, Zoning, Section 601. General Powers
states: “The governing body of each municipality, in accordance with the conditions and procedures set
forth in this act, may enact, amend and repeal zoning ordinances to implement comprehensive plans and
to accomplish any of the purposes of this act.” Section 602 addresses County Powers: “The powers of the
governing bodies of counties to enact, amend and repeal zoning ordinances shall be limited to land in
those municipalities, wholly or partly within the county, which have no zoning ordinance in effect at the
time a zoning ordinance is introduced before the governing body of the county and until the
municipality’s zoning ordinance is in effect. The enactment of a zoning ordinance by any municipality,
other than the county, whose land is subject to county zoning shall act as a repeal protanto of the county
zoning ordinance within the municipality adopting such ordinance.”

The PNP is not intended to usurp local municipal authority, rather to serve as a notification and land use
planning conduit between municipalities, Operators and counties and to further enhance pipeline risk
management and safety. While municipal zoning ordinances may or may not differ between adjacent
Commonwealth municipalities, interstate pipelines universally cross municipal and state boundaries. The
PNP should be adaptable in any locale.

While the project was intended to vet a PNP specific to the unique characteristic of Chester County,
located in a Commonwealth state, vetting PNP provided guidelines for regional adaption and adoption in
any regional or locality seeking to improve pipeline safety through risk management achieved by
proactive local participation in pipeline siting and safety. A check list for creating a PNP encourages:

1) County Commissioners vet, create and maintain oversight of review and development of a Pipeline
   Notification Procedure (PNP)
2) Establish a PNP Point of Contact (POC)
3) Identify/establish an Operator POC based in Operators’ government affairs

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19 Kentucky, Massachusetts, Pennsylvania and Virginia

20 Pennsylvania Municipal Planning Code
4) Establish Municipality POCs
5) Establish Consultation Zones (CZs)
6) Establish a PNP web page as POC location for verifiability and security

**Procedures and Findings** addresses the processes used to vet this PNP, survey data obtained and used to vet a PNP specific to Chester County, sample maps created by the CCPC for Consultation Zones by existing pipelines in relation to demographics, land use, and environmentally sensitive areas and for use in laying CZs in proposed pipeline planning and land use planning. A template for website design is provided.

Finally, specific to Chester County, Pennsylvania, the partners in this project vetted practicalities of cost, time and labor to produce a plan for implementing a PNP with the greatest success practicable. The initial list of recommendations created with a holistic, long term approach was evaluated to assure success to the greatest extent possible. The Chester County Commissioners committed to a phased approach to PNP:

**Phase I:** Chester County will create a web page to be called the “Pipeline Information Center” Once the web page is live, the Commissioners will introduce the program with high visibility, including media contact.

**Phase 2:** will involve hiring an employee to serve as the Point of Contact, expansion of the web page into a “public commons” on pipeline issues, mapping of the Consultation Zones, “registration” of Pipeline Operators and inclusion of Operators in County and municipal planning processes, development of a “guidebook” for landowners, facilitation of a series of public meetings and stakeholder outreach.

Recommendations beyond Phase 1 and 2 will be considered for implementation once additional resources become available. The County County Commissioners will periodically review implementation of the notification system, including meeting with officials from the pipeline companies and municipal officials to explore what additional steps from the report can be done to facilitate greater communication by all parties.
*Scope:*

The Pipeline Notification Procedure (PNP) is an initiative of the Chester County Commissioners, East Brandywine Township and Pipeline Safety Coalition. The purpose of the project was the research and development of recommendations for a County based “Pipeline Notification Procedure (PNP)” which would be transferable to other localities.

The PNP recommendations are structured to enhance pipeline safety and ensure the protection of people, the environment and pipeline infrastructure in Chester County, Pennsylvania through the establishment of bilateral communication standards for use early on in land use planning. Stakeholders included county, local, state and federal government entities, non government entities, citizens and pipeline companies operating in, or planning pipeline operations in, Chester County, PA.

The scope of work committed to:

1) define Chester County stakeholders in pipeline projects
2) review existing national notification protocols
3) review and correlate pertinent PIPA recommendations
4) conduct protocol establishing meetings with stakeholders
5) define protocol for citizens to notify the County upon landowner notification of pipeline projects
6) produce recommendations

Pipeline Notification Procedure (PNP) was created as notification recommendations for use in Chester County, in the planning of gas transmission, hazardous liquid pipelines and associated infrastructure, such as compressor stations, valves, meters, city gates and distribution lines as well as local land development. Chester County does not currently, nor does Chester County anticipate, well sites or gathering lines in the landscape.

PNP recommendations were established as a transferable template, are recommended protocols and are not mandated by any public or private entity.
Procedures and Findings:
Research of a Chester County Pipeline Notification Protocol (PNP) sought to identify mechanisms to fill gaps in a currently varied notification plan that, based on project survey results\(^{21}\), were unclear to both Operators, the County and community. Establishment of “notification protocol” recommendations sought to address bilaterally identified concerns and to produce mutually beneficial improvements in Operator/community communications, land use planning and pipeline safety in Chester County, Pennsylvania.

Research operated jointly under the “5Ws” of information gathering and the recommendations of PIPA’s “Seven Step Communication Model.” The 5Ws of information gathering used in journalism and research constitute a formula for getting the complete story on a subject by obtaining factual answers rather than "yes" or "no" answers to: “Who, What, When, Where, Why.” Elements of PIPA’s Seven Step Communication Model\(^{22}\) to identify a problem or need, determine which stakeholder/s need to receive communications, to identify the message to be communicated and to vet a delivery system best suited for the desired outcome, were incorporated into the research model. Design of the recommended Chester County PNP was achieved by incorporating the basics of information gathering and a communication model in a framework of factual, unbiased reporting and neutral vetting.

Who:
The project Principal Investigator (PI) was Lynda Farrell, Executive Director, Pipeline Safety Coalition\(^{23}\). A foundational meeting was held with the PI and the three County Commissioners; Ryan Costello, Kathi Cozzone and Terrence Farrell. The purpose of the meeting was to establish a broad stakeholder list for use in vetting the 5Ws of a PNP. County officials then met with the PI to further hone stakeholder needs through County department expertise. For Chester County the departments included the Planning Commission, Conservation District, Water Resource Authority, Department of Emergency Services and a County Commissioner representative.

Vetting key stakeholders included survey data analysis and interviews with prospective stakeholders for their interest in participation. Roles were broadly proposed in order to be inclusive of the needs and opines of diverse demographics, provide a balanced approach, unbiased findings and verifiable results. The core stakeholders list was honed to a smaller group in order to keep the PNP template as simple and therefore acceptable to stakeholders as possible, to provide a minimum of culture change issues and to minimize costs and promote success. A proposed PNP stakeholder list for development and implementation over time should define the ongoing roles of each stakeholder for review of modifications to the PNP and may include:

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\(^{21}\) Survey Response Report: Page 19

\(^{22}\) PIPA’s Seven Step Communication Model

\(^{23}\) Pipeline Safety Coalition
Key Stakeholders & Roles:

1. County Commissioners
   a. Oversight
   b. Establish Point of Contact (POC)
   c. Create a Memorandum of Understanding (MOU) between the County and municipalities
   d. Attend meetings as appropriate
2. County Chief Operating Officer
   a. Internal oversight as appropriate
   b. Establish contractual agreements as needed
   c. Oversight of funding and research for County web page
3. County Planning Commission
   a. PNP Point of Contact (POC)
   b. Webpage development and oversight
4. Municipalities (one representative and one alternate)
   a. Establish representative POC
   b. Register on the PNP webpage
   c. Notify PNP of proposed pipeline projects in respective municipality
   d. Notify landowners of proposed pipeline projects in municipality
5. County Conservation District
   a. Advisory/Professional input
   b. As the county contact for PA DEP permit reviews, CCD has often been the first County POC. CCD interview check lists include the question, “Have you contacted DEP?”  An ongoing role could be to ask, “Have you contacted the county PNP?” If the Operator has not contacted PNP, CCD could provide the PNP webpage to the Operator and provide the PNP with notification of the Operator’s status. Note: Operator contact with CCD is made only after plans are drawn and pre-filing has been made to FERC
   c. Notification to PNP of District/ PA DEP notification of permitting status of Operator
6. County Water Authority
   a. Advisory/Professional input
   b. Notification to PNP of CWA contact by Operator
7. County Emergency Responders
   a. Advisory/Professional input
   b. Reverse 911 - design and implementation
8. Landowner/Community
   a. One POC and one alternate from each Northern Tier and Southern Tier
   b. Register on the PNP
c. Notify PNP when landowners are contacted

9. NGOs/Environmental Groups
   a. Advisory/Professional input

10. Pipeline operators in or abutting the County
    a. Provide POC information
    b. Register with PNP
    c. Provide notification to PNP in evaluation stages of planning
    d. Provide PNP technical assistance
    e. Participate in review, modifications and promotion of PNP statewide in Pennsylvania

11. PA Public Utilities Commission
    a. Advisory; establishment, development, maintenance

PNP Long term Stakeholder/Advisory Committee Recommendations:

Once a PNP is established, the following entities are recommended for inclusion:
1) Home Builders Association
2) Realtors Association
3) PHMSA
4) FERC
5) NTSB

In Chester County, the vetting of “Who” was facilitated by Pipeline Safety Coalition (PSC) with the initiation of a Chester County pipeline operator database using the PHMSA Pipeline Operator database as foundation. Operators with existing pipeline infrastructure in Chester County were contacted directly to update local contact information and Operators known to be prospective county Operators were added to the list.

The Chester County Planning Commission (CCPC) and the PI identified and initiated six stakeholder databases: Municipalities, Pipeline Operators, County/State/Local Entities, Political Offices, NGOs and Utilities. The database of Operators was supplemented with lists of Operators located in or proposing pipeline projects in counties adjoining Chester County.

The project engaged applied anthropologist and researcher Dr. Simona Perry to conduct surveys of three demographics; Operators, Municipalities and Landowners/County residents. One purpose of the surveys was to vet the “Who” in a stakeholder list. Survey results were synthesized with data collected at meetings with municipalities, landowners and Operators. Dr. Perry’s Survey Response Report is unabridged for its integral content.
Survey Response Report: Chester County, Pennsylvania Pipeline Notification Protocol

Introduction

Increasing pipeline activity in Chester County, Pennsylvania resulted in The Chester County Commissioners’ observation of the absence of standardized notification processes for pipeline operators to use when existing pipelines are expanded, new pipelines proposed, and maintenance or repair work required. The Commissioners noted the importance of operators communicating with the County early in the pipeline planning process so that local input of Chester County’s unique features, its environment, community and land use planning are inclusive in pipeline siting and safety planning.

To address these issues, an application was made for a Technical Assistance Grant (TAG) offered by the US Department of Transportation’s Pipeline and Hazardous Materials Administration (PHMSA). A proposal was submitted through a partnership formed between The Commissioners, East Brandywine Township (EBT) & Pipeline Safety Coalition (PSC) to facilitate creating a notification protocol. The purpose of the project, dubbed Pipeline Notification Protocol (PNP) was to research, define and create a standard notification protocol that involves a variety of community stakeholders.

PNP drew from PHMSA's Pipelines and Informed Planning Alliance (PIPA) Recommendations for Reducing Risks and Improving the Safety of Communities and Pipelines (PIPA, 2010). PIPA was created in cooperation with industry, state and federal agencies and community stakeholders; precisely what PNP was designed to do in Chester County. A distinct difference between PNP and PIPA is that PIPA recommendations were created to be used where existing pipeline ROWs exist and PNP was designed to include existing pipeline expansions, new pipelines and maintenance or repair work.

In close collaboration with the Chester County Planning Commission (CCPC), development of the PNP involved an evaluation of Geographic Information System (GIS) data and surveys relating to the specific needs of Chester County, including identifying the types of information and modes of information dissemination that would be most useful for raising awareness, education, and informing public participation in future pipeline projects. This Report outlines the survey results.

The survey was designed using Constant Contact on-line survey software. Different surveys were created for landowners/residents, municipal officials, and pipeline operators with questions based on the anticipated role each would have in the PNP. All surveys were initially distributed via e-mail by Pipeline Safety Coalition, with assistance from the Chester County Planning Commission.

Landowner/Resident Survey Responses

A survey of Chester County landowners and residents was designed to gain a better understanding of the current levels of knowledge regarding existing pipeline infrastructure and pipeline planning throughout the County. There was also a focus on gauging the various modes of communication (e.g., internet, newsletters, word-of-mouth, etc.) that residents currently use to gather information, and what type of
information they would like to receive from the County or operators for work that is being planned in existing ROWs, as well as for proposed new pipeline projects.

Distribution of Survey
The on-line survey to Chester County landowners and residents was distributed via an electronic mail invitation from Pipeline Safety Coalition to 115 contacts on June 1, 2013. Two follow-up reminders were sent to these same contacts on June 14 and June 25. These initial contacts were obtained by Pipeline Safety Coalition from the attendance list of participants at recent pipeline meetings in the County, through referrals, and from a PNP introductory meeting held by The County Commissioners on April 10, 2013. The meeting drew over 100 attendees representing local, state, and federal government entities, landowners, citizens, pipeline operators, and the press.

Response Rate and Characterization of Survey Respondents
There were 55 unique hits (number of times the survey was opened) from June 1 through July 12, 2013. Forty-seven of the 115 landowners and residents completed responses, giving a response rate of 41%.

Respondents identified living in 24 different townships, boroughs, and cities (Table 1). More than one person responded that they lived in Warwick (7 respondents), West Vincent (6), East Brandywine (5), Caln (4), East Nantmeal (3), West Bradford (3), Chadds Ford (2), North Coventry (2), Uwchlan (2), Wallace (2). Other municipalities where respondents reported living were: Kennett, Kennett Square, Downingtown, Elverson, Honey Brook, Pennsbury, Sadsbury, Upper Uwchlan, West Marlborough, West Pikeland, and West Whiteland. Four respondents reported living in more than one municipality. Three respondents reported living outside of Chester County; two in Berks County and one Delaware County. These three responses were eliminated from subsequent analysis.

