



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration



Pipelines and Informed Planning Alliance (PIPA)



**Presentation to American Public Works Association
International Congress & Exposition
September 14, 2009**

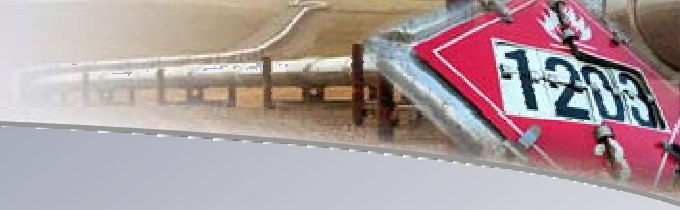
Presented by:

Herb Wilhite, Senior Consultant, Cycla Corporation

Supporting: PHMSA/Office of Pipeline Safety



Know what's below.
Call before you dig.



Energy Pipelines

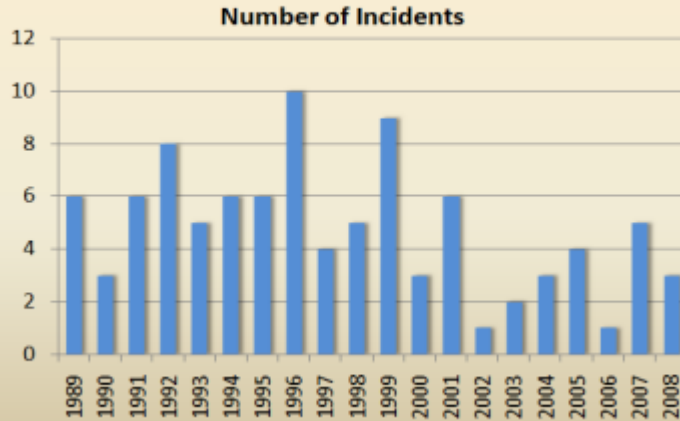
- Natural gas, crude oil and refined petroleum products pipelines extend across and into a majority of cities and counties in the U.S.
- Our national economy and security depend on these products.
- Pipelines are one of the safest, most efficient and most reliable means of transporting energy products.
- Serious pipeline incidents can occur, although in the last few years trends are going down.
- PIPA is addressing the concerns of land use planning and development near transmission pipelines.





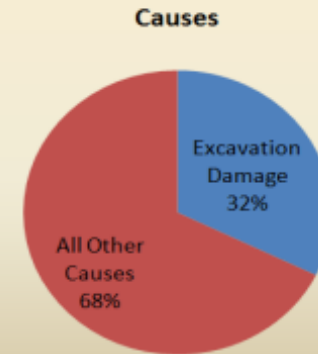
Data Trends

“Serious” Hazardous Liquid Pipeline Incidents (1989-2008)



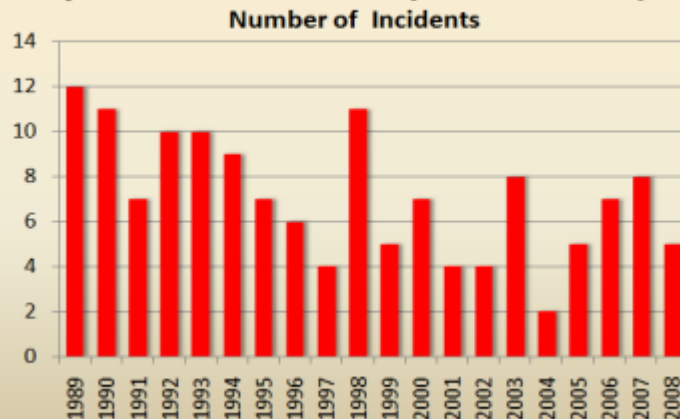
Source: DOT/PHMSA Significant Incident Data files April 15, 2009

“Serious” Hazardous Liquid Pipeline Incidents (1989-2008)



