PIPA Communication Team Annual Planning Meeting

Aug. 6-7, 2013

PHMSA
Your Safety Our Mission

FERC
FEDERAL ENERGY REGULATORY COMMISSION

FEMA

NACO National Association of Counties

NAHB
National Association of Home Builders

AGA

INGAA

energy API

Pipeline Safety Trust

DOT Conference Center, West Building, Room 5
1200 New Jersey Ave. SE
Washington, DC

APA
GREAT PLACES IN AMERICA

Agenda – Aug. 6

- Welcome & Introductions
- Review PIPA Recommended Practices
- PIPA Communication Plan – Goal & Tenets & Tools
- Anna Osland, *People and Pipelines: Land Use Management and Collaborative Planning Practices in NC*
- Kathy Smith, Mitigation Planning Team Lead, FEMA
- Ideas for socialization/outreach strategy for hazard mitigation primer to EM and Operators
- Hazard mitigation primer for pipelines review

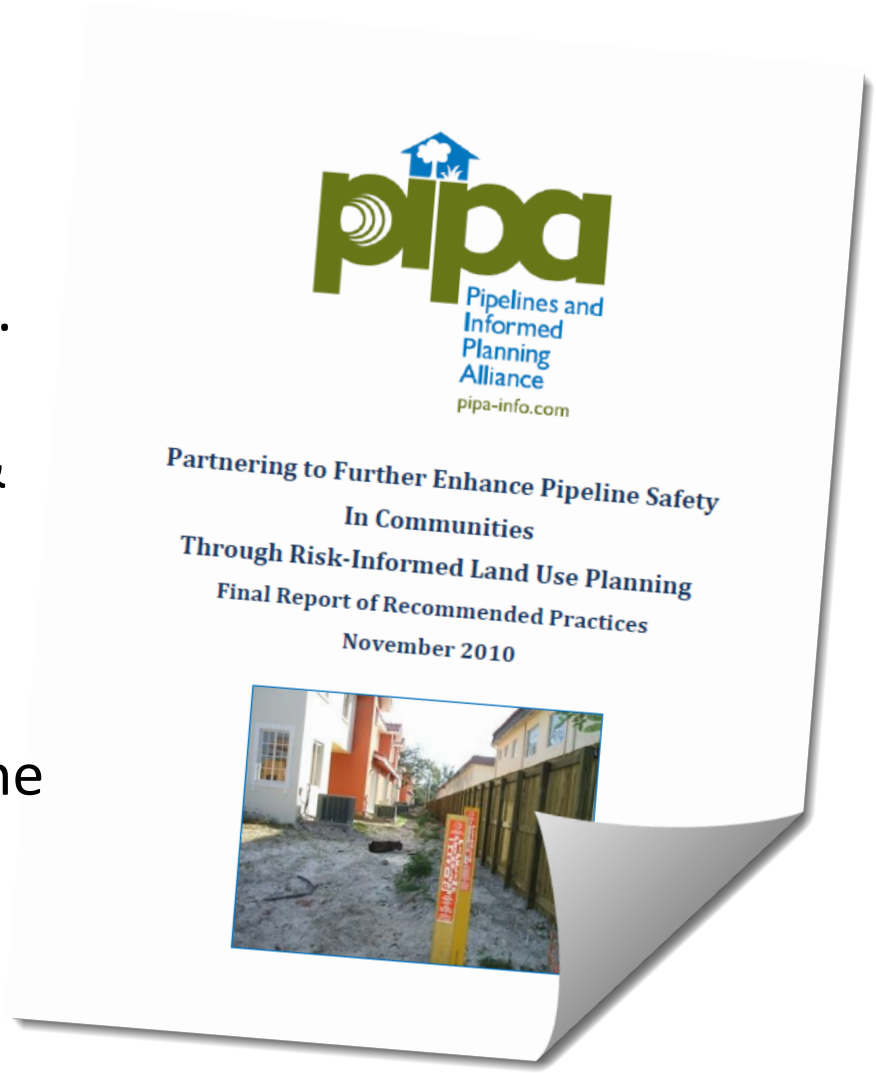
Agenda – Aug. 7

- PIPA related TAGs
- Review of previous implementation plan
- Review past outreach efforts
- Review “Idea List”
- Discuss strategy and develop communications plan for next year
- Team Building/Sustaining
  - Member Recruitment
  - Re-engagement of/update to previous PIPA participants