The age range of respondents was from 19-65+ years old, with 66% of respondents being in the 36-64 age group, 27% of respondents being in the 65+ age group, and 6.8% being in the 19-35 age group. Forty-five of the 47 respondents reported their highest level of education with 50% reporting from Chester County having completed college, 41% graduate school, and 6.8% high school. Respondents identified a diversity of different occupations and 25% reported being retired. Ninety-three percent of respondents own their own residence in Chester County, with 2.3% either renting their residence, living with relatives or friends, or living in an intentional community. Length of residency was between two and 41 years, with a median length of residency of 15.5 years. See Table 1: (page 21)
Table 1. Location of Chester County landowner and resident respondents.
(Note: See Map 1 page 40 for reference)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caln Township</td>
<td>4</td>
</tr>
<tr>
<td>Chadds Ford Township</td>
<td>2</td>
</tr>
<tr>
<td>Downingtown Borough</td>
<td>1</td>
</tr>
<tr>
<td>East Brandywine Township</td>
<td>5</td>
</tr>
<tr>
<td>East Nantmeal Township</td>
<td>4</td>
</tr>
<tr>
<td>Elverson Borough</td>
<td>1</td>
</tr>
<tr>
<td>Honey Brook Borough</td>
<td>1</td>
</tr>
<tr>
<td>Kennett Square Borough</td>
<td>1</td>
</tr>
<tr>
<td>Kennett Township</td>
<td>1</td>
</tr>
<tr>
<td>North Coventry Township</td>
<td>2</td>
</tr>
<tr>
<td>Pennsbury Township</td>
<td>1</td>
</tr>
<tr>
<td>Sadsbury Township</td>
<td>1</td>
</tr>
<tr>
<td>Upper Uwchlan Township</td>
<td>1</td>
</tr>
<tr>
<td>Uwchlan Township</td>
<td>2</td>
</tr>
<tr>
<td>Wallace Township</td>
<td>1</td>
</tr>
<tr>
<td>Warwick Township</td>
<td>7</td>
</tr>
<tr>
<td>West Bradford Township</td>
<td>3</td>
</tr>
<tr>
<td>West Marlborough Township</td>
<td>1</td>
</tr>
<tr>
<td>West Pikeland Township</td>
<td>1</td>
</tr>
<tr>
<td>West Vincent Township</td>
<td>6</td>
</tr>
<tr>
<td>West Whiteland Township</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

Responses to Survey Questions

*Pipeline Infrastructure and Where Residents Live*

With respect to pipeline infrastructure on or near where they live, 59% of respondents report that they do not have a pipeline ROW on their property, 36% of respondents report that they do have a pipeline ROW on their property, and 4.5% of respondents do not know if they have a ROW or not. Of those with a pipeline ROW on their property, two residents did not identify the company operating the pipeline. Other residents identified the following companies as the operators of the pipeline(s) on their property: Columbia Gas (7 respondents), Sunoco (1), NiSource (1), Williams/Transco (1), TexasEastern (2), Buckeye (1), and Tepco (2). Three respondents who do not have pipelines on their property reported in the comments that they have an existing or planned pipeline ROW near or adjacent to their property. Seventy-seven percent of respondents reported that they do not have a compressor station on or near the property where they live, 18% reported that they do have a compressor station on or near them, and 4.5% reported that they did not know.

*General Information Gathering Resources and Frequency of Use*

Respondents were asked what resources they use for information gathering in a general sense and how often they rely on those sources. Eighty-two percent indicated they gather information by attending
meetings, 70% gather information through word-of-mouth, and 70% rely on specific websites for general information gathering. Slightly less valuable a source of information, but still important to more than half of respondents were local newspapers (64%) and radio, television, or internet (59%). Of less importance to all respondents were newsletters (43%) and e-mail listservs (41%) and of least importance were billboards or road signs (18%). Of the top three resources for general information described above, attending meetings was an activity that 70% of respondents reported participating in 1-2 times a month, followed by searching the internet on a daily basis (61%). In looking at the trends in the frequency at which respondents search for information across various other types of resources, 45% gather information from local newspaper(s) on a daily basis, 36% gather information from newsletters 1-2 times a month, 34% get information from television daily, and 32% from the radio daily. Notably, 66% of respondents reported that they never obtained information from e-mail list serves and 45% indicated that they never got information from newsletters.

Information Gathering Styles and Sources Specific to Pipeline Information

Respondents were asked to select the types of information they used to find out about work on existing pipelines and on proposed pipeline projects. Based on the number of types of information respondents selected, their responses also allowed for a calculation of intensity of their search for information using the number of types of information as a proxy for that intensity. This intensity is important because it could serve as an indicator of interest or concern for the pipeline issue.

When residents were asked to identify all of the different ways that they gather information about existing pipeline ROWs in their community 39% rely on only one source of information (“low-information gatherers”), 34% rely on at least two sources of information (“moderate-information gatherers”), 11% rely on three sources of information (“high-information gatherers”), 14% (6 out of 44 respondents) do not know how to find information about existing ROWs, and one respondent replied “Does not apply.” Among low-information gatherers, 82% rely on signs or markers along the ROWs. For moderate-information gatherers, 80% rely on signs or markers along ROWs and 60% rely on the PA One Call System. And, for high-information gatherers, 100% rely on the PA One Call System and signs or markers along ROWs. Overall, only 16% of all information gatherers (those who identified as knowing where to find information about ROWs) said they would find information by contacting the Chester County Planning Office for information, whereas 39% said they would find information through PA One Call and 82% said they would rely on signs and markers along the existing ROWs.

When residents were asked to identify all of the different ways that they gather information about proposed pipeline projects in their community 73% rely on between one and three sources of information (“low-information gatherers”), 30% rely on between four and eight sources of information (“high-information gatherers”), and 5% (2 out of 44 respondents) do not know how to find information about proposed pipeline projects. Among low-information gatherers, 44% rely on talking with their neighbors,
38% rely on mailings from pipeline operators or companies, and 31% rely on community or neighborhood meetings for information. In addition, 25% of low-information gatherers rely on information in local newspapers and 19% seek information from local officials. For high-information gatherers who seek out between four to eight sources of information, 92% rely on talking with their neighbors, 85% rely on newspapers, and 77% rely on community or neighborhood meetings for information. These high-information gatherers also favor local officials (69%) and mailings from pipeline operators or companies (54%) to get information regarding proposed pipeline projects. Overall, 62% of all information gatherers (those who identified as knowing where to find information about proposed pipeline projects) indicated they relied on talking to their neighbors to find information, followed by community and neighborhood meetings and mailings from a pipeline operator or company (both 45%). None of the information gatherers indicated they would find information by listening to the radio and only one respondent (in the high-information gathering category) indicated they would find information from the television.

Resident Concerns Regarding Existing Pipeline ROWs

What concerns do you have regarding existing pipeline right-of-ways (ROWs)?

This open-ended question was posed to Chester County landowners and residents to get a better understanding of their concerns regarding existing pipelines in their neighborhood or on their property. The open-ended responses were coded and concerns categorized where appropriate. After the coding was complete, a count of the number of times a concern, or category of concern if it was mentioned by more than one respondent, was made and a percent calculated (# respondents mentioning item in their response/n= percentage of respondents). See Table 2 (page 24).

Eleven percent of respondents had no concerns regarding existing pipeline ROWs. For those who did have concerns, they were varied and numerous, including 19 different items or categories of concern.

The most common concern, mentioned by 25% of respondents, involved the general safety of existing pipelines. One respondent said: “They are too close to vital life services and human activity,” and others just cited “Safety.”

The second most common concern (23% of respondents) about existing pipelines was a category of items related to proper maintenance and inspections and the risk of leaks and spills to the air and water. One respondent in this category noted concern about, “Leakage, noise and dispersal of diesel fumes from stations.”

Eighteen percent of respondents mentioned concern about the environmental and health impacts of existing pipelines. A comment from a property owner in West Vincent that typifies this category of concern said, “An Exceptional Quality waterway, French Creek, borders our land. The existing ROW directly mows the banks. We want to insist on a 100 ft riparian buffer of woody vegetation.”
There was equal concern (14% of respondents) about three categories of concern: Proximity of existing pipelines to residential areas and dense housing development; Communication with and notification of landowners; and Property destruction/inadequate site restoration. One respondent from East Nantmeal said, “Expansion and maintenance. Never notified when maintenance is to be done. They just show up even for major patching repairs. They do not repair ruts or re-seed when they leave the property, even when I request it. I don't push it because there are some large trees in the easement. I am afraid if I annoy them they will clearcut it all.”

Table 2. Landowner Survey: Concerns about Existing Pipeline Right of Ways Note: *(n=44)*

<table>
<thead>
<tr>
<th>Concerns about Existing Pipeline Right-of-Ways</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents*</th>
</tr>
</thead>
<tbody>
<tr>
<td>General safety</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Maintenance and inspections leading to risk of leaks and spills (air and water)</td>
<td>10</td>
<td>23%</td>
</tr>
<tr>
<td>Environmental and health impacts</td>
<td>8</td>
<td>18%</td>
</tr>
<tr>
<td>Proximity to residential areas/dense housing development</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Communication with and notification of landowners</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Property destruction/inadequate site restoration</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Increasing ROW size/expansion of ROW</td>
<td>5</td>
<td>11%</td>
</tr>
<tr>
<td>Mistrust in government agency and companies</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Increasing existing pipe size and pressure</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Using existing ROWs for new lines instead of taking more land</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Property values, financial impacts</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Public education</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Disturbance of ROW by landowners and developers</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Abandoned in place pipelines</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Standards through sensitive areas</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Poor signage</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Exclusion of property owners from decision-making</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Pipeline companies have political and legal advantages</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Age of existing pipelines</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>No concern</td>
<td>5</td>
<td>11%</td>
</tr>
</tbody>
</table>

Resident Concerns Regarding Proposed Pipeline Projects

What concerns do you have regarding proposed pipeline projects?

This open-ended question was posed to Chester County landowners and residents to get a better understanding of their concerns regarding proposed pipeline projects in their neighborhood or on their property. The open-ended responses were coded and concerns categorized where appropriate. After the coding was complete, a count of the number of times a concern, or category of concern if it was mentioned by more than one respondent, was made and a percent calculated (# respondents mentioning item in their response/n= percentage of respondents). See Table 3 (page 25)
As opposed to existing pipelines, only one person had no concerns about proposed pipeline projects. The remaining 43 respondents with concerns expressed 21 different items or categories of concern.

The most common concern, mentioned by 48% of respondents, involved the environmental and health impacts of proposed pipeline projects. One specific concern about environmental impacts came from a resident of West Vincent: “We want to help conserve the most valuable forests. Specifically the Hopewell Big Woods because they were threatened with a recent proposed pipeline. Can our existing ROW ever be offered as an alternative to disturbing virgin forests? We want to explore if that is an option.” More generally, a resident of East Nantmeal noted, “they threaten farmland, forests, wildlife areas and streams as well as areas that have great national historic significance.”

Table 3. Landowner Survey: Concerns about Proposed Pipeline Projects

<table>
<thead>
<tr>
<th>Concerns about Proposed Pipeline Projects</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental and health impacts</td>
<td>21</td>
<td>48%</td>
</tr>
<tr>
<td>General safety</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Property destruction, inadequate site management during construction and restoration</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Timely communication with landowners, opportunities for input from community and local government</td>
<td>8</td>
<td>18%</td>
</tr>
<tr>
<td>Cumulative nature of projects</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Loss in property values, financial impacts</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Impacts on cultural, historic and scenic landscapes</td>
<td>5</td>
<td>11%</td>
</tr>
<tr>
<td>No more new pipeline ROWs, use existing ROWs for new pipelines</td>
<td>5</td>
<td>11%</td>
</tr>
<tr>
<td>Proximity to residential areas, gathering places, appropriate placement of ROWs</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Lack of information from pipeline companies, lies and withheld information</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Alternatives fully and fairly evaluated by FERC</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Citizens are uninformed and disempowered to do anything</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Adequacy of maintenance, inspections, oversight</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Regulation inadequate or uncertain</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Hiring of unqualified and cheapest contractors</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Property takings and rights of landowners</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Impact to livestock</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Pipeline companies lack knowledge of local conditions</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Traffic impacts</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Increasing ROW size/expansion of ROW</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Increasing existing pipe size and pressure</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>No concerns</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Notes: * (n=44)

The second most common concern (25% of respondents) about proposed pipeline projects were categories of items related to general safety, specifically explosions, leaks, and construction practices, and related to property destruction and inadequate site management during construction and restoration. One
respondent who had concerns in the general safety category said, “We do not need the added risk of more pipelines. We endure enough risk in Northern Chester County with existing pipelines as well as Limerick Nuclear power plant where spent fuel is stored.” Another, with concerns related to inadequate site management during construction said, “Columbia Gas provided no ‘port-o-pots’ so we had human waste on our property during the last dig.” Many of those expressing concerns related to property damage were most concerned about the loss of trees on their properties, on adjacent properties, or in places that they deemed ecologically important. As one respondent from West Bradford said, “The removal of more trees and changing the landscape from wooded to more of an open lot, which will cost me more to cool my house because of the loss of more shade trees and more time committed to yard maintenance.”

Eighteen percent of respondents mentioned a concern about timely communication with landowners and opportunities for input from community and local government before proposed projects were approved or began. A property owner from Chadds Ford was concerned about “making sure all stakeholders are fully notified in a timely manner in the pre-application period of the proposed route and have an opportunity to provide meaningful input into the route planning process and mitigation requirements.”

For 14% of respondents, the cumulative nature of pipeline projects and loss in property values/financial impacts were also of concern. One respondent from East Brandywine was concerned about “creating a new ROW to suit Columbia Gas needs without any concern for its impact on homes already having a previous ROW running thru their yards (surrounding on both sides).”

**Pipeline Notification Protocol Information and Dissemination Preferences**

**What do you see as the most important information needed in a pipeline notification protocol for local residents, whether for existing pipeline right-of-ways (ROWs) or proposed pipeline projects?**

This open-ended question was posed to Chester County landowners and residents to get a better understanding of the type of information that they deem most important in a pipeline notification protocol. The open-ended responses were coded and categorized (into 6 categories) based on the type of information identified by respondents. Even though it was not part of the question, the majority of respondents also commented on the methods used to disseminate that information, so those responses were also coded and categorized. After the categories were developed, a count of the number of times a sub-category or category was mentioned by respondents was made, and a percent calculated (# respondents mentioning category in their response/n= percentage of respondents). See Table 4 (pages 27-28)
## Table 4. Landowner Survey: Creating a Pipeline Notification Protocol

<table>
<thead>
<tr>
<th>Important Information and Dissemination Methods for Pipeline Notification Protocol</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Details of where, what, when, why, and who</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exact information about the location of existing or proposed pipelines</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Laws and regulations and agencies who will be overseeing the pipelines</td>
<td>5</td>
<td>11%</td>
</tr>
<tr>
<td>Information about the size, volume, pressure of the pipelines</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Details of all companies involved, including those hired to do construction</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Consideration of all pipeline alternatives</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Information about where gas is coming from and where it is going to</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Whether pipeline will be interstate or intrastate</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Detailed information about the remediation process and long-term disturbances</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Locations of any above-ground facilities</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Flow chart of organizations involved in pipeline notification protocol</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td><strong>2. Communication with property owners</strong></td>
<td><strong>30</strong></td>
<td><strong>68%</strong></td>
</tr>
<tr>
<td>Timely (advance notice), specific, and accurate information to property owners</td>
<td>15</td>
<td>34%</td>
</tr>
<tr>
<td>Written notification sent by mail before any official approval by FERC for any projects within 5-10 miles of any residential address</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Truth from the pipeline companies</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Notification of municipality, County, and conservation organizations by pipeline companies first</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Follow-up meetings with residents and companies before new project construction begins</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Primary contact for resident’s concerns</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>
Advanced notification to property owners of planned excavation or "pigging" on existing lines | 1 | 2%
---|---|---
Name of a citizen representative that has all information and a voice with the pipeline company | 1 | 2%
Assurance that local governments are informed of the projects early and that they have the best interest of the residents, not the corporations | 1 | 2%

### 3. Public education and awareness

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website with interactive conversations about project plans, including timelines and dates for informational meetings</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Public information sessions/meetings describing new project with a one-page hand-out</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Archival website with all previous correspondence for each pipeline</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>News articles about existing ROWs and future pipeline projects</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Field trips for residents to see the proposed routes of new pipeline project</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

### 4. Risks

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure of all possible risks to property owners</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Environmental Impact Assessment</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Company's liability insurance information in case of accidents</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Impacts of pipeline location</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

### 5. Rights of residents and how they can protect their rights

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know, blank, don't want pipelines</td>
<td>5</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Note: (n=44)*

There were three categories of types of information that respondents identified as being most important to a standardized pipeline notification protocol: Details of where, what, when, why, and who (86%); Risks (14%); and, Rights of residents and how they can protect their rights (11%). Many respondents (86%) also mentioned communication and the methods by which the information should be disseminated as part of a pipeline notification protocol. Of these, 68% expressed an interest that communication with landowners be a priority, and of those 34% called for timely and advanced notice to property owners about work that would take place in existing ROWs or for new projects that involved specific and accurate information. Another 18% of respondents mentioned something about more general public
education and awareness regarding pipelines. There were 11% of respondents who left this question blank, said they did not know, or said they did not want any pipelines.