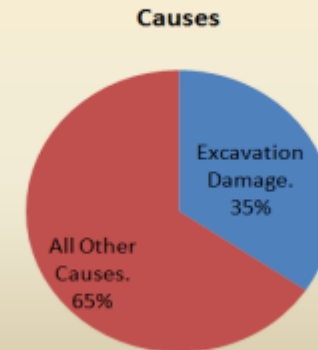
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“Serious” Gas Transmission Pipeline Incidents (1989-2008)

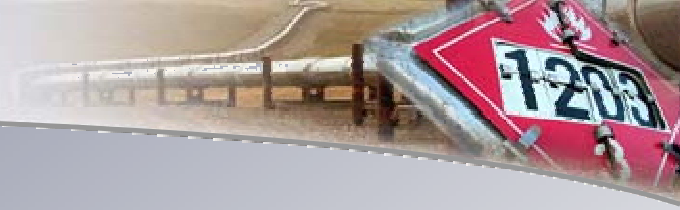


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“Serious” Gas Transmission Pipeline Incidents (1989-2008)

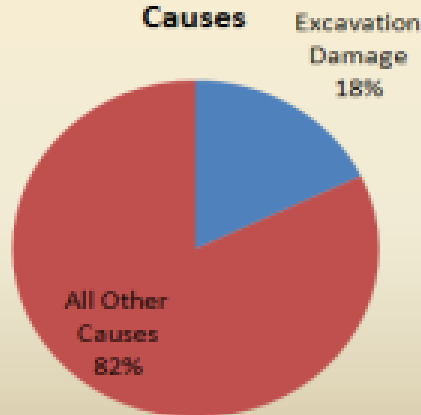


Source: DOT/PHMSA Significant Incident Data files April 15, 2009



Data Trends

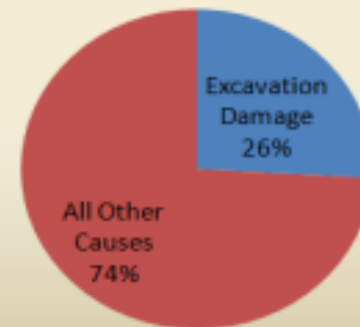
All "Significant" Transmission Pipeline Incidents (1989-2008)



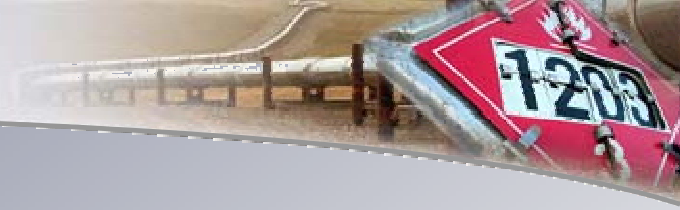
Source: DOT/PHMSA Significant

"Serious" Pipeline Incidents (1989-2008) All Pipeline Types, Including Distribution

Causes



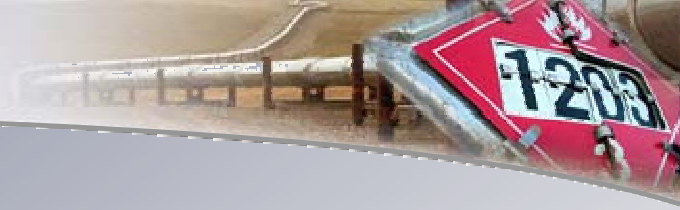
Source: DOT/PHMSA Significant Incident Data files April 15, 2009



Energy Pipelines and Land Use Planning

- Land use planning and development can have a direct impact on pipeline safety.
- In 2000 PHMSA began looking at developing guidance for communities regarding development near pipelines.
- Cooperative agreement with TRB revised to address PSIA 2002 requirement to study land use.