About the PIPA Report

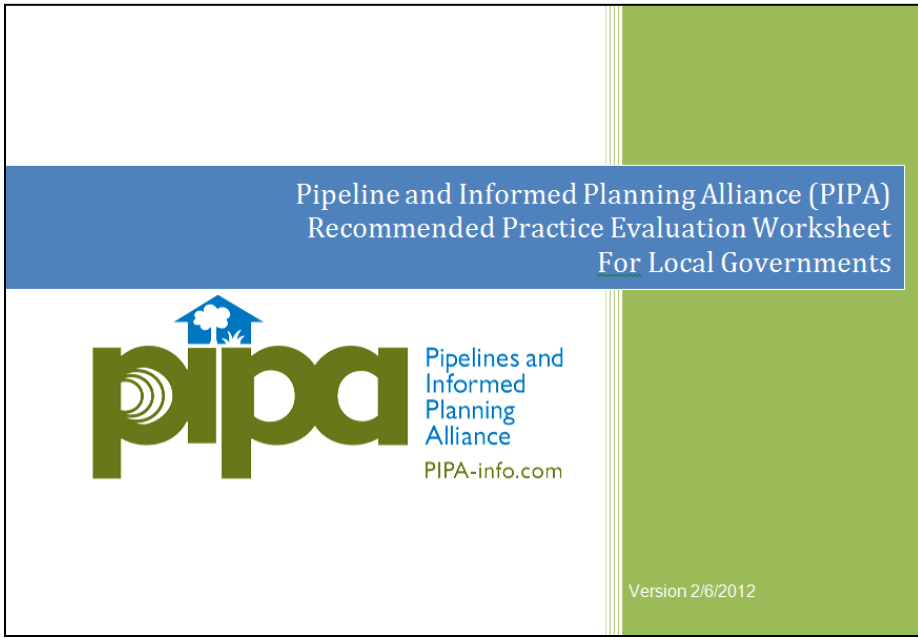
Created by a stakeholder group of ~130 participants representing a wide range of interests, organizations, and viewpoints on pipelines and community planning.

Scope: Existing Gas Transmission & Hazardous Liquid Pipelines (not gathering, distribution)
Stakeholders: Local Government, Property Developer/Owner, Pipeline Operator, Real Estate Commission
43 Recommended Practices



Perform PIPA RP Gap Analysis

- Gap analysis tool for each stakeholder group
- RPs grouped :
  - Land Planning and Development
  - Pipeline Maintenance & Damage Prevention
  - Maps & Records
  - Communication.
- Practices where stakeholders has the primary action listed first, other RPs are greyed out.



Baseline (BL) Practices

- Stakeholders consider and adopt these recommended practices before development is proposed

RP BL01 Obtain Transmission Pipeline Mapping Data

- Online map
- Pipeline type & commodity
- Operator name and contact
- Pipeline shape file