**Conclusions:**

Of the 44 landowner/resident survey respondents who answered the open-ended questions regarding their concerns about existing pipeline ROWs or proposed pipeline projects, 14 were property owners who have an existing ROW on their property, 25 were property owners without an existing ROW on their property, and 2 did not own the property on which they lived. Three of the respondents did not indicate their property status.

The objective in doing this survey was to collect information that will be useful to development of a community-based and county-wide pipeline notification protocol, and as such it was not designed to segregate residents and landowners based on ownership or experience, but rather to understand general concerns on a holistic community and county scale. With that objective in mind, the questions were asked and designed in such a way that it does not allow for any accurate assessment of differences between types of landowners and residents based on ownership regimes or experiences. In addition, because some respondents did not completely fill out the survey or are unsure about the status of ROWs on their property there was not a large enough sample size to conduct such an analysis without over-representing, and thus misinterpreting, survey responses that were received. That said, the data was segregated based on whether residents owned their properties and had ROWs on their property or did not and were then re-analyzed for any general descriptive differences. This segregated look at the data did reveal two observations worth noting related to risk perceptions and relations/communications with pipeline operators and the federal government.

Property owners without a ROW on their property are relatively more concerned about general safety issues for existing pipelines (36%) and new pipeline projects (40%) than property owners who have an existing ROW on their property (general safety concerns for both existing pipelines and proposed pipelines was at 7%). Caution should be taken in over-interpreting this, but one hypothesis is that such difference could indicate that once landowners have ROWs on their property, that they become more aware of the actual versus perceived risks and that they begin to view both existing and new pipeline projects as less of a risk the more they learn. Conversely, landowners who do not currently have a ROW on their property have less information about actual risks, have a higher perceived risk and therefore risk aversion, and thus a greater fear associated with both existing and new pipelines. However, more surveys would need to be done to fully understand risk perceptions and test that hypothesis. If this is the case, it may be a signal that risk-based education and awareness programs should be a part of the pipeline notification protocol for existing ROWs and new pipeline projects.
The second observation from looking at the segregated data is that property owners with a ROW on their property were more likely to mistrust the companies and government (most mentioned FERC specifically) about existing pipelines (14%) than property owners without an existing ROW (mistrust of companies and governments for existing pipelines = 4%). Once again, the sample size is too low to draw any conclusions from this data, and in order to understand these possible different levels of trust more surveys would need to be conducted with that primary objective.

**Municipal Official Survey Responses**

A survey of Chester County municipal officials was designed to obtain a better understanding of the current levels of knowledge regarding existing pipeline infrastructure and municipal pipeline planning in the County. There was also a focus on gauging the types of information municipalities would like to receive from the County or operators for work in existing ROWs and for proposed new pipeline projects.

**Distribution of Survey**

The on-line survey to Chester County municipal officials was distributed via an electronic mail invitation from Pipeline Safety Coalition to 72 contacts on June 1-4, 2013. Follow-up reminders were sent to these same contacts from the Chester County Planning Commission: one on June 19 and again on July 17. The initial contacts were obtained by Pipeline Safety Coalition from the County Planning Commission.

**Response Rate and Characterization of Survey Respondents**

There were 42 unique hits (number of times the survey was opened) from June 1 - July 30, 2013. Thirty-six of the 72 municipal officials completed enough responses to the survey questions to be informative, giving a response rate of 48.6%. See Appendix 1 for complete list of Chester County municipalities who completed the survey, responded but did not complete the survey, and who did not complete the survey.

Respondents worked in 36 different townships, boroughs, and cities (see Table 5): Wallace, Warwick, West Pikeland, East Pikeland, East Whiteland, West Sadsbury, Pennsbury, Malvern, Londonderry, South Coventry, North Coventry, West Nantmeal, East Nantmeal, West Marlborough, West Vincent, East Vincent, Spring City, Charlestown, Parkesburg, Pocopson, Franklin, West Goshen, East Goshen, East Bradford, Willistown, West Brandywine, East Brandywine, Upper Uwchlan, Kennett, Modena, Upper Oxford, Caln, West Chester, Schuylkill, Penn, and Thornbury. Twenty-one respondents identified themselves as Township or Borough Managers, five as Secretary/Treasurer, three as Supervisors, two as Administrator, two as Administrative Secretary, one as Manager/Treasurer, two as Director of Public Works, and one as Administrative Assistant. Some indicated that they had more than one role in municipal government.
Table 5. Municipalities Responding to Pipeline Notification Protocol Survey.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Role of Respondent</th>
<th>Estimated Miles of Pipeline(s)</th>
<th>Type of Pipeline(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caln Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Charlestown Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Natural gas, Other liquids, Petroleum product</td>
</tr>
<tr>
<td>East Bradford Township</td>
<td>Township Services Coordinator</td>
<td>Less than 1</td>
<td>Natural gas</td>
</tr>
<tr>
<td>East Brandywine Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Liquid petroleum, Liquified natural gas, Other liquids, Other gases</td>
</tr>
<tr>
<td>East Goshen Township</td>
<td>Township Manager</td>
<td>41-60</td>
<td>Liquid petroleum, Natural gas</td>
</tr>
<tr>
<td>East Nantmeal Township</td>
<td>Secretary/Treasurer</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>East Pikeland Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Natural gas, Unknown</td>
</tr>
<tr>
<td>East Vincent Township</td>
<td>Township Manager, Secretary/Treasurer</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>East Whiteland Township</td>
<td>Township Manager</td>
<td>21-40</td>
<td>Liquid petroleum, Natural gas, Liquified natural gas</td>
</tr>
<tr>
<td>Franklin Township</td>
<td>Township Manager, Treasurer</td>
<td>2-20</td>
<td>Liquid petroleum, Natural gas</td>
</tr>
<tr>
<td>Kennett Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Liquid petroleum, Natural gas, Other liquids, Propane</td>
</tr>
<tr>
<td>Londonderry Township</td>
<td>Administrative Secretary</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Malvern Borough</td>
<td>Borough Manager</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>Modena Borough</td>
<td>Borough Administrator</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>North Coventry Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Liquid petroleum, Liquified natural gas</td>
</tr>
<tr>
<td>Parkesburg Borough</td>
<td>Borough Manager</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Penn Township</td>
<td>Administrative Assistant</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Pennsbury Township</td>
<td>Township Manager</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Pocopson Township</td>
<td>Administrative Secretary</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Schuylkill Township</td>
<td>Township Manager</td>
<td>Unknown</td>
<td>Natural gas, Other liquids</td>
</tr>
<tr>
<td>South Coventry Township</td>
<td>Supervisor, Secretary/Treasurer</td>
<td>Less than 1</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Spring City</td>
<td>Borough Manager</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Thornbury Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Unknown</td>
</tr>
<tr>
<td>Upper Oxford Township</td>
<td>Supervisor</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>Upper Uwchlan Township</td>
<td>Township Manager</td>
<td>Unknown</td>
<td>Liquid petroleum, Liquified natural gas</td>
</tr>
<tr>
<td>Wallace Township</td>
<td>Township Manager</td>
<td>Unknown</td>
<td>---</td>
</tr>
<tr>
<td>Warwick Township</td>
<td>Administrator</td>
<td>2-20</td>
<td>Natural gas</td>
</tr>
<tr>
<td>West Brandywine Township</td>
<td>Director of Public Works</td>
<td>2-20</td>
<td>Liquid petroleum, Natural gas, Other gases</td>
</tr>
<tr>
<td>West Chester Borough</td>
<td>Borough Manager</td>
<td>Unknown</td>
<td>Natural gas</td>
</tr>
<tr>
<td>West Goshen Township</td>
<td>Township Manager</td>
<td>2-20</td>
<td>Liquid petroleum, Natural gas</td>
</tr>
<tr>
<td>West Marlborough Township</td>
<td>Supervisor</td>
<td>2-20</td>
<td>Natural gas</td>
</tr>
<tr>
<td>West Nantmeal Township</td>
<td>Secretary/Treasurer</td>
<td>2-20</td>
<td>Liquid petroleum, Other liquids</td>
</tr>
<tr>
<td>West Pikeland Township</td>
<td>N/A</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>West Sadsbury Township</td>
<td>Secretary/Treasurer</td>
<td>2-20</td>
<td>Natural gas, Unknown</td>
</tr>
<tr>
<td>West Vincent Township</td>
<td>Township Manager</td>
<td>Unknown</td>
<td>Liquid petroleum, Natural gas</td>
</tr>
<tr>
<td>Willistown Township</td>
<td>Director of Public Works</td>
<td>Unknown</td>
<td>Liquid petroleum, Natural gas</td>
</tr>
</tbody>
</table>
Response to Survey Questions

Knowledge about Pipeline Systems in Municipalities

Of the 36 municipalities responding, 32 (89%) responded that they do have gas and/or hazardous materials pipelines currently in their municipality. Of those municipalities with pipelines, 24 (67%) identified these lines as natural gas lines, 13 (36%) as liquid petroleum lines, five (14%) as other liquids (i.e., “other petroleum product” and “propane”), four (11%) as liquefied natural gas lines, and two (5.5%) as other gases. Four municipal respondents (11%) did not know what type of pipelines they have in their municipality. One municipality, East Whiteland, responded having natural gas, liquid petroleum, and liquefied natural gas pipelines. Twelve municipalities (Caln, East Bradford, East Vincent, Londonderry, Parkesburg, Penn, Pennsbury, Pocopson, South Coventry, Spring City, West Chester, and West Marlborough) responded that they have natural gas pipelines only. Ten other municipalities (East Brandywine, East Goshen, Franklin, Kennett, North Coventry, Upper Uwchlan, West Brandywine, West Goshen, West Vincent, and Willistown) have two of these types of pipelines within their boundaries. Six municipalities (Charlestown, East Brandywine, Kennett, Schuykill, West Brandywine, West Nantmeal) responded that they have “other liquids” or “other gases” pipelines. Four municipalities (East Pikeland, Thornbury, West Pikeland, West Sadsbury,) also responded that they did not know all of the types of pipelines that were currently in their municipalities. Most notably, West Pikeland Township indicated that they know they have pipelines in their municipality but that they did not know what type they are.

When asked where the pipelines in their municipality are located eight of the municipalities (25% of the municipalities with pipelines) did not know where they were located. Two respondents said that they did know where they were located, but that a written description was impossible or very difficult. And, 22 of the respondents (69%) gave very general or specific descriptions of the pipeline locations.

Eight of the respondents who have pipelines in their municipalities (25%) did not know what pipeline companies operated and managed the pipelines in their municipalities, whereas 24 respondents (75%) were able to name the companies. These companies include: Williams Transco (10 municipalities/respondents), Sunoco Logistics (8), Texas Eastern/Spectra/Duke (7), Columbia Gas (5), Buckeye Partners LP (4), Eastern Shore Natural Gas (4), PECO (4), Transcontinental (3), Colonial (2), UGI, Atlantic, Enterprise Products, and PPL Interstate Energy Co. One municipality, Warwick Township, named Laurel Pipeline as the operator. However, Laurel Pipeline was bought by Buckeye Partners in 1986.

In response to the question, “Approximately how many total miles of pipelines exist within this municipality?” 39% of respondents indicated that there were between two and 20 miles of pipeline and another 39% of respondents did not know the total miles of pipeline in the municipality. One municipality, East Whiteland, indicated having between 21 and 40 miles of pipeline, and another, East Goshen, indicated having between 41 and 60 miles of pipeline.
Implementation of Current Pipeline Notification Protocols

Twenty-four municipalities (67%) responding indicated that they currently implement a pipeline notification protocol for work within or in close proximity to existing pipeline ROWs: East Vincent, West Vincent, South Coventry, Londonderry, Spring City, West Sadsbury, East Pikeland, West Pikeland, East Whiteland, Warwick, Wallace, Parkesburg, Pocopson, Franklin, East Goshen, West Goshen, East Bradford, Upper Uwchlan, East Brandywine, Kennett, Caln, West Chester, Penn, Thornbury. Ten municipalities (28%) indicated that they did not have such a notification protocol. The most common type of notification protocol used was 811-Call Before You Dig for all excavation. This was used by 64% of municipalities indicating they had a current protocol. The second most commonly used type of notification protocol (47%) was the consideration of existing pipeline infrastructure in the review of new land development plans, followed by above-ground signs and markers along existing ROWs (36%). Of those municipalities with a pipeline notification protocol for existing pipeline ROWs, two, East Pikeland and East Brandywine, indicated that they have had a problem with implementation of the protocol. East Pikeland noted that: “Tree trimming contractors hired by pipeline companies typically fail to notify the township or adjacent property owners before they start working and this usually results in complaints from property owners due to the extreme type of work that they conduct in removing vegetation.” And, East Brandywine said in the comments that “We were advised by one company that the federal regulations they must operate under do not require their company to submit plans for review by local municipalities.” Another municipality (Pennsbury) commented, “The industry does a pretty good job in letting us and the public know of any activity in our area.”