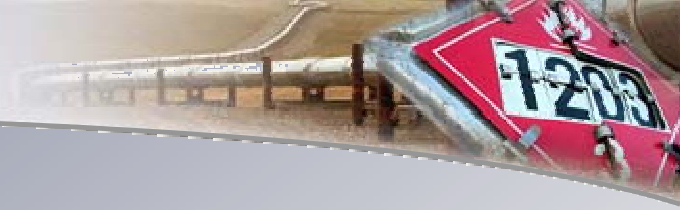


Population Encroachment

PSIA required information from study be used to:

- Determine effective practices to limit encroachment on transmission pipeline ROW.
- Address and prevent hazards and risks to public, workers, and environment associated with ROW encroachment.
- Raise awareness of the risks and hazards of encroachment.
- Address preservation of environmental resources while maintaining the ROW.





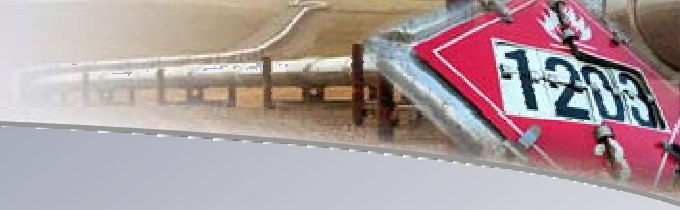
Population Encroachment

TRB Special Report 281, September 2004

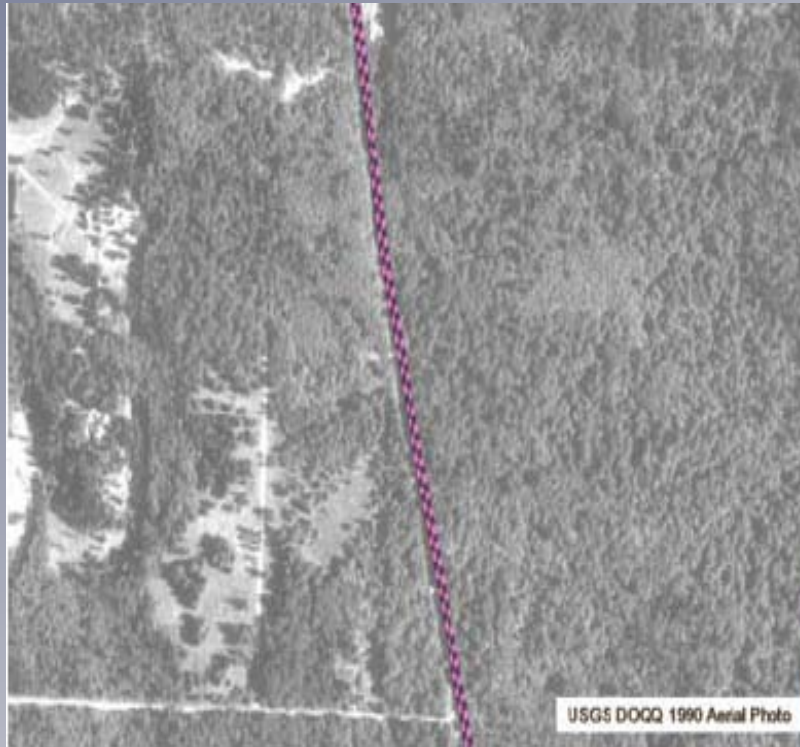
(<http://primis.phmsa.dot.gov/comm/RiskInformedLandUse.htm>)

- Recommendations to PHMSA:
 - Develop risk-informed land use guidance.
 - Involve all stakeholders
 - Include expertise in risk analysis, risk communication, land use management, and developing regulations
 - Ensure process is transparent, independent, and peer reviewed
 - Refine the guidance over time
- Recommendations to transmission pipeline industry:
 - Develop practices for specifying, acquiring, developing, maintaining ROW.