www.NPMS.phmsa.dot.gov

US DOT
npms
national pipeline mapping system

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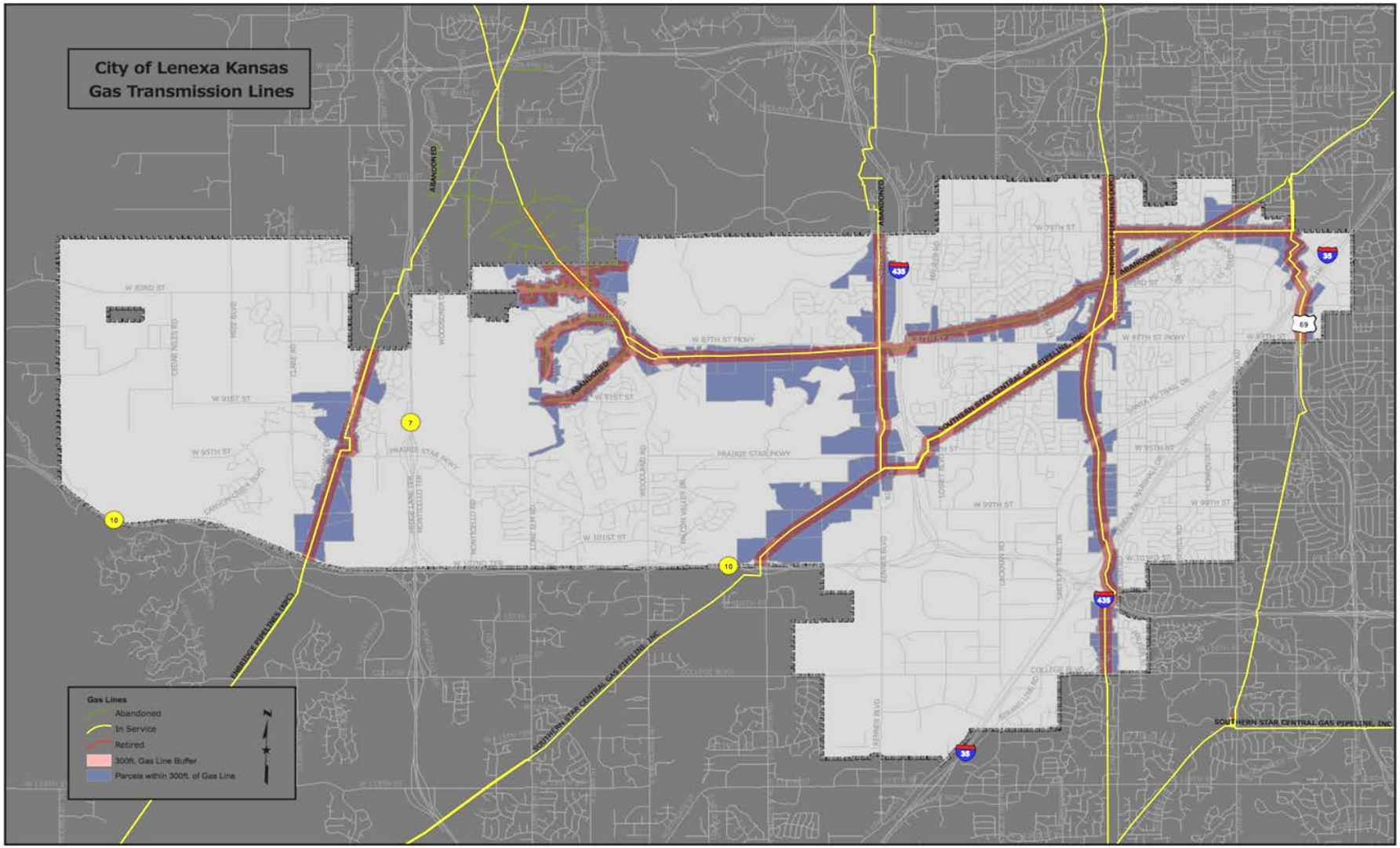
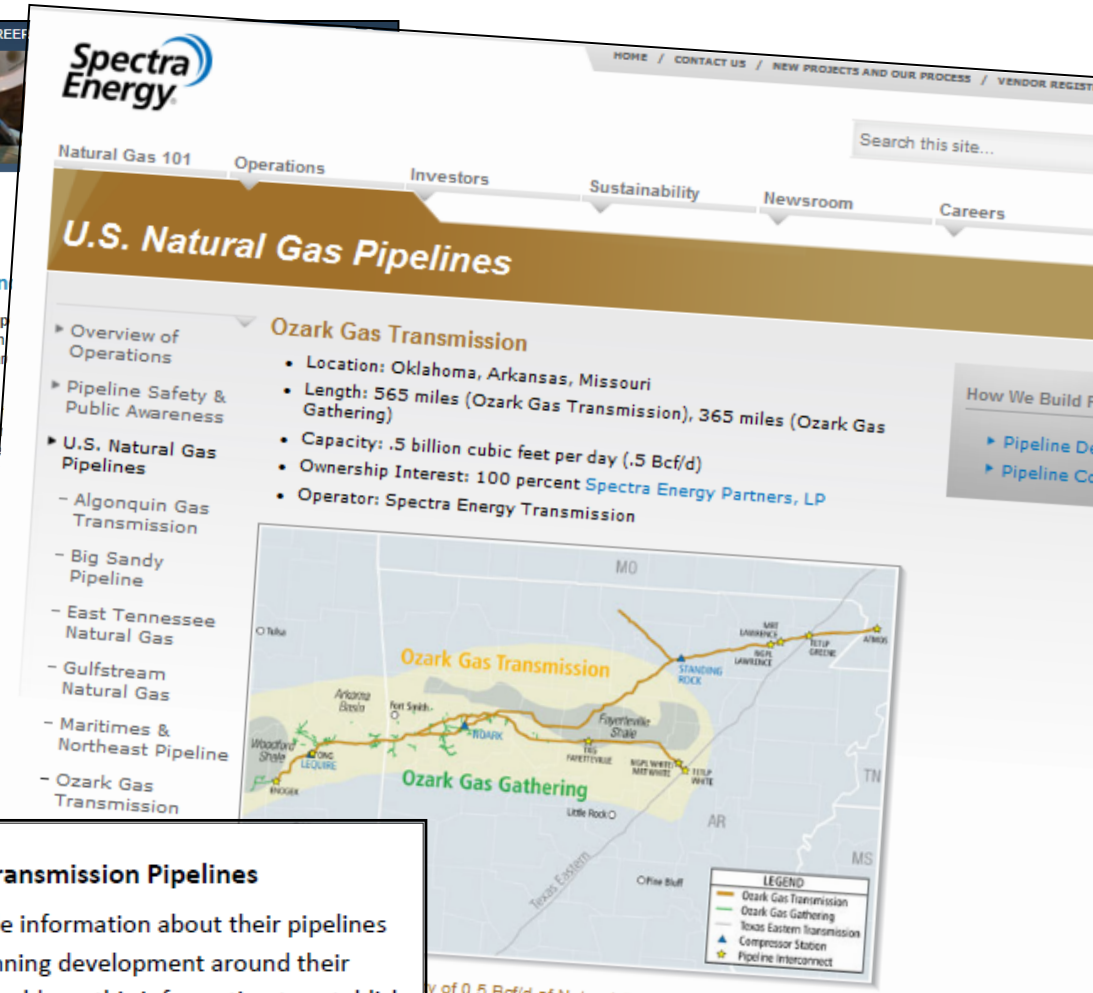
Incorporate Pipeline Maps on Internal GIS Maps