Twenty municipalities who responded (56%) indicated that they currently implement a pipeline notification protocol for proposed pipeline projects: East Nantmeal, West Nantmeal, East Vincent, West Vincent, Londonderry, Spring City, West Sadsbury, West Pikeland, Warwick, Franklin, East Goshen, West Goshen, East Bradford, Upper Uwchlan, East Brandywine, Kennett, Upper Oxford, Caln, Penn, Thornbury. Seven (19%) said that they had no notification protocol for proposed pipeline projects, and nine (25%) did not know if they had such a protocol. Of those fifty-six percent who do have a protocol for new pipeline projects, six municipalities (80%) indicated that they used two types of protocols: 1) obtaining and reviewing proposed pipeline ROW maps and other documents from companies, operators, and contractors, and 2) holding consultation meetings between municipal officials and pipeline companies, operators, and contractors. Fifty-five percent of municipalities who have a notification protocol for new pipeline projects also seek to hold consultation meetings between municipal officials, pipeline companies, and adjacent residents. After that, municipalities indicate that they post information on their municipal website (45%) and have pre-defined Consultation Planning Zones and/or Ordinances established for construction of new pipelines (25%). In response to this question, Warwick responded: “I believe the only permitting the Township can require is a road crossing.” And, East Pikeland indicated that
they had not had any new pipeline projects in the last five years. Of those municipalities that do have a pipeline notification protocol for new pipeline projects, West Vincent indicated that they have had problems in implementing the protocol in the last five years. They noted: “It has proven very difficult to obtain meetings with the owners of newly proposed pipelines.” Another municipality (township), Upper Uwchlan, said they were evaluating a new pipeline project (Columbia East Side Expansion) and that they would be communicating with both the pipeline company and residents at the appropriate time. There was no indication of what that “appropriate time” might be.

Consultation Zones (CZs) are a planning tool used by local municipalities or other zoning authorities and recommended in the Pipelines and Informed Planning Alliance’s (PIPA) November 2010 Recommended Practices document for enhancing pipeline safety and risk-informed land use planning in communities (PIPA 2010, “Partnering to Further Enhance Pipeline Safety In Communities Through Risk-Informed Land Use Planning Final Report of Recommended Practices”). In this PIPA document, CZs are generically defined as “an area extending from each side of a transmission pipeline, the distance of which should be defined by local governments, to describe when a property developer/owner, who is planning new property development in the vicinity of an existing transmission pipeline, should initiate a dialogue with a transmission pipeline operator.” Model ordinances for creating CZs are found in the 2010 PIPA document. When asked if they were familiar with CZs as a mechanism for communication between property developers/owners and operators of nearby transmission pipelines when new land uses and property developments are being planned, the majority of municipalities (89%) indicated that they were not familiar with CZs. Three municipalities (East Brandywine, West Vincent, West Marlborough) were familiar with CZs. East Brandywine commented: “Our land use regulations require a developer to provide correspondence from the pipeline operator that they have reviewed their land development plans, and approve of the setbacks, crossings and other issues which may encroach on the existing pipeline or ROW.”

Creating a Pipeline Notification Protocol for Chester County, Pennsylvania

The survey asked municipal respondents what they saw as the most important type(s) of information needed in a pipeline notification protocol. Table 6 ranks municipality responses from most (1) to least (5) important. Note that one municipality (township), Caln, indicated that they did not know what was the most important types of information.
Table 6. Municipality Survey: Information needed in a Pipeline Notification Protocol (PNP)

<table>
<thead>
<tr>
<th>Information Required in a Pipeline Notification Protocol</th>
<th>Rank*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency contact name and information for pipeline operator(s) and County Department of Emergency Services</td>
<td>1 (94%)</td>
</tr>
<tr>
<td>Contact name and information for pipeline companies, operators, and contractors</td>
<td>1 (89%)</td>
</tr>
<tr>
<td>Description of the work to be conducted or construction and operation of the new pipeline</td>
<td>1 (89%)</td>
</tr>
<tr>
<td>Traffic impacts that could occur as a result of the work or construction (for example: road detours, temporary roadways and detours, volume of heavy truck traffic)</td>
<td>1 (86%)</td>
</tr>
<tr>
<td>Boundaries of project area, including a map of the proposed work-space or development location, existing pipeline ROWs, other current land uses, and other relevant information</td>
<td>2 (83%)</td>
</tr>
<tr>
<td>Details of the type of project under construction (for example: new pipeline construction or reconstruction, pipeline repair or maintenance, new development or land use near existing pipeline)</td>
<td>2 (83%)</td>
</tr>
<tr>
<td>Expected duration of proposed projects, including daily hours of operation during maintenance or construction</td>
<td>2 (83%)</td>
</tr>
<tr>
<td>Environmental and other transportation impacts to waterways, protected areas, roads, rail lines, including crossings of streams, creeks, wetlands, other protected areas, roads, and rails</td>
<td>3 (81%)</td>
</tr>
<tr>
<td>Emergency management and response plan for the operation of existing and new pipelines</td>
<td>3 (81%)</td>
</tr>
<tr>
<td>Parcels and landowner names immediately adjacent to where the work or new project is proposed to occur</td>
<td>3 (81%)</td>
</tr>
<tr>
<td>Length and diameter of existing and new pipelines and associated ROWs</td>
<td>4 (78%)</td>
</tr>
<tr>
<td>Details regarding the grubbing, trimming, or removal of trees or native vegetation, including a restoration plan for vegetation along existing or new ROWs</td>
<td>4 (78%)</td>
</tr>
<tr>
<td>Materials being transported through existing pipeline ROWs or proposed to be transported through new pipelines (for example: natural gas, petroleum, hazardous liquids)</td>
<td>4 (75%)</td>
</tr>
<tr>
<td>List of all parcels within 1,000 feet of the work-space or new pipeline</td>
<td>5 (69%)</td>
</tr>
<tr>
<td>Current operating pressure(s) of pipelines within existing ROWs and of proposed pressure(s) for new pipeline construction</td>
<td>5 (58%)</td>
</tr>
</tbody>
</table>

Note: * (N= 36); 1 = most important to 5 = least important

The next question asked municipal respondents how they would prefer to receive pipeline notification protocol information that they indicated as most important. Seventy-eight percent responded that they preferred to receive informational packets and detailed proposals from companies and developers. Sixty-four percent also said that they preferred to have meetings with pipeline companies, operators, contractors, developers, and the County. Twenty-one municipal respondents (58%) prefer e-mail information, 33% prefer community or neighborhood meetings, 31% prefer a phone call, 19% prefer that information be posted on a municipal website, and 17% prefer for information about the pipeline notification protocol to be posted on the Chester County website.

Conclusions

The majority of municipalities (67%) responding to this survey indicated already using a pipeline notification protocol for work in existing pipeline right-of-ways. The most common type of protocol used by these municipalities is the 1-800-Call-Before-You-Dig number, followed by consideration in new land development plans, and above ground signs and markers in pipeline right-of-ways. Problems municipalities have run into when implementing their protocol for existing right-of-ways have to do with operators not notifying the municipality about above ground activities, such as tree-trimming or telling municipalities that federal regulations mean they do not need to tell the local municipality of their plans.
On other municipality said the operator does a good job of letting the municipality and the landowners know about their planned activities. One reason for this discrepancy is likely different operators operating in different areas. This raises the important issue of knowing which operators are operating in which municipalities throughout the county in order to avoid such problems.

The majority of municipalities (56%) also indicated already using a pipeline notification protocol for new pipeline projects. There were two types of protocols that were cited as being most frequently used: 1) obtaining and reviewing proposed pipeline ROW maps and other documents from companies, operators, and contractors, and 2) holding consultation meetings between municipal officials and pipeline companies, operators, and contractors. These two most common protocols are followed by holding consultation meetings between municipal officials, pipeline companies, and adjacent residents, posting information on their municipal website, and implementing pre-defined Consultation Planning Zones and/or Ordinances established for construction of new pipelines. One municipality who reported having difficulties implementing these protocols cited problems with getting meetings with the operators of newly proposed pipelines. But, most municipalities did not comment on their experiences with implementation of these protocols. The CCPC will be following up with each municipality who indicated having a notification protocol to get more information about their protocols and experiences implementing them to date. It is also clear from the survey that education regarding what a Consultation Zone is and how it can be used in local land-use planning is necessary, as only three of the municipalities taking this survey understood what they were.

It is recommended that Table 6, generated from municipality’s ranking of possible notification protocol information, be used to prioritize the type of information that municipalities find most useful to their planning and that should be considered for inclusion in a County-wide pipeline notification protocol.

**Pipeline Operator Survey Responses**

A survey of pipeline operators and managers was designed to understand which companies operate pipeline infrastructure in Chester County, who is responsible for pipeline notifications within companies, the nature of their pipeline systems (e.g., number of pipeline miles, type of materials and facilities, etc.), sharing of information regarding High Consequence Areas and Pipeline Impact Radius, how they currently manage communication and notification in the County with regard to working within existing pipeline right-of-ways and proposing new pipeline projects, and their willingness to share information about their existing pipeline systems.

**Distribution of Survey**

The on-line survey to pipeline operators was distributed via an electronic mail invitation from Pipeline Safety Coalition to 19 company contacts (from 11 current pipeline companies operating in the county and one pipeline company that is proposing to operate pipelines in the county) between June 1 and June 6,
2013. A follow-up reminder was sent to these same contacts on June 10 from Pipeline Safety Coalition and on June 28 from the Chester County Planning Commission. Company contact information was obtained by Pipeline Safety Coalition from the PHMSA National Pipeline Mapping System Operator by County database and supplemented by operators known to be potentially new County operators, as well as operator participants at meetings in the County.

Response Rate and Characterization of Survey Respondents
There were 24 unique hits (number of times the survey was opened) from June 1 - July 12, 2013. There were eight completed surveys, which using the 19 original company contacts gives a total response rate of 42%. However, this response rate should be used with caution since some of the surveys received (both complete and incomplete) appeared to be from different contacts than the original 19. Incomplete and inconsistent surveys were eliminated from the analysis. Four of the contacts that completed the survey provided their company name and address (Doyle Land Services Inc. for Columbia Gas, Inergy Midstream LP, Enterprise Products, and PECO Energy), while the other four preferred to remain anonymous. Two of the contacts responding to the survey indicated that they were the company’s primary contact for pipeline notifications, and the other six who responded either did not indicate what their role was with the company or indicated diverse roles including being responsible for right-of-way acquisitions (Doyle Land Services) and a vice president of business development (Inergy Midstream). Two respondents (Enterprise Products and PECO Energy) indicated that the role they played in the company depended on the type of pipeline that the notifications were referring to (i.e., transmission versus distribution).

Responses to Survey Questions
Nature of Pipeline Systems in County
Preliminary analysis of the results of the survey to operators shows that of the eight respondents, four have no pipelines or facilities in Chester County (three anonymous respondents and Inergy Midstream) and one anonymous respondent indicated “Other,” but did not specify what type of pipeline or facility. Of the remaining three respondents, one company (Columbia Gas via Doyle Land Services) operates gas transmission pipelines and gas compression station(s), another (PECO Energy) operates gas distribution lines throughout the County and transmission pipelines in East Vincent Township and West Vincent Township, and the other (Enterprise Products) operates hazardous liquids pipelines in Chester County. Besides, PECO Energy, respondents did not provide the names of municipalities, townships, boroughs, or cities where their pipelines are located. The miles of transmission pipelines operated by all companies who responded ranged from none (those companies not yet operating transmission lines) to between 20 and 40 miles (hazardous liquids transmission lines owned by Enterprise Products). We had no responses from companies operating LNG plants and facilities or gas gathering pipelines.
Sharing of High Consequence Areas and Pipeline Impact Radius Information

In terms of sharing databases of High Consequence Areas (HCA) or Pipeline Impact Radius (PIR) with Chester County, seven out of the eight respondents said they did not share this information. Of those seven, one (Doyle Land Service, Inc.) indicated that they would share upon request, one (Inergy Midstream) indicated they would share this information if they were to build pipelines in Chester County in the future, and one (PECO Energy) indicated they would share this information with appropriate township officials and the County Emergency Response Team.

Notification and Communication Regarding Existing Pipeline Right-of-Ways and Proposed/New Pipeline Projects

All four respondents operating pipelines in Chester County indicated that their company does implement a current notification protocol when working within existing pipeline right-of-ways (ROWs). Doyle Land Service indicated that Columbia Gas notifies people in mail and in person when possible, Inergy Midstream indicated that they follow federal, state, and local protocols, Enterprise Products indicated that they contact their Land Department, and PECO said that their Damage Prevention Team notifies the PA One Call System.

Three of the four respondents operating pipelines in Chester County indicated that their company also implements a notification protocol for proposed pipeline projects, while the one operator (Enterprise Products) indicated that they did not know if such a protocol for proposed pipelines was implemented. Of the three who do have a pipeline notification protocol for proposed projects, Columbia Gas and PECO Energy follows the same procedures as for working within existing pipeline ROWs-- Columbia Gas notifies people in mail and in person when possible and PECO Energy notifies PA One Call System. Inergy Midstream indicated that the company will attempt to meet with all affected third parties to address concerns about proposed pipeline projects. None of the eight respondents were familiar with Consultation Zones (CZs) in pipeline land use planning.

When asked what they saw as the most important form of communication needed in a Chester County pipeline notification protocol, whether for existing ROWs or proposed pipeline projects, Internet and Websites ranked as the first most important form, e-mail, phone calls, public meetings, and postal mail all ranked second, while local newspapers and face-to-face meetings with landowners ranked third.

Willingness to Publicly Share Information about Pipeline Systems

In order to gauge the willingness of companies to share specifics about pipeline operations, including locations and materials, with the public, the survey asked respondents whether or not they had seen the Marathon Pipe Line LLC interactive Google Map and if they would consider incorporating this idea into their own company website. Three respondents had seen the website, two had not, two did not know, and one other did not answer the question. All seven responding, said they did not know whether their
company would consider incorporating an interactive Google Map of their pipeline systems into their company website. According to the comments, the contact person filling out the survey was not the right or the only person to make this decision in the company. According to PECO Energy, they would need to get approval from their Legal and Security Departments before putting up this type of information on their website.

Creating a Pipeline Notification Protocol for Chester County, Pennsylvania

Two of the eight respondents answered the final question: “If you were creating a pipeline notification protocol for Chester County, Pennsylvania what would it look like?” Doyle Land Service Inc. for Columbia Gas said “It would most likely be a spreadsheet with the county PIN number, the street address of the property, the landowner’s name, address, phone, and e-mail address where available.” The respondent from PECO Energy noted that they would have to speak with others to make the decision.

Conclusions

Pipeline operator contacts who responded to this survey were equally split between operators who are currently operating or planning to operate pipelines in Chester County and those who do not operate any pipelines in the County. The majority of respondents who completed or partially completed the survey chose to remain anonymous, so there is no data on which operators filled out the survey but do not have pipelines in the County.

All four operators who responded as having or planning to have pipelines in the county indicated that they use a pipeline notification protocol for work within existing pipeline right-of-ways. They all use different types of protocols, and follow-up on the exact implementation is recommended to find out what a common denominator could be to use in designing the Chester County protocol for existing right-of-ways.