Population Encroachment



USGS DOQQ 1990 Aerial Photo

Figure 1 - 1990



NGA 2002 Aerial Photo

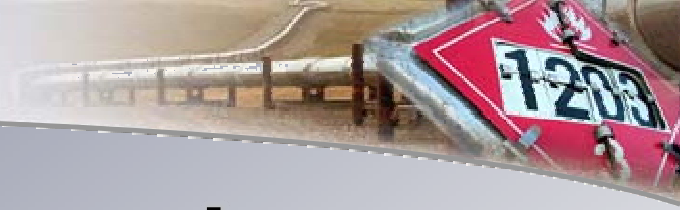
Figure 2 - 2002

Illustrated: Growth Along Pipeline in Washington State



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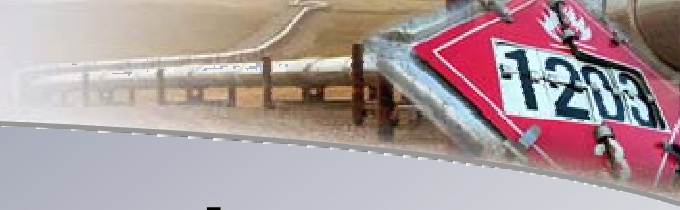




Pipelines and Informed Planning Alliance (PIPA)

- PIPA resulted from implementing TRB recommendations and PSIA
- PIPA is a partnership of stakeholders whose purpose is to further enhance pipeline safety
- Its aim is to help understand risks of ROW encroachment
- Its focus is to develop guidance and recommendations for stakeholders in land use planning and property development in the vicinity of transmission pipelines
- Inaugural meeting – January, 2008 – Approximately 130 stakeholder representatives participating
- Including representatives of NACo, NLC, NAHB, PST, MRSC, APWA, NASFM, NAPSAR, NARUC, FERC, PHMSA, Pipeline Industry



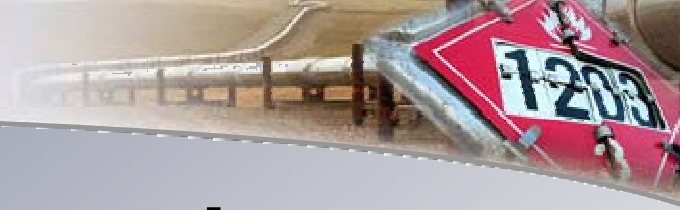


Pipelines and Informed Planning Alliance (PIPA)

Through PIPA we recognize:

- Need to educate local planners on pipelines and associated risks
- Need to develop guidelines for local planners to make risk-informed decisions about development along pipeline ROW
- **KEY** – Encourage **communication** between local planners and developers and transmission pipeline operators.
- Guidance also needed for pipeline operators regarding maintenance of their ROW.

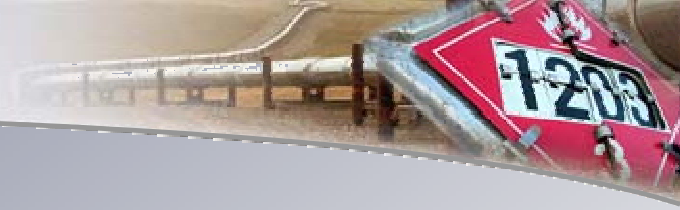




Pipelines and Informed Planning Alliance (PIPA)

- Key stakeholders for consideration in recommended practices are:
 - Local governments
 - Property developers/owners
 - Transmission pipeline operators
 - Real estate commissions
- Task teams considered existing practices and stakeholder needs and challenges.
- Consensus used to develop recommendations and guidance.



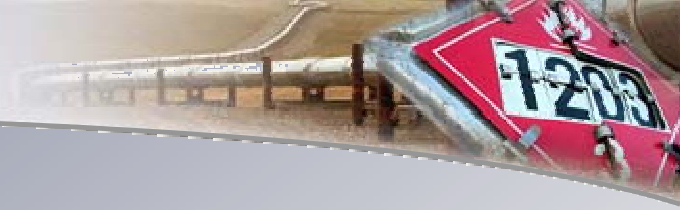


PIPA Task Teams

Three task teams established:

- Protecting Communities – Addressed concerns on lands **adjacent to** the pipeline rights-of-way to reduce the risk to communities
- Protecting Transmission Pipelines – Addressed concerns regarding activities **on** the transmission pipeline rights-of-way to reduce risks to the pipelines and community while preserving environmental resources
- Communication – Addressed issues of how risks to communities and transmission pipelines should be communicated among pipeline safety stakeholders
- Populated by volunteers, facilitated