BL 03 Utilize Information Regarding Development around Transmission Pipelines



BL03 Utilize Information Regarding Development around Transmission Pipelines

Practice Statement Transmission pipeline operators should provide information about their pipelines to local governments and property developers/owners who are planning development around their pipelines. Local government authorities regulating development should use this information to establish requirements regarding land use and development around transmission pipelines.

Audience Local Government, Transmission Pipeline Operator

Public Awareness

- American Petroleum Institute Recommended Practice (API RP) 1162, Public Awareness Programs for Pipeline Operators, First Edition, December 2003
- Incorporated by Reference Code of Federal Regulations §§ 192.616 & 195.440
- Referenced in 11 PIPA RPs (BL 03, 05, 06, 10, 12, 13, 16; ND 13, 15, 20, 26)

Local Public Officials

Local, city, county or state officials and/or their staffs having land use and street/road jurisdiction along the pipeline route.

Baseline Messages (every 3 years):

- *Pipeline purpose and reliability*
- *Awareness of hazards and prevention measures undertaken*
- *Emergency preparedness communications*
- *One-call requirements*
- *Pipeline location info and NPMS*
- *How to get additional info*

<u>Supplemental Messages</u>

- *Designation of HCA (or other factors unique to segment and integrity measures undertaken)*
- *ROW encroachment prevention*
- *Maintenance construction activity*

- Planning boards
- Zoning board
- Licensing departments
- Permitting departments
- Building code enforcement departments
- City and county managers
- Public and government officials
- Public utility boards
- Includes local "Governing Councils" as defined by many communities
- Public officials who manage franchise or license agreements

Emergency Officials

Local, state or regional officials, agencies and organizations with emergency response and/or public safety jurisdiction along the pipeline route.

Baseline Messages (every year):

- *Pipeline purpose and reliability*
- *Awareness of hazards and prevention measures undertaken*
- *Emergency preparedness communications*
- *Potential hazards*
- *Pipeline location info and NPMS*
- *How to get additional info*

<u>Supplemental Messages</u>

- *Provide info and/or overview of integrity measures undertaken*
- *Maintenance construction activity*

- Fire departments
- Police/sheriff departments
- Local Emergency Planning Commissions (LEPCs)
- County and State Emergency Management Agencies (EMA)
- Other emergency response organizations
- Other public safety organizations

Excavators & Land Developers

Excavators: Companies and local/state government agencies who are involved in any form of excavation activities.

Land Developers: Companies and private entities involved in land development and planning.

Baseline Messages (every year – Excavators):
- *Pipeline purpose and reliability*
- *Awareness of hazards and prevention measures undertaken*
- *Damage prevention awareness*
- *One-call requirements*
- *Leak recognition and response*

Supplemental Messages (Land Developers):

- *Pipeline purpose and reliability*
- *Awareness of hazards and prevention measures undertaken*
- *Damage prevention awareness*
- *One-call requirements*
- *Leak recognition and response*
- *ROW encroachment prevention*
- *List of pipeline operators in NPMS*

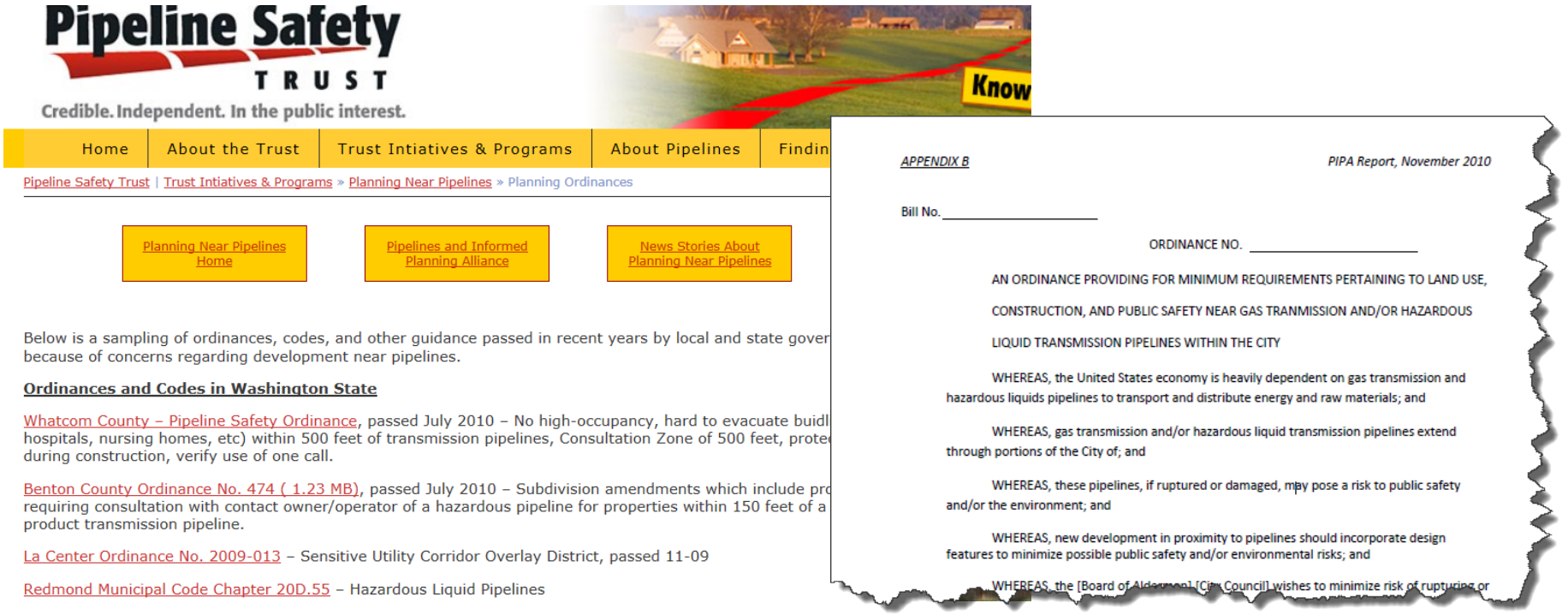
- Construction companies
- Excavation equipment rental companies
- Public works officials
- Public street, road and highway departments (maintenance and construction)
- Timber companies
- Fence building companies
- Drain tiling companies
- Landscapers
- Well drillers