With regards to proposed new pipeline projects, three of the four current operators indicate that they use a notification protocol. For two this is similar to their protocol for existing right-of-ways, and for the company who is planning to operate in the County in the future they indicated they attempt to meet with all affected third parties to address concerns. Most importantly, all eight respondents to the survey answered that they were unfamiliar with Consultation Zones in local pipeline land use planning. This was a surprising finding since one of the respondents is from a company that was part of the team that introduced the Consultation Zone process in the PIPA document.

In discussion with oil industry consultants (personal correspondence, Terra Group, 8-15-13), it is concluded that the lack of familiarity with Consultation Zones was most likely due to the fact that the survey was sent to the public relations, community outreach, and land acquisition staff from the companies who are less likely to work on land use planning decisions at the local government level, such as what is being contemplated for the Chester County pipeline notification protocol. Therefore, in moving
forward in the design and implementation of the Chester County pipeline notification protocol it is recommended that the county develop a working relationship with the governmental affairs staff from each company in order to ensure that all communications is conducted with staff who are familiar with the concept of Consultation Zones or who have experience in local government land use planning and relations.

In terms of their willingness to share information and participate in a Chester County pipeline notification protocol, most operator respondents indicated some willingness to share information with certain County stakeholders and to participate to the extent that the decision-makers in their company allowed. Therefore, similar to the issue of Consultation Zones, it is recommended that the county develop a working relationship with the governmental affairs and other staff from each company planning to operate in the county who have the authority to make decisions regarding information that companies would be willing to share with various stakeholders about their operations. A better understanding about the parameters each company has set with regard to data sharing and stakeholder participation is necessary in order to ensure that the design of the Chester County pipeline notification protocol can be implemented effectively.

Map 1. Chester County, Pennsylvania Municipalities and Major Roads
Survey Report: APPENDIX 1

36 municipalities completed the survey:

Caln Township
Charlestown Township
East Bradford Township
East Brandywine Township
East Goshen Township
East Nantmeal Township
East Pikeland Township
East Vincent Township
East Whiteland Township
Franklin Township
Kennett Township
Londonderry Township
Malvern Borough
Modena Borough
North Coventry Township
Parkesburg Borough
Penn Township
Pennsbury Township
Pocopson Township
Schuylkill Township
South Coventry Township
Spring City Borough
Thornbury Township
Upper Oxford Township
Upper Uwchlan Township
Wallace Township
Warwick Township
West Brandywine Township
West Chester Borough
West Goshen Township
West Marlborough Township
West Nantmeal Township
West Pikeland Township
West Sadsbury Township
West Vincent Township
Willistown Township

6 municipalities opened the survey, but did not complete it:

Sadsbury Township
West Bradford Township
West Whiteland
Tredyffrin Township
New London Township
New Garden Township

No responses were received from 31 municipalities:

Atglen Borough
Avondale Borough
Birmingham Township
Coatesville City
Downingtown Borough
East Caln Township
East Coventry Township
East Fallowfield Township
East Marlborough Township
East Nottingham Township
Easttown Township
Elk Township
Elverson Borough
Highland Township
Honey Brook Borough
Honey Brook Township
Kennett Square Borough
London Britain Township
London Grove Township
Lower Oxford Township
Newlin Township
Oxford Borough
Phoenixville Borough
South Coatesville Borough
Uwchlan Township
Valley Township
West Caln Township
West Fallowsfield Township
West Grove Borough
West Notthingham Township
Westtown Township
What:
Research and design of the PNP drew from PIPA recommendations, consistency with the policies of the Chester County Comprehensive Policy Plan Landscapes 2 to bring growth and preservation together in Chester County, and recommendations made to PHMSA by the Transportation Research Board (TRB) of the National Academies, “Transmission Pipelines and Land Use: A Risk-Informed Approach” Elements of the October 2004 Transportation Research Board (TRB) recommendations to PHMSA, “Transmission Pipelines and Land Use: A Risk-Informed Approach,” addressed the development of risk-informed land use guidance through a process that involves the collaboration of a full range of public and private stakeholders, is conducted by persons with expertise in risk analysis, risk communication, land use planning, and development, is transparent, independent, and peer reviewed; and incorporates learning and feedback to refine the guidance over time.” The TRB Report also recommended “The transmission pipeline industries should develop best practices for the specification, acquisition, development, and maintenance of pipeline rights-of-way. In so doing, they should work with other stakeholders.”

The project gauged stakeholder interest in development of a notification process that would deliver shared benefits to affected landowners, Operators and the County through community meetings, stakeholder surveys, an Operator-only roundtable discussion, and stakeholder interviews.

Stakeholder Meetings: The Chester County Commissioners started by holding public meetings to engage communities, legislators, Operators and statewide stakeholders. An initial public and municipal introduction of PNP was incorporated into an “On the Road” Commissioner meeting. “On the Road” meetings have been established by the County Commissioners to facilitate public access to meetings typically held during workday hours. By conducting meetings in the evening and at various municipal buildings and libraries throughout the County, public participation is enhanced. Held in the Northern Tier of Chester County, the first meeting drew standing room only attendance and provided public introduction to PNP.

Aforementioned databases and press releases were used to notify the public, Operators, federal and state entities of a second PNP Pipeline Communications Strategy meeting. Held in Central Chester County, the meeting again addressed a standing room only audience of approximately 100 attendees. Among those attending were eleven legislators and government officials with the notable inclusion of PA PUC Commissioner Gardner and Chief of Gas Safety, Paul Metro. Mr. Metro observed that despite PAPUC lack of authority in interstate pipeline issues, PUC’s attendance was intended as indication of the

24 “Transmission Pipelines and Land Use: A Risk-Informed Approach”
25 “Transmission Pipelines and Land Use: A Risk-Informed Approach”: Transportation Research Board (TRB) of the National Academies
26 PIPA Appendix G
dedication to participation in PNP to the best of PUC’s ability. Municipal officials and landowners were the largest demographic in attendance. Fourteen pipeline representatives attended, representing six of Chester County’s twelve pipeline operators.

A joint public meeting with the FERC, Columbia/NiSource (as an operator planning a pipeline expansion in Chester County), the community, legislators and press provided a case study for developing a PNP. Held prior to the Columbia/NiSource Eastside Expansion/Chester County FERC pre-filing, the meeting allowed bilateral stakeholder input in close proximity to Columbia’s General Route Evaluation and Project Feasibility Analysis,\(^{27}\) when as stated in PIPA, Operators “connect point ‘A’ to point ‘B’ (and) evaluate potential routes from ‘A’ to ‘B’...\(^{28}\)” Local input regarding siting and notification practices provided data for consideration in vetting needs in a PNP and most notably resulted in Operator revisions to the proposed pipeline extension right of way.

An Operator only roundtable discussed the “Who, What, Where and Why” of creating a Chester County Pipeline Notification Protocol. Project facilitators reinforced a proactive approach to address the concerns that Operators and the County already know exist in order to reduce or eliminate concerns thorough a standard notification protocol for pipeline operations and landowners/developers in Chester County. Mutual benefits of shared land use planning information, improved community relations and time and cost savings were discussed. Benefits and considerations for adapting the Chester County PNP for use in the remaining 66 counties of the Commonwealth of Pennsylvania were discussed. Among the benefits noted was the ability of a PNP to facilitate land use planning dialogue between municipality/counties in a Commonwealth state. The Operator roundtable was attended by 49% of County Operators and one Operator not currently located in Chester County.

**Consultation Zones & Mapping:**

Key to PNP recommendations is implementation of Consultation Zones (CZs); a risk management approach to pipeline and land use planning developed by and defined by PIPA as “an area extending from each side of a transmission pipeline, the distance of which should be defined by local governments, to describe when a property developer/owner, who is planning new property development in the vicinity of an existing transmission pipeline, should initiate a dialogue with a transmission pipeline operator.” PIPA recommendations were created primarily for use where existing pipeline ROWs are located, and are a recommended use by landowners/developers to “…consult with transmission pipeline operators early in

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27 PIPA, Appendix G, Page 5
28 PIPA: Appendix G, page 1-2
the development process, so that development designs minimize risks to populace living or working nearby and are consistent with the needs and legal rights of the operator.29"

The Chester County PNP recommendations were expanded to include Operator notification to a County Point of Contact when new pipelines, expansions, maintenance or repair work are proposed. Chester County, recommended CZs are defined as, “an area extending 1,000 ft from each side of a transmission pipeline or a proposed transmission pipeline to describe when an operator or property developer/owner, who is planning land use activity should initiate a dialogue with the County through PNP.”

As discussed in the Survey Data Report, neither Operators nor municipalities surveyed in Chester County were familiar with Consultation Zones. Adoption of CZs in relationship to land use planning and pipeline infrastructure is the first tool of communications after notification has been made in pipeline infrastructure expansions or new projects as well as local land use planning. CZ reviews provide Operators with immediately discoverable County land use plans (pending or approved but not yet implemented) with the goal of avoiding mutual conflicts in land use planning and/or encroachment on existing pipeline ROWs. Notification of pipeline project planning by Operators also provides the County with information helpful in County land use permit reviews, maintains transparent communications with citizens and local government while improving community relations. Reduction or avoidance of the need for dispute resolution through implementation of a proactive standard for communications should promote risk management and enhance participation by informed communities.

The Chester County Planning Commission (CCPC) evaluated available information in the Geographic Information System (GIS) to identify 59 of the 73 County municipalities intersected by pipelines. Included in this mapping is the statewide network of pipelines that extend into and adjacent to Chester County.

Using Consultation Zones (CZs), CCPC is able to identify currently affected landowners, landowners indirectly affected by current ROWs and landowners potentially affected by expanding ROWs by parcel and therefore deed. The map and correlating databases are intended to be supplemented over time by Operator data, through public meetings, further survey data evaluations and municipal participation. Notification in a pre-application period of the proposed route affords County input in the route planning process and mitigation requirements, land use planning and pipeline safety in the County.

CZs may be laid onto GIS maps in the planning stages of new pipeline infrastructure and in permitting reviews for local land development, thereby providing a check point for inappropriate encroachment on existing pipeline and/or to community infrastructure by Operator early in the planning stages. Mutual benefits include:

29 PIPA: BLO4: Adopt Transmission Pipeline Consultation Zone Ordinances, page 25
1. the ability to identify existing HCA’s based on currency of County mapping
2. the potential to reduce increased HCAs to the greatest extent possible
3. the ability to share information in local land use plans (both permitted and permitted but not executed)
4. the potential to proactively participate in the prevention of negative impacts to environmentally sensitive areas to the greatest extent possible
5. increased pipeline/community safety.

CZ Maps Developed by CCPC:(pages 45-50)
Population Analysis

Persons/Square Mile by Census Block Group
- <500
- 501 - 1,000
- 1,001 - 5,000
- >5,000

Pipelines
Consultation Zones


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Population Analysis

Pipeline Operators:
- TEXAS EASTERN TRANSMISSION CORP (DUKE)
- LAUREL PIPELINE CO - BUCKEYE P/L CO LP
- COLUMBIA GAS TRANSMISSION CORP
- WILLIAMS GAS PIPELINE - TRANSCO
- EASTERN SHORE NATURAL GAS CO
- TE PRODUCTS PIPELINE CO., LP
- PPL INTERSTATE ENERGY CO
- COLONIAL PIPELINE CO
- SUNOCO PIPELINE L.P.
- MOBIL PIPELINE CO
- PECO ENERGY CO
- CONNETIC

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Messaging:
Stakeholder involvement in defining parameters of messaging is vital. Surveys of three demographics; Operators, Municipalities and Landowners/County residents were conducted by applied anthropologist, Dr. Perry. Different surveys were created for each demographic. The objective in doing these surveys was to collect information useful in development of a community-based and county-wide pipeline notification standard, to vet messaging modalities and to vet message delivery format. One important finding of the landowner surveys was citizen concern that all stakeholders be properly notified before FERC pre-filing of a proposed route so that meaningful, community and regional input are available to Operators in their General Route Evaluation and Project Feasibility Analysis. In the final analysis information gathered from surveys demonstrated that concerns and changes needed resulted from the absence of a pre-planning notification protocol. Survey data also affirmed the PIPA recommendation for a team approach to communications that is inclusive of community and Operator in order to enhance awareness of the bilateral safety benefits derived from community participation.

To promote the PNP, obtain universal access to the greatest degree practicable, provide cost efficient communications and verifiable/reliable results, the 2012 Technical Assistance Grant (TAG) web based registration system of The Georgia Public Services Commission Gas Pipeline Construction Notification and Evaluation of Pipeline Construction was vetted for emulation in a web based approach to the PNP.

Creating a PNP Website/Webpage: Recommendations for the Chester County PNP were designed for Operator notification to the County in the first stages of an Operator’s “General Route Evaluation and Project Feasibility Analysis,” or as documented in PIPA, when “(s)imply stated, (Operators) connect point ‘A’ to point ‘B’ (and) evaluate potential routes from ‘A’ to ‘B’…” (emphasis added).

The PNP process is recommended to begin with Operators registration for all with pipelines in Chester County through a webpage database. Recommended registration data fields are taken directly from PHMSA Operator Registry Notification Form F 1000.2 requirements. PNP registration information needed by the Operator should be on hand for ease in transfer to the PNP.

Once registered in the PNP database, Operators would be able to access land use planning documents, current deed holder databases, construction plans of other Operators in the County (to reduce risk and

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30 Recommendations for Reducing Risks and Improving the Safety of Communities and Pipelines (PIPA, 2010)

31 Georgia Public Service Commission Gas Pipeline Construction Notification and Evaluation of Pipeline Construction

32 PIPA, Appendix G, Page 5

33 PIPA: Appendix G, page 1-2

34 PHMSA Operator Registry Form F 1000.2
minimize social and environmental impacts), and able to notify the PNP POC of proposed pipeline plans in Chester County. Only registered Operators would have access to data.

Schematic design for PNP registration: Design by: Pipeline Safety Coalition

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**PNP**

*Chester County Pipeline Notification Protocol*

**Recommended Webpage Content Introduction:**

*For Demonstration Purposes: Format to be adjusted to County website Procedures*

The following template is the recommended prototype webpage for PNP registration and notification by Operators, Landowners and Municipalities.

Each Information gathering page is intended to be a continuous scroll down page.

Web based registration and notification provides verifiable, cost efficient registration and a form of accountability and security that addresses Operator security concerns. The prototype is intended to accommodate growth.

Recommended information to be provided by each demographic was derived through review of:

1. Survey data collected and analyzed by researchers from Chester County Municipalities, Landowners and Operators
2. PIPA recommendations
3. Industry approved recommendations cited in PIPA
4. PHMSA operator registration format & Procedure
5. Landscapes 2
7. PIPA cited Transportation Research Board of National Academies recommendations to PHMSA
8. PA PUC advisory
9. Meetings with: Operators, Landowners, County officials, County departments and local governments
PNP
Chester County Pipeline Notification Protocol
Recommended Webpage Content

For Demonstration Purposes:
Format to be adjusted in County website Procedures

Registration in the PNP database is intended to provide bilateral communications that facilitate enhanced pipeline safety in Chester County.