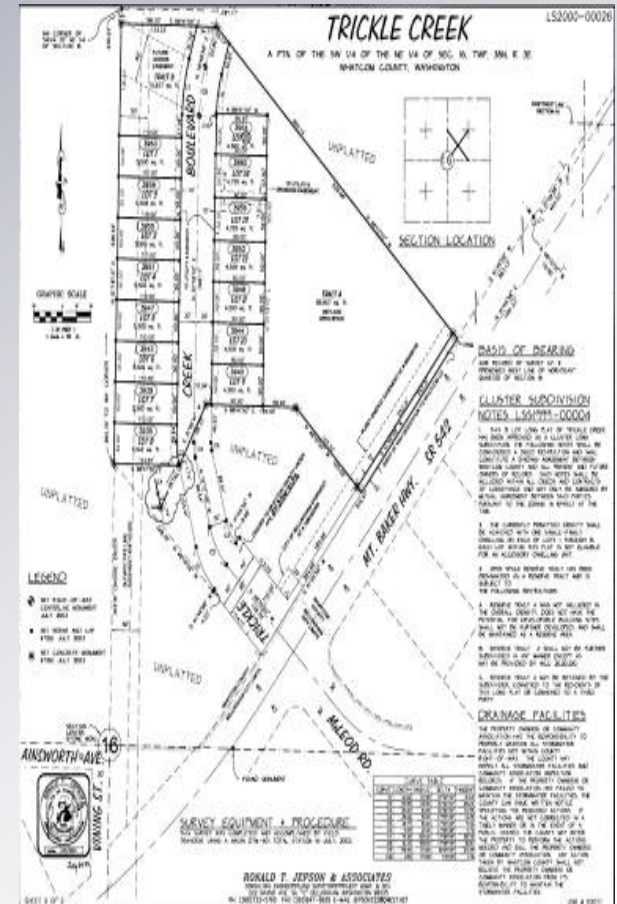




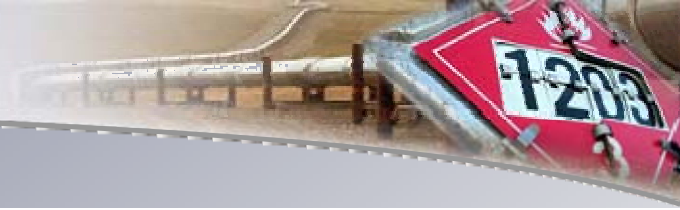
PIPA Report

Recommended Practice Scenarios:

- Baseline (BL)
- New Development (ND)
- ~~New Pipeline (NP)~~



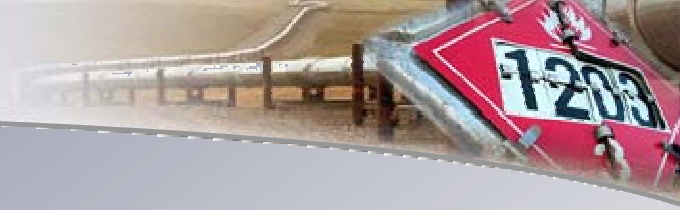
Know what's below.
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Examples of recommended practices

	BL07	Understanding the Elements of a Pipeline Easement
	BL08	Land Records Management
	BL09	Documenting and Recording Easement Amendments
	BL10	Implement Communications Plan
	BL11	Effectively Communicate Pipeline Risk and Risk Management Information
	BL12	Notification of Right-of-Way Maintenance Activities
	BL13	Encroachment Prevention and Management
	BL14	Participate in Organizations Pursuing Improved State Damage Prevention Programs
	BL15	Enhanced Damage Prevention Practices for Excavation near High Priority Underground Facilities
ND01		Pipeline Operators and Local Governments Should Coordinate with Property Developers/Owners
ND02		Gather Information for Design near Transmission Pipeline
ND03		Property Developer/Owner Review of Acceptable Right-of-Way Prior to Design
ND04		Property Developer/Owner Coordination of Development Design and Construction with Pipeline Operator
ND05		<i>n/a – Practice Deleted –</i>
ND06		Local Government Requires Consideration of Transmission Pipeline Facilities in Land Development Design
ND07		Define Blanket Easement Agreements When Necessary
ND08		Developing the Pipeline Transmission Right-of-Way
ND09		Provide Flexibility to Property Developer for Providing Open Space In Close Proximity to the Right-of-Way of Transmission Pipeline
ND10		Record Transmission Pipeline Easements on Development Plans and Final Plats
	BL16	Halting Dangerous Excavation Activities near Subsurface Installations
	BL17	Mapping Abandoned Pipelines
	BL18	Real Estate Disclosure