- Home builders
- Land developers

Affected Public

Stakeholder Audience	Message Type	Delivery Frequency	Delivery Method and/or Media
2-1.1 Affected Public			
Residents located along transmission pipeline ROO and Places of Congregation	Baseline Messages: • Pipeline purpose and reliability • Awareness of hazards and prevention measures undertaken • Damage prevention awareness • One-call requirements • Leak recognition and response • Pipeline location information • How to get additional information • Availability of list of pipeline operators through NPMS	Baseline Frequency = 2 years	Baseline Activity: • Targeted distribution of print materials • Pipeline markers
	Supplemental Message: • Information and/or overview of operator's Integrity Management Program • ROW encroachment prevention • Any planned major maintenance/construction activity	Supplemental Frequency: Additional frequency and supplemental efforts as determined by specifics of the pipeline segment or environment	Supplemental Activity: • Print materials • Personal contact • Telephone calls • Group meetings • Open houses
Residents near storage or other major operational facilities	Supplemental Message: • Information and/or overview of operator's Integrity Management Program • Special incident response notification and/or evacuation measures if appropriate to product or facility • Facility purpose	Supplemental Frequency: Additional frequency and supplemental efforts as determined by specifics of the pipeline segment or environment	Supplemental Activity: • Print materials • Personal contact • Telephone calls • Group meetings • Open houses

BL04 Adopt Transmission Pipeline Consultation Zone Ordinance
Appendix B: Model Ordinance



Pipeline Safety TRUST

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Pipeline Safety Trust | Trust Intiatives & Programs » Planning Near Pipelines » Planning Ordinances

Planning Near Pipelines Home | Pipelines and Informed Planning Alliance | News Stories About Planning Near Pipelines

Below is a sampling of ordinances, codes, and other guidance passed in recent years by local and state gover
because of concerns regarding development near pipelines.

Ordinances and Codes in Washington State

Whatcom County – Pipeline Safety Ordinance, passed July 2010 – No high-occupancy, hard to evacuate buidl
hospitals, nursing homes, etc) within 500 feet of transmission pipelines, Consultation Zone of 500 feet, prote
during construction, verify use of one call.

Benton County Ordinance No. 474 (1.23 MB), passed July 2010 – Subdivision amendments which include pr
requiring consultation with contact owner/operator of a hazardous pipeline for properties within 150 feet of a
product transmission pipeline.