PNP registration emulates the PIIMSA Operator Registry. Providing your PIIMSA designated OPID# reduces redundancy and provides reference capabilities.

This site allows you to provide Chester County with notification of proposed pipeline projects (excluding emergency repairs) in first stages of “the Operator Right-of-Way Acquisition Process” referenced in Appendix G of PIPA as the “General Route Evaluation and Project Feasibility Analysis” phase of planning.

Date of this Registration: (M/DD/YY)
Create User Name: _______________
Create Password: _______________
1. Operator’s PIIMSA registered OPID #: _______________
2. Current name of Operator assigned to this Operator Registry: _______________
3. Operator Headquarters address: _______________
4. Operator Local mailing address: _______________
5. Primary contact for pipeline notifications to the County:
   Last Name: _______________ First Name: _______________
   Phone: _______________
   E-mail: _______________
   Is this you? __________
6. Emergency contact information:
   Last Name: _______________ First Name: _______________
   Phone: _______________
   E-mail: _______________
8. Type of pipelines and/or facilities operating in Chester County, Pennsylvania (check all that apply)
   _LNG plant or facility
   _Gas distribution
   _Gas transmission
   _Gas gathering
   _Hazardous liquid
   _Compressor Station
   _None at this time

9. *Existing Operators* check the municipalities where your facilities are currently located:
   (supply list (59) to check off)

10. *New Operators* check the municipalities where your proposed facilities would be located:
    (supply full list to check off)

11. *Existing Operators*: How many total miles of pipelines does your company operate in Chester County? (check one)
    _Less than 1_  _2-20_  _21-40_  _41-60_  _61-80_  _81-100_  _Over 100_

12. *New Operators*: How many total miles of pipelines does your company anticipate to operate in Chester County? (check one)
    _Less than 1_  _2-20_  _21-40_  _41-60_  _61-80_  _81-100_  _Over 100_

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Registration in the PNP database is intended to provide bilateral communications that facilitate enhanced pipeline safety in Chester County. PNP change of registration enables PHMSA Forms D & E for notification of acquisition or divestiture, subject to 49 CFR 192 or 195.

**Date of this Registration: (MM/DD/YY)**

**Operator’s PHMSA registered OPID:**

1. Current name of Operator assigned to this Operator Registry Notification:

2. Is this Notification for:
   1. Acquisition
   2. Divestiture
   3. Both Acquisition & Divestiture

3. If an Acquisition, provide the OPID number of the previous Operator (if one was assigned): ____________
   ☐ No OPID number assigned

4. If a Divestiture, provide the OPID number of the previous Operator (if one was assigned): ____________
   ☐ No OPID number assigned

5. Is this Notification for (check all that apply):
   ☐ 50 miles or more of pipeline system
   ☐ Acquisition and/or Divestiture of an existing pipeline operator or facility currently functioning in Chester County
   ☐ Acquisition and/or Divestiture of a pipeline operator proposing to function in Chester County
   ☐ Other ____________

6. Effective date of this acquisition or divestiture: (MM/DD/YY)
Notification early in the Operator “General Route Evaluation and Project Feasibility Analysis” phase of planning provides bilateral communications that facilitate enhanced pipeline safety in Chester County.

Date of this Notification: (M/D/YR)

1. Operator Name

2. Name of Project

3. Project Planning Stage (Check all that apply)
   - General Route Evaluation and Project Feasibility Analysis:
     - Originating and Terminating Points
     - Identification of Terrain
     - Preliminary Cost Estimate
     - Scheduling
     - Feasibility
   - Due Diligence:
     - Records Research & Development
     - Title Research and Curative Matters
     - Land Surveys
     - Environmental, Archeological & Endangered Species Studies
   - FERC:
     - Pre-filing, Docket #
     - Docket #

4. Type of Construction and/or Facilities Project (check all that apply)
   - LNG plant or facility: New __ Expansion ___ Repair ___
   - Gas distribution: New ___ Expansion ___ Repair ___
   - Gas transmission: New ___ Expansion ___ Repair ___
   - Hazardous liquid: New ___ Expansion ___ Repair ___
   - compressor station: New ___ Expansion ___ Repair ___

5. Location: Municipalities involved in this project (Check all that may apply)

(supply full list to check off)

7. For New Pipelines:
   - Length: _______
   - Diameter: _______
   - Fuel: _______
   - MAOP: _______

8. For Existing Pipelines (Expansion or Repairs):
   - Length: _______
   - Diameter: _______
   - Fuel: _______
   - MAOP: _______
9. How many total miles of pipelines does your company anticipate will be involved in this project
   __ Less than 1 __ 2-20 __ 21-40 __ 41-60 __ 61-80 __ 81-100 __ Over 100

10. If this project physically crosses county boundaries, list those counties:

11. What maps are available at this phase (schematic, topographic, plans)

12. Proposed or Actual Start Dates for All Construction Types:
   Field Work Activities: (M/DD/YR)
   Please describe field work: __________________________

   Construction Activities: (M/DD/YR)
   Please describe construction activities: ___________________

The PNP was developed to fill the need for pipeline operators to communicate with County, Municipal officials and residents early on in their planning process so that local input of Chester County’s unique characteristics, its environment, community and land use planning are included in pipeline project planning. PNP was created to give both pipeline companies and Chester County residents access to an early communications system.

Please let us know when you’ve been contacted by a Pipeline Company or their Land Agent:

Date of this Notification: (M/DD/YR)

1. Your Last Name: ________________________ First Name: ________________________

2. Address: Street Name & Number: __________________________

3. Mailing Address if different: __________________________

4. Phone: __________________________

5. E-mail: __________________________

6. Municipality, Borough, Township, City or Village: __________________________

7. Your Parcel or Deed Number: __________________________ I don’t have either: ______

8. Name of Operator or Land Agent who contacted you: __________________________

9. Name of Project (if supplied to you): __________________________

10. Were you contacted about:

11. Did you notify your municipal manager?

12. Name of person you spoke with: __________________________

13. Would you like to remain proactively participating in this Project: Yes: ____ No: _____
The PNP was developed to fill the need for pipeline operators to communicate with County, Municipal officials and residents early on in their planning process so that local input of Chester County’s unique characteristics, its environment, community and land use planning are included in pipeline project planning. PNP was created to give both pipeline companies and Chester County residents access to an early communications system.

Please let us know when you’ve been contacted by a Pipeline Company or their Land Agent:

Date of this Notification: (M/DD/YR)

1. Your Last Name: ___________________________ First Name: ___________________________ Title or Position: ___________________________

2. Name of Municipality: ___________________________

3. Mailing Address: ___________________________

4. Phone: ___________________________

5. E-mail: ___________________________

6. Name of Operator or Land Agent who contacted you: ___________________________

7. Name of Project (If supplied to you): ___________________________

8. Were you contacted about:

9. Have you been contacted by residents? Yes: _______ No: _______

10. Have you notified residents potentially impacted by the project? Yes: _______ No: _______

Dial 8-1-1 or 1-800-242-1776

Pipeline Operators and Landowners planning to dig need to have underground lines marked. Designing a project, no matter how big or small, requires knowing the location of the underground lines. To place a dig or design notification in Pennsylvania, please call 8-1-1 or 1-800-242-1776 (outside PA)

Pennsylvania 811

“Our purpose is to prevent damage to underground facilities. To promote safety, we provide an efficient and effective communications network among project owners, designers, excavators, and facility owners.”
Why:
As full stakeholder inclusion had not been historically experienced in Chester County, the project sought to create a notification process that would improve risk management by enhancing safety through community awareness, public education and public participation that vests a community in achieving pipeline safety.

Vetting a PNP addressed the need for Operators to communicate with the County early on for consistency with the policies of Chester County’s Comprehensive Policy Plan, Landscapes 2, and to understand and utilize the unique and evolving characteristics of the community in pipeline infrastructure planning and maintenance. The vetting of a PNP addressed landowner and municipal survey concerns regarding the use of open spaces and preserved lands for pipeline ROWs, devaluation of natural resources and impacts on habitat. Chester County’s landmark Landscapes2 includes the following policies which relate to transmission pipelines and environmentally sensitive energy supplies:

- **Objective UI 4: Energy Generation, Transmission, and Distribution** - Encourage the use of efficient, reliable, affordable, and environmentally sensitive energy supplies that support planned growth and the protection of natural, cultural, and open space resources in Chester County.
· **Policy UI 4.1:** Assess both the positive and negative impacts of future expansions of electrical transmission infrastructure, fuel pipeline corridors, and their easements on land use and local municipalities in the development of comprehensive plans.

· **Policy UI 4.2:** Promote the use of alternative energy supplies from sources that reduce greenhouse gas emissions.

As these policies indicate, there is a need to assess both the “negative and positive impacts” of pipelines. For example, the PNP promotes preventative safety (a positive impact), as well as improved communication, which would be of value in case of an emergency within a pipeline corridor (a negative impact). PNP sought to promote a proactive collective community planning approach akin to many sustainable planning efforts such as *Landscapes2*.

**Defining a Pipeline Notification Protocol:**

The project shared the PIPA goal of fostering early communication in the land development process among all stakeholders and sought to establish a standardized notification process for Operators and local stakeholders to use early in land use planning. Data produced general recommendations for establishing a PNP non specific to location:

1) County Commissioners could vet, create and maintain oversight and development of a Pipeline Notification Procedure (PNP)

2) County Commissioners could consider establishing a MOU with County Municipalities regarding participation in the PNP

3) PNP stakeholder roles should be broadly inclusive and established for ongoing reviews, continued development and function of PNP

4) A County Point of Contact (POC) should be established early on in creating a PNP

5) An Operator POC should be identified/established in the Operators’ government affairs department

6) Municipality POCs should be identified/established

7) PNP should establish a web page as the POC location for verifiability and security

8) Consultation Zones (CZs) should be defined and established

Specific to Chester County, Pennsylvania, the partners in this project vetted practicalities of cost, time and labor to produce a plan for implementing a PNP with the greatest success practicable. An initial list of recommendations was created with a holistic, long term approach:

**Developing a Chester County PNP:**

1. Chester County Commissions could adapt and adopt PNP recommendations

2. Chester County Commissions could formally establish the County Planning Commission as the Chester County PNP POC
3. The County Commissioners could approach announcing the completion of PNP template with the high visibility used to introduce the program. The meeting could be Sunshined and approached as an invitation for community and Operators to “pre-register” for sign up to the PNP site by attending educational workshops offered by PSC. The announcement could provide a neutral setting for community/Operator networking.

5. The PNP could consider establishing regional landowner community POCs.

6. The PNP could conduct workshops to introduce the PNP:
   i. County/Operators only
   ii. County/Landowners
   iii. County/Municipalities

7. An Operator only workshop could provide walk through registration.

8. The County Commissioners could apply to FERC for a Petition for Rule Making to adopt PNP for the purpose of reducing the need for dispute resolution.

9. The PNP could create an Operator Incentive Plan.

10. The PNP could promote Operator inclusion by creating a Fact Sheet to include benefits such as:
   i. Reduce time and expense in land use planning for Operators
   ii. Reduced community resistance through education: surveys show citizens with ROWs have fewer concerns about pipeline safety than citizens without ROWs.

11. A County created program could be created to; “Rate Your Operator,” with local press coverage.

12. A program similar to the Chester County Conservation District Cooperators could be created.

The PNP recommended pipeline notification protocol is specific to the unique characteristics of Chester County, PA and was established in a Commonwealth state; a designation that emphasizes government based on the common consent of the people, or welfare of the public. Regardless of state designations, interstate and intrastate pipelines cross county borders. As such, PNP could provide a template for a valuable conduit between local and county officials, Operators and landowners to enhance pipeline safety through established, bilateral communications conducted early in the land use planning stages of pipeline infrastructure and local land use planning. PNP is a recommended notification protocol and not mandated by any public or private entity.

On review of study recommendations and in order to assure success to the greatest extent possible, the Chester County Commissioners committed to a phased approach to PNP:

**Phase 1:** Chester County will create a web page to be called the “Pipeline Information Center.” Once the web page is live, the Commissioner will introduce the program with high visibility, including media contact.

**Phase 2:** will involve hiring an employee to serve as the Point of Contact, expansion of the web page into a “public commons” on pipeline issues, mapping of the Consultation Zones, “registration” of
Pipeline Operators and inclusion of Operators in County and municipal planning processes, development of a “guidebook” for landowners, facilitation of a series of public meetings and stakeholder outreach.

Recommendations beyond Phase 1 and 2 will be considered for implementation once additional resources become available. The County Commissioners will periodically review implementation of the notification system, including meeting with officials from the pipeline companies and municipal officials to explore what additional steps from the report can be done to facilitate greater communication by all parties.

For the Chester County PNP, the study recommended the Chester County Planning Commission (CCPC) as the POC department. In conjunction with review with the Commissioners, the CCPC provided the following memorandum presenting a summary of key issues to be addressed in establishing a PNP.

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Technical Requirements Memorandum: Chester County Pipeline Information Center:
Submitted by: Chester County Planning Commission

A: Introduction

Throughout the spring and summer of 2013, the Chester County Planning Commission (CCPC) compiled pipeline corridor mapping and provided other pipeline related information to the Pipeline Safety Coalition (PSC) as part of the study of options for notifying the county and the public about pipeline maintenance and expansion projects. Through this process, it became clear that there would be a significant value in presenting the gathered information and mapping on an easy to use website that could be updated and expanded as conditions change on the ground. This proposed web site would be called the Chester County Pipeline Information Center (PIC).

The following memorandum identifies the need for a County-run website as well as the available resources and needs in offering this informative service for the County. Specific design issues such as the layout of individual pages or detailed content will not be discussed in this memorandum. The goal of this memorandum is to provide a basic foundation of what type of content will be required and how it could be feasibly organized. There will also be a general evaluation of the amount of time that will be required to establish the PIC, and then update it once the site is established.

B: The Need for a PIC

The technologies used in building, maintaining and expanding pipeline can be complex. Likewise the process of obtaining government approval for a pipeline involves various agencies and stakeholders, with whom most people are not familiar. As a result, there is a need to create a web page for Chester County that would explain these complicated issues in laymen’s terms and provide links to information sources. This need is especially pressing because Chester County is a major corridor for pipelines.
The following chart provides an estimate of pipeline mileage by company within the County. Figure 1 shows mapping the pipeline locations in Chester County.