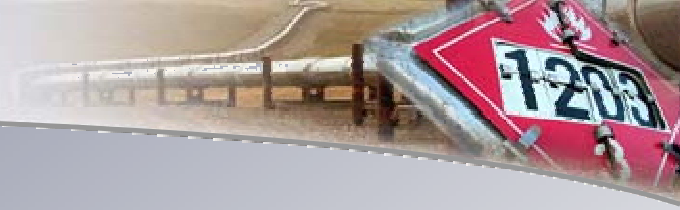




PIPA Report

- Publish as a web-based document
- Printable
- Practices selectable by the stakeholder audience taking action
 - Local Government
 - Property Developer/Owner
 - Pipeline Operator
 - Real Estate Commission
- Each recommended practice will have a brief Practice Statement and a Practice Description





PIPA Status

- Consensus reached on majority of recommended practices
- Ongoing discussion between industry and local government / community representatives regarding Consultation Zone and Planning Zone recommendations
- Publication of the PIPA Report during fall 2009
- PHMSA presenting at national and state stakeholder conferences
- Communications Team evaluating options for getting the word out
- Evaluating path forward regarding “evergreen”
- Stakeholders are encouraged to begin consideration of the recommended practices as soon as they are published.





Stakeholder Communications

- Home
- General Public
- Local Officials
- State Regulators
- Federal Agencies
- Emergency Officials
- Advocates
- Industry
- Excavators

Print

Stakeholder Communications

Site Pages

- Pipeline Basics
- Safety Standards
- Inspection
- Enforcement
- Incident & Mileage Reports
- Damage Prevention
- Alternative Fuels
- Community Assistance and Technical Services
- Land Use Planning**
- Public Meetings
- Public Awareness
- Liquefied Natural Gas
- Pipeline Library
- Pipeline Glossary
- Links

State-specific information:

Choose One... ▾

We are the Office of Pipeline Safety (OPS) within the U. S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

OPS is the primary federal regulatory agency responsible for ensuring the safe, reliable, and environmentally sound operation of America's energy pipelines. We develop and implement pipeline safety regulations at the federal level, and we share regulatory responsibility with the states, with whom we oversee more than two million miles of pipelines.

We are changing the way pipelines are regulated and we have new strategies that are improving the operation of pipelines as well as public and environmental safety.

We are now more mindful than ever of the roles that others play in helping to ensure the safe, sustained flow of energy products across our country. We are actively partnering with state and local officials, first responders, excavators and the general public - among others - to "get the word out" on pipeline safety. All of us, in one way or another, are pipeline safety stakeholders.

On this website you will find information that you can use right now - regardless of your stakeholder interest -- to help ensure pipeline safety in your community. To begin, please select the stakeholder tab above that best describes you or select a topic from the menu on the left.

If you don't have time to browse our website you can follow this link to download a printable [brochure about OPS](#).

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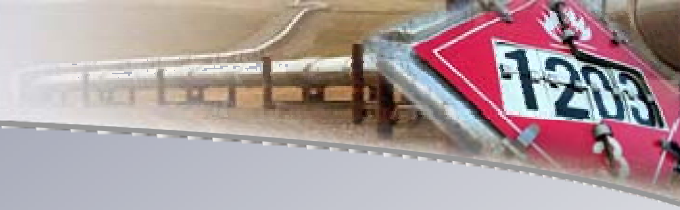
Following are some recent items of interest related to pipeline safety. Please visit <http://phmsa.dot.gov/pipeline> for additional What's New and event information.



What's New

- PHMSA solicits additional research on alternative fuels and to address pipeline integrity issues with ethanol, biodiesel, biogas and hydrogen (October 2008)
- PHMSA Publishes Final Rule for Increasing Maximum Allowable Operating Pressure on Gas Transmission Pipelines (October 2008)
- PHMSA Issues Guide for Strengthening State Damage Prevention Programs (September 2008)
- PHMSA Advisory Bulletin: Pipeline Safety: Notice to Operators on the Regulatory Status of Direct Sales Pipelines (May 2008)
- PHMSA Advisory Bulletin: Pipeline Safety: Installation of Excess Flow Valves into Gas Service Lines (June 2008)
- Report - Virginia Pilot Project - Incorporating GPS Technology to Enhance One-Call Damage Prevention - Phase I: Electronic White-lining
- Pipelines and Informed Planning Alliance (PIPA)
- PHMSA Publishes Final Rule to Relax Applicability of Public Awareness Regulations to Certain Gas Distribution Operators (December 2007)
- NTSB Study on Supervisory Control and Data Acquisition Systems in Liquid Pipelines (November 2005)

<http://primis.phmsa.dot.gov/comm>



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What's New

- 2010 State Damage Prevention Grants Solicitation Posted (July 2009)
- PHMSA Seeks R&D Proposals on High Strength Line Pipe Anomaly Assessment Methods (July 2009)
- PHMSA Releases Report on Mechanical Damage to Pipelines (April 2009) **[This is a large file (approx. 40 MB)]**.
- PHMSA Publishes Final Rule for Increasing Maximum Allowable Operating Pressure on Gas Transmission Pipelines (October 2008)
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<http://primis.phmsa.dot.gov/comm>



Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

State Pipeline Safety Partners –

- Supported by funding agreements with PHMSA.
- State agencies can assume safety jurisdiction for pipeline operators.
- States must publish regulations that meet or exceed the federal safety regulations.
- National Association of Pipeline Safety Representatives (NAPSR)
- PHMSA frequently consults with NAPSR.

<http://primis.phmsa.dot.gov/comm>



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Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Grants to States and Communities –

- PHMSA grants help states improve their damage prevention programs to protect pipelines.
- States should seek to address one or more of the nine elements identified in the PIPES Act of 2006 in their grant application.
- PHMSA Technical Assistance Grants (TAG) to communities help strengthen the depth and quality of public participation in pipeline safety and damage prevention matters.

<http://primis.phmsa.dot.gov/comm>



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Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Consensus Standards –

- OPS works with national standards organizations, such as ASME, API and NACE.
- These organizations produce effective standards balanced through a stakeholder consensus process.
- PHMSA recognizes and appreciates the value.
- When standards complement or enhance federal pipeline safety regulations, they may be incorporated by reference.
- Example: API Recommended Practice (RP) 1162, Public Awareness Programs for Pipeline Operators.

<http://primis.phmsa.dot.gov/comm>



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Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Research and Development (R&D) –

- PHMSA's R&D program goal is to drive improvements in pipeline safety.
- Technical review committees identify priorities and select projects.
- Program focuses on rapid conversion of new technology into usable tools to improve pipeline safety.
- Completed projects often provide technical basis for regulations and safety standards.
- Other projects support well-informed decisions by pipeline safety stakeholders.

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Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Public Awareness Programs –

- Pipeline safety regulations address public awareness communications.
- Pipeline operators must implement public awareness programs in communities traversed by their pipelines.
- They must inform stakeholders on how to recognize pipeline failures and of what actions to take in such an event.
- Operators must develop plans for carrying out their programs and must evaluate their effectiveness to identify needed improvements.