<table>
<thead>
<tr>
<th>Operator Name</th>
<th>Miles of Pipeline in Chester County*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonial Pipeline Co.</td>
<td>21.7</td>
</tr>
<tr>
<td>Columbia Gas Transmission Corp.</td>
<td>82.5</td>
</tr>
<tr>
<td>Eastern Shore Natural Gas Co.</td>
<td>31.0</td>
</tr>
<tr>
<td>Laurel Pipeline C. - Buckeye Pipeline Co. LP</td>
<td>24.1</td>
</tr>
<tr>
<td>Mobile Pipeline Co.</td>
<td>37.9</td>
</tr>
<tr>
<td>PECO Energy Co.</td>
<td>2.4</td>
</tr>
<tr>
<td>PPL Interstate Energy Co.</td>
<td>17.5</td>
</tr>
<tr>
<td>Sunoco Pipeline LP</td>
<td>102.9</td>
</tr>
<tr>
<td>TE Products Pipeline Co. LP</td>
<td>24.8</td>
</tr>
<tr>
<td>Texas Eastern Transmission Corp. (Duke)</td>
<td>75.2</td>
</tr>
<tr>
<td>Williams Gas Pipeline – Transco</td>
<td>138.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>557.9</strong></td>
</tr>
</tbody>
</table>

Note: *Estimated based on currently available mapping as of 1/11/13.

Another need for the PIC is to clarify information and properly address questions that have been raised at public meetings and in conversation with CCPC staff. For example, an issue that was discussed at public meetings was the schedule with which pipelines are inspected using devices called Pipeline Inspection Gauges or PIGS. A PIG is a cylindrical device that may even be a robot, which is inserted into a pipeline. A PIG may have attachments that scrape clean the interior of the pipeline. A PIG may also have sensors that detect cracks or small leaks. The process is called “pigging.” Pipelines are pigged according to a mandated schedule, but there is not information readily available to the public, as to what those schedules are, or if they have been fulfilled. Also, there are unconfirmed reports that older pipelines are exempt from pigging, which raises the concern that the most aged pipelines are the least inspected. Further research would be required to clarify this issue.

Another issue that has been raised by the public in the past is the notion that some pipelines are designed for rural areas, while others are for urban areas. The concern is that there are areas of Chester County that once were rural, and so had rural-type pipeline infrastructure requirements. However,
these rural areas have since been urbanized without the pipeline being upgraded. It appears that this public perception may relate to the differing design classes of pipelines. There are four classes of pipeline which as of 2011, were defined in the Code of Federal Regulations, Title 49, Part 192, Transportation of Natural and Other Gas Pipeline: Minimum Federal Safety Standards.

Each class of pipeline is intended to be used in communities according to population densities. Class 1 being the least dense (most rural) and Class 4 having the densest population (most urbanized). Each class of pipeline has differing design requirements. For example, the maximum allowable operating pressure has been 936 pounds per square inch for Class 1 and 520 pounds per square inch for Class 4. However, these criteria have been recently updated and further research would be required to bring these figures and other information up to date. Class 1 pipelines, also known as rural pipelines, are exempt from state Public Utilities Commission (PUC) safety inspections. There is no readily available mapping of pipelines in Chester County based on class. Such information could be combined with existing population densities to better evaluate the public concerns.

C: Pipeline History

According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), there are over 2.5 million miles of pipelines in the United States. The number of pipeline miles in Pennsylvania is unknown, although it is estimated to be over 60,000 miles. This uncertainty is due to the fact that there is no single regulatory agency whose job it is, to oversee these projects. The Pennsylvania Public Utilities Commission (PUC) is only involved with those pipelines categorized as “public utilities,” meaning those that deliver gas directly to a consumer, and those lines that are contained from start to finish within the Commonwealth’s boundaries. Those pipelines which are interstate, such as Transcontinental, or the proposed Sparrows Point project fall under the siting jurisdiction of the federal government. The variety of regulators can be very confusing. According to StateImpact, a reporting project of NPR, Pennsylvania does not have one regulatory authority that oversees intrastate gas pipelines. In fact, out of 31 states that produce natural gas, Alaska is the only other state besides Pennsylvania, that does not.

The first commercial oil well was developed in Pennsylvania in 1859 in Titusville. Since then, more than 350,000 oil and gas wells have been drilled. In Pennsylvania, the Marcellus Shale rock formation underlies approximately two-thirds of the Commonwealth, as well as parts of New York and West Virginia. It is believed that the Marcellus Shale holds trillions of cubic feet of natural gas. Many of the issues widely discussed regarding the Marcellus shale include well drilling, hydraulic fracturing (or “fracking”). The natural gas that is harvested from these sites is ultimately refined and transported throughout the region and country for domestic use.

In the spring of 2008, Chester County became acutely aware of the pipeline infrastructure that traversed its geography. A notice for a public meeting was received regarding the Williams-Transco Pipeline extension whose corridor passed through the center of the County. Within weeks, another notice,
this time a newly proposed line, Sparrow Point, was received. This line proposed to transport liquefied natural gas from the Chesapeake Bay region in Virginia, through Maryland, and from the southwestern portion of the County up through the north central region. It should be noted that the Williams-Transco extension has proceeded, while the Sparrows Point project, though approved by the Federal Energy Regulatory Commission, has been vacated as of November 8, 2013.

One of the reasons that pipeline expansion projects and new lines have become such an issue, is that no public or private entity has determined how many new miles of pipelines need to be constructed to transport the Marcellus Shale out to the markets for consumption. An additional problem is that the Commonwealth’s current pipeline infrastructure system is not equipped to carry the volume of gas produced at the pressure needed to transport it to the market. A report from the PA chapter of the Nature Conservancy estimated that between 10,000 and 23,000 new miles of pipeline would be needed for this purpose. In the past five years, the County has been notified of projects, including but not limited to, Williams Transco Sentinel Project, Sparrows Point LNG pipeline, Commonwealth Pipeline Project, Eastern Shore Natural Gas Expansion project.

D: Agencies Involved

Although there are many agencies that are involved in the process of a pipeline’s proposals, below are a list and brief description of some of the more involved organizations, and what they do.

- **The Federal Energy Regulatory Commission** (FERC) is the agency that regulates the interstate transmission of natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines. While FERC also deals with electricity, only the natural gas/oil responsibilities are listed as part of their responsibility in the Energy Policy Act of 2005. FERC is also responsible for:
  1. the regulation of the transmission and sale of natural gas for resale in interstate commerce;
  2. the regulation for the transportation of oil by pipeline in interstate commerce;
  3. approving the siting and abandonment of interstate natural gas pipelines and storage facilities;
  4. ensuring the safe operation and reliability of proposed and operating LNG terminals;
  5. monitoring and investigates energy markets;
  6. enforcing FERC regulatory requirements through imposition of civil penalties and other means; and
  7. overseeing environmental matters related to natural gas and hydroelectricity projects and other matters.

There are many other responsibilities that fall outside of FERC’s jurisdiction and lie with agencies such as the US Department of Transportation, the PA Public Utilities Commission, the
Environmental Protection Agency, and the PA Department of Environmental Protection, to name a few.

- **The US Department of Transportation (USDOT)** has an agency called the Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA is the agency that develops and enforces regulations for the “safe, reliable, and environmentally sound operation of the nation’s… pipeline transportation system.” Specifically, the Office of Pipeline Safety (which is part of PHMSA’s two safety offices) is the Federal safety authority for the nation. They provide information regarding pipeline regulation, proposed and final rulemaking, and pipeline statistics. USDOT also provides information on the Common Ground Alliance, One Call programs, the National Pipeline Mapping System and report on accidents/incidents/corrective action orders for major pipelines.

- **The PA Public Utilities Commission (PUC)** is an agent for PHMSA. The PUC is given the task of enforcing the federal pipeline safety regulations in Pennsylvania. As part of PA Act 127, also known as the Pipeline Act (the Gas and Hazardous Liquids Pipelines Act), PUC has to develop a registry and conduct safety inspections of the lines for “all pipeline operators in the state.” PUC already monitors compliance with federal and state regulations by “conducting frequent inspections of pipeline facilities and records of regulated gas utilities.”

- **Pennsylvania Department of Environmental Protection (DEP)** is responsible for issuing permits when a pipeline runs through a wetland or crosses a waterway. They also have oversight if a project crosses through an area with endangered or rare species. In areas of the state were natural gas is extracted, the DEP regulates natural gas drilling, as part of its Bureau of Oil and Gas Management, which employs approximately 80 well inspectors who performed about 5,000 inspections in 2012.

- **Chester County Agencies** also play a role in this process. Some of the involved County offices include the Planning Commission, Water Resources Authority, Conservation District, Facilities and Parks, and the Department of Emergency Services. The level of involvement of these groups varies depending on what is being proposed and how the County is notified. While most of the county agencies only serve in an advisory role in the pipeline planning and notification process, they also play an integral role in communication with the larger community.

**E: Stakeholder Concerns**

The goal of the PIC is to provided information to residents, pipeline operators and other Chester County stakeholders including farmers and non-profit land trusts (like the Brandywine Conservancy) whose large undeveloped fields and nature preserves are commonly crossed by pipelines. The design and structure of the PIC should therefore consider stakeholders concerns. From April through September of 2013, staff from the CCPC was asked to attend various pipeline related meetings on an almost monthly
basis. Most of these meetings were open to the public and many of them included local elected officials and other stakeholders such as the land trusts. The key issues that arose at these meeting were:

- **Safety** - By far the most common comments raised by residents and landowners were concerns about pipeline safety. These included fears of gas leaks, explosion, and the long-term effect that living near a gas line might have on the development of their children.

- **Poor Communication** - Another frequently occurring issue was the perception that pipeline operators did not sufficiently inform the public of proposed projects, or expediently notify landowners when pipeline operator staff would be walking on their property.

- **Pipeline Saturation** - Residents in communities with a large number of pipelines, such as East Goshen, Upper Uwchlan, Uwchlan, Westtown, East Whiteland, and West Whiteland Townships, expressed frustration that they already have many pipelines and are “saturated.” These residents feel that they are already bearing too much of a burden, and that any new pipelines should cross into other communities that are less saturated.

- **Natural Resource Impacts** - Common environmental concerns include issues regarding potential impacts to water quality, impacts to stream crossings, the loss of open space, and the cutting down of woodlands and personal yard landscaping.

- **Land Value Impacts** - Landowners are concerned that environmental impacts and real or perceived safety concerns about pipelines could lower their property values.

- **Property Rights** - In general, landowners are often unclear as to the exact nature of the property rights that pipeline operator possess when the operators own a right-of-way, work space, or other development rights.

Pipeline operators are also key stakeholders whose input is essential for the successful design of the PIC. In August of 2013, a meeting was held between PSC and four of the operators whose pipelines pass through Chester County. CCPC staff also attended. At this meeting, the operators noted that:

- They use technical terminology that the public does not, which can cause confusion.
- They must deal with both renters and owners which can cause complications for notification.
- They focus on coordinating with land owners whose property has pipeline right-of-way. However, nearby landowners are often concerned with pipeline issues, and they feel like they are not well informed.
- They recognize that there are perceived gaps in communication with the public.
- They need to balance transparency with the need to keep proprietary information private so they can remain competitive in the marketplace.

**F: Alternative Web Models**

There are several alternative models that the CCPC explored as part of our background research. Each model had positive aspects, but there were also negatives. The three models we looked at most
closely were from Brookings County, South Dakota; the Georgia Public Service Commission; and Strathcona County, Alberta Canada.

- **Brookings County, South Dakota** utilized the Pipelines and Informed Planning Alliance (PIPA) document to create and adopt a Transmission Pipeline Consultation Zone Ordinance. The specifically cited Baseline Recommended Practices BL04 (adopting a transmission pipeline consultation zone ordinance) and BL05 (defining transmission pipeline consultation zone) from the PIPA document. They defined a Consultation Zone as an area extending from each side of a transmission pipeline, the distance of which should be defined by local governments, to describe when a property developer/owner who is planning new property development in the vicinity of an existing transmission pipeline should initiate a dialogue with a transmission pipeline operator. This ordinance requires anyone within this area (660-feet on either side of an existing transmission pipeline) who wishes to excavate in that defined area to initiate a consultation with the transmission pipeline operator. The goal of this process is to protect the pipelines and to raise awareness of safety impacts.

The use of the PIPA document in this situation worked extremely well for the same reasons it would likely not be entirely successful in Chester County. Primarily, Brookings County is a rural county. They identify themselves as such, indicating that their population is 28,220 and their heads of cattle are 47,000. Additionally, they only specify two pipeline companies that are to be contacted; indicating that there are only two pipelines that traverse the county. Chester County has ten pipelines, according to our mapping, and that does not include those projects that are currently being proposed, or those that have been approved, but not built.

- **Georgia Public Service Commission** houses a site that allows operators to provide a 10-day notification that is required by the Commission. CCPC examined this model because it was designed to be easy to use. Also, it shows mapping and proposed pipeline activity utilizing Google Maps as its base mapping.

On this site there are text boxes with required information regarding the proposed construction project, as well as the representative’s information. After this information is complete, the applicant can then use point markers on the provided Google map to show where the pipeline project will be located. From there, any citizen who requested to be notified of construction within a specified area would be provided a link to the notification on the Georgia State site. While this might be user friendly, we ultimately were concerned that neither the County, nor the Commonwealth could require an operator to participate.

The main issues we found were that Georgia has different powers and control over operators than the Commonwealth of Pennsylvania holds. Furthermore, these powers allow for the requirement
of operators to provide their information on this site, whereas Pennsylvania could only advise operators to use this method of information sharing. Based on recent coordination meetings, it was clear that a majority of operators had little or no desire to go beyond what they were legally required to do. Figure 2 shows the sort of complex and detailed information that operators are required in provide to this web site.

• **Strathcona County**’s process was explored because it is a county very similar to Chester County. It is similar in population, proximity to a major city (Edmonton, Alberta), quality of life values, and focus on empowering citizens. The statement of purpose from the Strathcona County Protocol has a very clear purpose: to ensure that oil and gas projects are “carried out with the least possible impact on the environment, health, safety and quality of life for the residents of the community.” Their approach involves a staff person who is dedicated to energy development issues, familiar with both the local protocol and their federal regulations. As presented, the Strathcona protocol facilitates the process by providing a list of expectations to the industry, as well as information that aims to engage and educate their landowners with the goal of reducing conflict and negative impacts to quality of life for residents.

The two main aspects we found with this process, making it not viable for Chester County, were that it provided for a full-time staff member to be dedicated to this issue. Furthermore, the information provided is not so much of a protocol. Rather, it as a checklist of items that landowners should be asking for, or trying to achieve through the leasing process, and not information regarding safety and some of the other concerns held by landowners and others.

**G: Existing and Potential County Website Capabilities**

The CCPC has access to extensive digitized mapping called Geographic Information Systems (GIS) maps. These maps identify the location of pipelines, land uses, and provide property information. However, as with any new initiative there are technical limitations as to how elaborate a web page can be established in the short term. As it currently stands, CCPC could establish the PIC web page as part of the Chesco.org or Landscapes2.org web sites, as shown in Figure 3. The PIC web page could include maps, tables, and figures in a pdf format.
There is also the option to establish AGOL (Arc GIS On-Line) mapping in which the user could view a map on a computer and zoom in on a specific area. With AGOL, the user could also click onto a parcel of land and get very basic information such as the parcel number and its owner. Although this information would be limited, it would still be quite useful. CCPC does not have access to detailed modern mapping of the exact surveyed locations of any pipeline. However, more generalized mapping could be presented showing a 2,000 foot wide Consultation Zone (CZ) that follows available pipeline mapping, which may be somewhat outdated. (For Chester County, the CZ would extend 1,000 feet to either side of a pipeline.) A user could then click on that CZ and be directed to the web page of the pipeline operator. Thus, the user would quick get a contact email or phone number for the company.