<http://primis.phmsa.dot.gov/comm>



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Focused Damage Prevention Initiatives –

- PHMSA invests in identifying damage prevention best practices and raising stakeholder awareness.
- PHMSA's Stakeholder Communications website provides additional information on these initiatives.
- *Damage Prevention Best Practices* –
 - 1999, Common Ground Study to identify “best practices”.
 - Nonprofit CGA now provides stewardship to the Best Practices.
 - Best Practices are recognized nationally and internationally.

<http://primis.phmsa.dot.gov/comm>



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Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Focused Damage Prevention Initiatives –

- Common Ground Alliance – promotes damage prevention across all stakeholder groups.
 - CGA members and sponsors represent spectrum of stakeholders.
 - PHMSA supports CGA efforts toward pipeline damage prevention.
- 811 – National 3-digit dialing number to provide access to one-call centers.

<http://primis.phmsa.dot.gov/comm>



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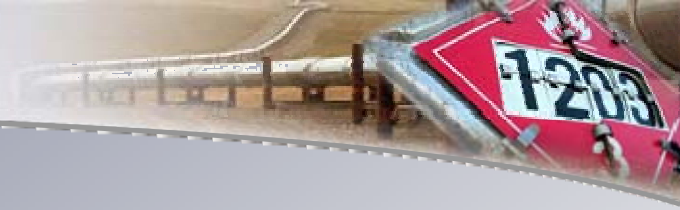
Focused Damage Prevention Initiatives –

- Community Assistance and Technical Services (CATS) – established in each of five PHMSA regions.
 - CATS Managers provide assistance and services to all stakeholders.
 - Focus is to foster effective communications and assist permitting agencies.
- VA Pilot Project –
 - PHMSA sponsors and supports
 - Phase I report available; Phase II underway

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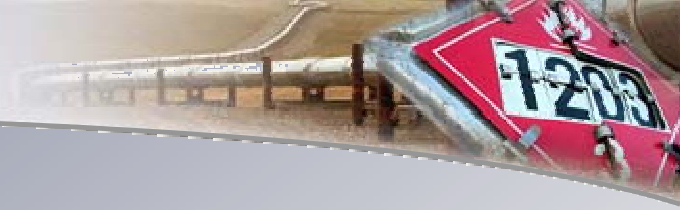


Current PHMSA programs and recent initiatives to enhance pipeline safety through improvements in excavation damage prevention

Focused Damage Prevention Initiatives –

- Pipelines and Informed Planning Alliance
- Damage Prevention Assistance Program (DPAP) –
 - Guidance: “Strengthening State Damage Prevention Programs”.
 - Draws on PIPES Act of 2006 definition of effective damage prevention programs.
 - Examines nine elements and discusses implementation.
 - State programs can be improved.

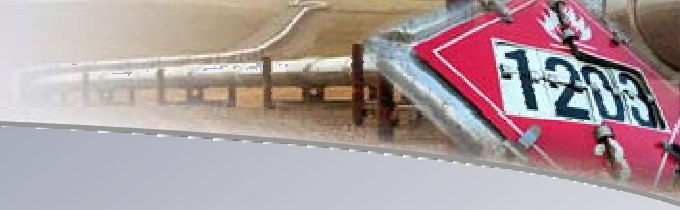




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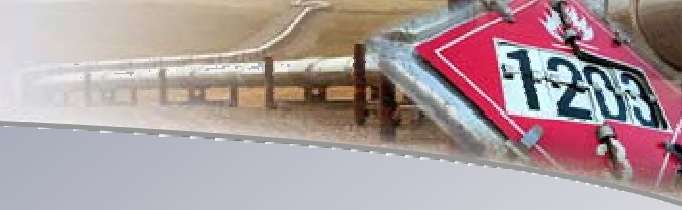




Energy Pipelines and Land Use Planning

- We need to educate planners on pipelines and associated risks
- We need to develop guidelines for planners to make risk-informed decisions about development along pipeline ROW
- **KEY** – Encourage **communication** between local planners and developers and transmission pipeline operators.
- Stakeholders encouraged to begin consideration of the recommended practices





Thanks for your time and consideration

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Questions?



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