Another web page within PIC could give users instructions on how to determine if they have a pipeline easement, and contact information to the Recorder of Deeds Office. Thus, the user could locate their deed and verify what sort of easement is in place. Lastly, the CCPC could create an on-line form where users could write questions that would then be responded to by CCPC staff. Both the questions and the answers could be posted on line. There could also be a FAQ page. In a sense, this would be a kind of permanent on-line public meeting with displays and opportunities to ask questions. It would not be fully interactive, as in a chat room or a discussion board. Rather it would establish a foundation that would have limited interaction more akin to an information clearinghouse. Of course, if the site proved popular and useful, it could be expanded.

Over the long term, a designated County Point-of Contact (POC) could establish a more interactive Phase 2 version of the PIC. It would build on what was successful with the initial Phase 1 version. The Phase 2 web page could include a more enhanced and interactive platform in which pipeline operators would notify the POC that a project is being proposed. Likewise, the Chester County Conservation District could also use this page to notify the POC when they become aware of a pipeline project. The POC could then contact the operator and gather information that could be posted to the PIC. Information that would be gathered from the operators could include:

- **Project Location** - PIC could include a section where project location information could be displayed on an interactive map, including the start and end point locations (termini) of any project an operator is proposing. The PIC might also include a field survey or other mapping of the project corridor. The termini of the project will be mapped in terms of street addresses, stream crossings, and rail crossings.
• **Project Description** - PIC could post a brief description of the project and the duration in which the operators workers will be in the field. If construction is to be completed in phases, this information could be included. Information could also be provided as identified through the survey such as emergency contact for the operator County Department of Emergency Services, or general contact for both the operator and their consultants. Any proposed projects will remain posted on the PIC for one year after they are completed.

**H: Phased PIC Implementation Approach**

Because of the large amount of information that could ultimately be posted on the PIC, a phased implementation will be required. The following presents an outline that could be used to established a web site in the spring of 2014 and then complete it over a course of 24 months.

• **Phase 1: Establish the PIC** - Create a live web page that lists easily available background information such as pipeline and land use maps, and links to key web pages to entities like FERC, PHMSA, operators, and other interested parties. **Figure 3** shows how some existing information could be presented.

• **Phase 2: Update the PIC** - Update the PIC based on PSC recommendations that are applicable and practicable. Also create a Public Commons web page where the public can post questions to be answered in writing by POC once a week. The answers would also be posted. A FAQ section would also be developed.

An easy to read on-line “guidebook” could be created to explain various facets of pipeline operation, land records and how to access them, and other issues that may arise. Topics in the guide might initially include:

1. The limitation of accuracy in mapping and land use records
2. The types of activities that can occur in pipeline right of ways and who to contact with questions
3. Safety issues to consider (for both operators and residents)
4. What to do and who to call in case of emergency

- **Phase 3: Public Meetings and Stakeholder Outreach** - Two public meetings (daytime and evening) could be held to introduce the PIC. This meeting would also be used to gather stakeholder input on the PIC and determine what further issues the PIC could address. Similarly, POC will contact, and is needed meet with operators and agencies to gather their input on the PIC.

- **Phase 4: Update Landscapes2 Policies** - Based on new information gathered through the above phases, policies in Landscapes2 would be updated. Although the PIC would be a useful tool, it would have no weight in terms of setting County policy. Updating Landscapes2 would fill this need in an authoritative manner.

- **Phase 5: Finalize the PIC** - The final phase would be to update the PIC to be consistent with both stakeholders needs and any updated County policy.

I: Conclusion and Next Steps

This memorandum presents only a summary of key issues that would have to be addressed in establishing the PIC. A further refinement and a more detailed plan of action will be required to begin the actual implementation of the PIC.
Recommendations & Challenges:

Recommendation: Guidelines for defining a PNP:
1. Construct an initial PNP as basic and user friendly as possible for Operator, municipal and public participation
2. Vet and establish a County based Pipeline Notification Procedure (PNP) under the auspices of County Commissioners when feasible
3. County Commissioners could establish coordination with State County Commissioner Associations for statewide adaption and adoption of PNP
4. The County Commissioners should maintain oversight of the development of a PNP
5. The County Commissioners should define and establish the County Point of Contact (POC)
6. The County POC should be involve in vetting the PNP
7. Define and establish Operator Point of Contact (POC) with existing and proposed Operators in your County. Consider establishing participation from Operators in adjacent counties or states if their infrastructure might cross your boundaries over time.
8. Define the Operator POC through the Operator Government Affairs department; Land agents do not have the authority nor information needed to participate as a POC
9. Establish that only registered Operators have access to PNP information
10. Define and establish municipal POCs
11. County Commissioners could establish a MOU with county municipalities regarding participation in a PNP
12. Consider establishing regional landowner community POCs
13. Include Emergency responders as PNP stakeholders
14. Consider Emergency Services & Reverse 911 capability. Operator and County sharing of precise ROW information and current parcel ownership may be used in a reverse 911 system that enhances emergency response in a pipeline emergency.
15. Develop a POC relationship with Conservation Districts for their role in permitting notification requirements by DEP
16. Define and establish Consultation Zones (CZs)
17. Define your region’s overall “tasks to ask” of stakeholders for a PNP.
18. Conduct surveys to define Operator/Community/Municipality needs in a PNP and to vet appropriate longterm stakeholders
19. Incorporate tasks identified in surveys that fall beyond a PNP into a program for public education and awareness. Consider involving legislators, NGOs and Conservation Organizations in those issues beyond a PNP
20. Establish a **PNP Web Based System of Notification** for verifiability and security. PIPA’s Operator Registry Notification is very detailed. Consider using the PNP modified schematic to collect operator information

a. Use/include the Operator’s OPID # in PNP registration for cross referencing PHMSA compliance data

b. The PNP Webpage could provide a secure link for sensitive communications between Operator/County/Municipalities

c. The PNP Webpage could emulate the PNP Webpage Schematic (page 52) and include:
   i. Operator Registration:
      i) Efforts should be made to determine Operators POC as Governmental Affairs or Government Relations in the pipeline company. Land agents do not have the authority nor information needed to participate as a POC

ii. Operator Notification:
   i) In Pennsylvania, the system could provide that Operators supply a 30 day notification through adaption of the PA PUC compliance requirements of 52 PA Code 59.38 for pipeline construction35 for:
      - a. proposed new pipelines
      - b. expansion of existing pipelines
      - c. repairs
      - d. maintenance

iii. Operator Change of Name:
   i) through acquisition and/or divestiture

   ii) If FOIA applies, reference PHMSA databases for safety compliance rather than requiring industry to refile data with County

21. Consider a “Landowner/Deed Verification/Update Request Form” for bilateral sharing of landowner information between Operator & County in order to provide Operators with current landowner information and the County with landowner information for proposed pipeline projects. Used in conjunction with CZs, this information sharing in the General Evaluation stage of Operator planning and in local land use review provides for land use planning that enhances pipeline safety

22. Vet funding/labor concerns and research resources early in vetting a PNP

23. Consider a PNP central County based depository to ensure easy access to information, consistent message and information exchange, and to promote a sharing of effectiveness lessons

24. Engage the FERC in an both advisory and partnering capacities

25. In a Commonwealth, emphasize upholding Commonwealth principles of municipal authority

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35 for A) any transmission or distribution gas pipeline or (B) any gas pipeline where the actual, planned or proposed replacement, relocation, construction, expansion or extension of such pipeline within the PNP Consultation Zones
26. In all other states, consider the use of the principles of a Commonwealth in creating a PNP
27. Consider public education forums introducing the “Who, What, Why, Where, When” of the PNP as a function of PNP/Operator/Community relations
28. Emulate PIPA where applicable

**Challenge:** Keep the focus on developing a Notification Protocol. Researchers discovered early on that stakeholders, from Operator to County to Community, viewed vetting the PNP to include issues from landowner rights to dispute resolution. These are important issues but are beyond the scope of developing a PNP and detract from the ability to focus on a Protocol that provides for full stakeholder involvement.

**Recommendation:** Create a mission statement for repetitive reinforcement in messaging. The mission in vetting a PNP in this study was “to create a notification process for use by Operators, County, Landowners/Developers in the initial stages of pipeline and land use planning.”

**Recommendation:** This PNP incorporated this language in the definition for Chester County CZs: “an area extending 1,000 ft from each side of a transmission pipeline or a proposed transmission pipeline to describe when an operator or property developer/owner, who is planning land use activity should initiate a dialogue with the County through PNP.” (emphasis added)

**Challenge: Funding:** This project was funded by a US DOT PHMSA TAG which facilitated the research and definition of this County based PNP. **Recommendation:** Annual TAG awards are available to counties and communities for research, adaption and adoption of the Chester County PNP and could eliminate the initial fiscal obstacle.

**Challenge: Website development and maintenance: Costs and Labor:** Survey data and government services interviews indicate a web based registration and Notification Protocol is the most reliable mechanism for a PNP. Costs associated with the development and maintenance of a web based PNP present the challenge. The additional time and labor needed for web maintenance and a POC need to be vetted for availability of funds or redistribution of responsibilities. **Recommendation:** webpage design is transferable to all counties. Consider a central depository for PNPs to ensure easy access to information, consistent messaging and information exchange, and to promote effectiveness. **Recommendation:** Pennsylvania counties that receive Impact Fee funds may investigate using a portion of those funds for developing and maintaining a PNP.

**Challenge:** as discussed in the Survey Data Report, neither Operators nor municipalities surveyed in Chester County were familiar with Consultation Zones. **Recommendation:** Partner with PHMSA for educational programs to address all stakeholders at the onset of a producing participation in a PNP.

**Challenge: Noted by Operators; “It’s a culture change”** Operators asked when a PNP would recommend notification in a PNP. **Recommendation:** This PNP encourages notification be made to the PNP POC when an Operator first begins to evaluate potential pipeline routes from origination to termination; when
the Operator identifies terrain, preliminary costs and feasibility. At the Operator first step; General Route Evaluation, PNP should provide regional expertise by using CZs for existing and proposed new pipelines. As a guide, vetting a regional PNP may reference PIPA36 for a chronology of a transmission pipeline Operators’ Right of Way Acquisition Process described as:

1) General Route Evaluation - Project Feasibility Analysis Phase,
2) Operator’s Due Diligence Phase,
3) Environmental, Archeological Studies & Endangered Species.

The appendix follows with Land Agent Background, Condemnation Process and concludes with public relations. Public Relations states, “Landowners often reach out to government officials for objective information and support. Government officials should be contacted as early as reasonable in the acquisition process.” (emphasis added). PNP recommends a shift in the Public Relations aspect of an Operators’ Right of Way Acquisition Process to the foreground by a following the recommended PNP in the first stages of the General Route Evaluation and Project Feasibility Analysis.

For landowners/developers, the County/municipal permitting process PNP would begin with CZ overlays.

**Challenge: Barriers to behavior change:** should be identified and recognized in both the landowner and Operator cultures. Project surveys indicated that the culture of business as usual for operators and the unwanted additional responsibility from local governments provided obstacles to initiating a PNP. **Recommendation:** Identify both barriers and benefits with transparency, and approach both Operators and Community with transparency. **Recommendation:** Build bilateral incentives into the effort to help overcome barriers or increase the benefits to add value to the communication effort. **Recommendation:** Initiate efforts to understand and address Operator and landowner frequently asked questions such as, “What’s in it for me?” **Recommendation:** Once research identifies the need (the why), the audience (the who), and the basic message (the what), design a notification protocol that diverse stakeholders can refine by agreement.

**Challenge:** Inherent in both PIPA and any PNP is the absence of regulatory authority. As recommended practices, the challenge to voluntarily gain participation from all stakeholders has been daunting in promoting PIPA. The study discovery that neither Operators nor municipalities in Chester County were aware of the 2010 produced PIPA recommendation for use of Consultation Zones in land use planning associated with pipeline infrastructure. The Chester County Commissioners identified this challenge early on and recommend creation of an extension to PNP that identifies and outlines needed state and federal legislative changes. **Recommendation:** a PNP could provide for advisory reviews and meetings between municipalities, stakeholders and Pipeline Operators, facilitated by the County, in the preliminary stages of pipeline evaluation and location, before formal permit applications are made to FERC.

36 PIPA, Appendix G, Pages 1-7
Recommendation: taken directly from a Chester County Commissioners recommendation, the County Commissioners should “periodically review implementation of the notification system, including meeting with officials from the pipeline companies and municipal officials to explore what additional steps from the report can be done to facilitate greater communication by all parties.37”

Challenge: POCs: the Operator and County Point of Contact are the most crucial components, and hardest to determine. **Recommendation: County POC:** Be patient. Developing the PNP may answer the question of who should be designated the County POC, Developing a PNP may beget a fervent POC. **Recommendation: County POC:** Determine Operator POC as Governmental Affairs or Government Relations in the pipeline company. Land agents do not have the authority nor information needed to participate as a POC

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37 Chester County Planning Commission 12/2013
Summary Conclusions:
The Commissioners opined bilateral benefits of notification to a designated Chester County Point of Contact (POC), early in a pipeline operators’ planning and in Chester County land use, in order to identify and prevent encroachments, enhance public, environmental and pipeline safety and improve community relations.

The project was founded on the principle of improving safety over time through pre-construction land use planning to prevent bilateral encroachments, promote community awareness and enhance damage prevention. A shared goal of PIPA and PNP is to avoid conditions in which pipeline operators learn of proposed land use and development projects after pipeline designs are complete or construction has begun.

Inclusion of Model Ordinances such as provided by PIPA (Section 2, Appendix B), recommending property developers/owners notify and provide Operators development information when in proximity to existing pipeline infrastructure is recommended by PNP for use by Operators in notifying the County PNP when proposing new pipeline projects in Chester County.

The bilateral use of Consultation Zones (CZs) are encouraged rather than use of fixed-distance setbacks which may not consider the risks involved with a specific pipeline nor the physical environment in which the pipeline operates or will operate. PNP and CZs provide local resources to Operators in order to provide technical assistance and better understanding of the unique characteristics of local terrain and society. Characteristics of specific pipelines and associated risks that come with varied characteristics of fuel, diameter and psi are crucial technical resources Operators may provide to the County through PNP to enhance County pipeline safety. However, as discussed in the Survey Data Report, neither Operators nor municipalities surveyed in Chester County were familiar with Consultation Zones. Education for all stakeholders is necessary at the onset of producing participation in a PNP.

The Chester County PNP was created specific to the unique characteristic of Chester County, PA but is intended to ensure collaborative risk assessment and to serve as a transferable prototype.

PNP is a recommended notification protocol and not mandated by any public or private entity.