La Center Ordinance No. 2009-013 – Sensitive Utility Corridor Overlay District, passed 11-09

Redmond Municipal Code Chapter 20D.55 – Hazardous Liquid Pipelines

APPENDIX B *PIPA Report, November 2010*

Bill No. _____

ORDINANCE NO. _____

AN ORDINANCE PROVIDING FOR MINIMUM REQUIREMENTS PERTAINING TO LAND USE, CONSTRUCTION, AND PUBLIC SAFETY NEAR GAS TRANMISSION AND/OR HAZARDOUS LIQUID TRANSMISSION PIPELINES WITHIN THE CITY

WHEREAS, the United States economy is heavily dependent on gas transmission and hazardous liquids pipelines to transport and distribute energy and raw materials; and

WHEREAS, gas transmission and/or hazardous liquid transmission pipelines extend through portions of the City of; and

WHEREAS, these pipelines, if ruptured or damaged, may pose a risk to public safety and/or the environment; and

WHEREAS, new development in proximity to pipelines should incorporate design features to minimize possible public safety and/or environmental risks; and

WHEREAS, the [Board of Aldermen] [City Council] wishes to minimize risk of rupturing or

BL04 Adopt Transmission Pipeline Consultation Zone Ordinance

Practice Statement Local governments should adopt land development procedures requiring property developers/owners to consult with transmission pipeline operators early in the development process, so that development designs minimize risks to the populace living or working nearby and are consistent with the needs and legal rights of the operators.

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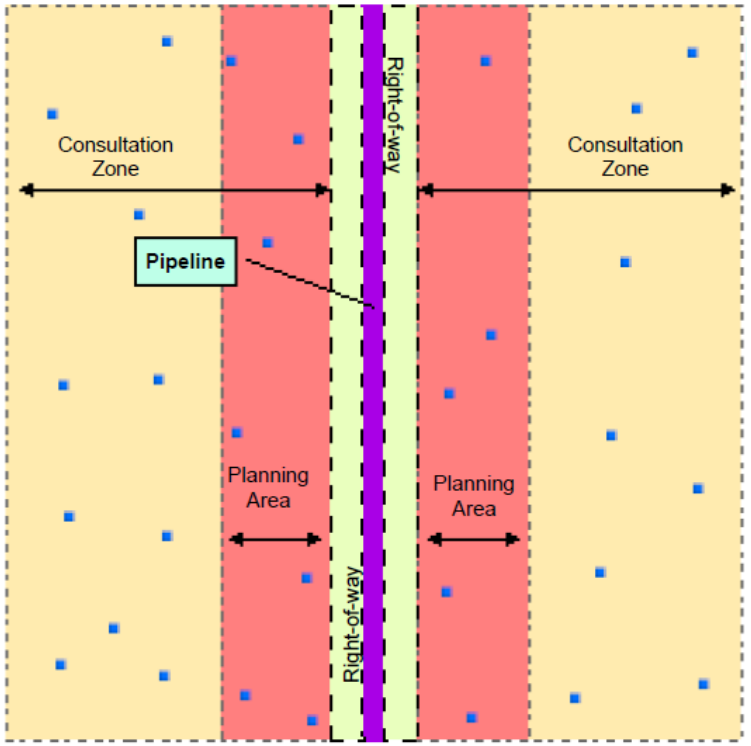
BL05, BL06 – Consultation Zone & New Development Planning Area

*A **"consultation zone"** triggers communication between property developers/owners and operators when new land use and development is being planned.*

*A **"planning area"** can provide for application of additional regulations, standards, or guidelines (Consider ND11 – ND 23)*



Absent site-specific information:

- Natural Gas Pipelines = 660'-1,000'
- Hazardous Liquid Pipelines = 1,000'-1,500'

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Consultation Zone for Gas Transmission Pipelines

Appendix I: Calculation of Site-Specific Planning Area Distances

Natural Gas

- Potential Impact Radius (PIR) Formula
- Radius of circle which the potential failure could have significant impact

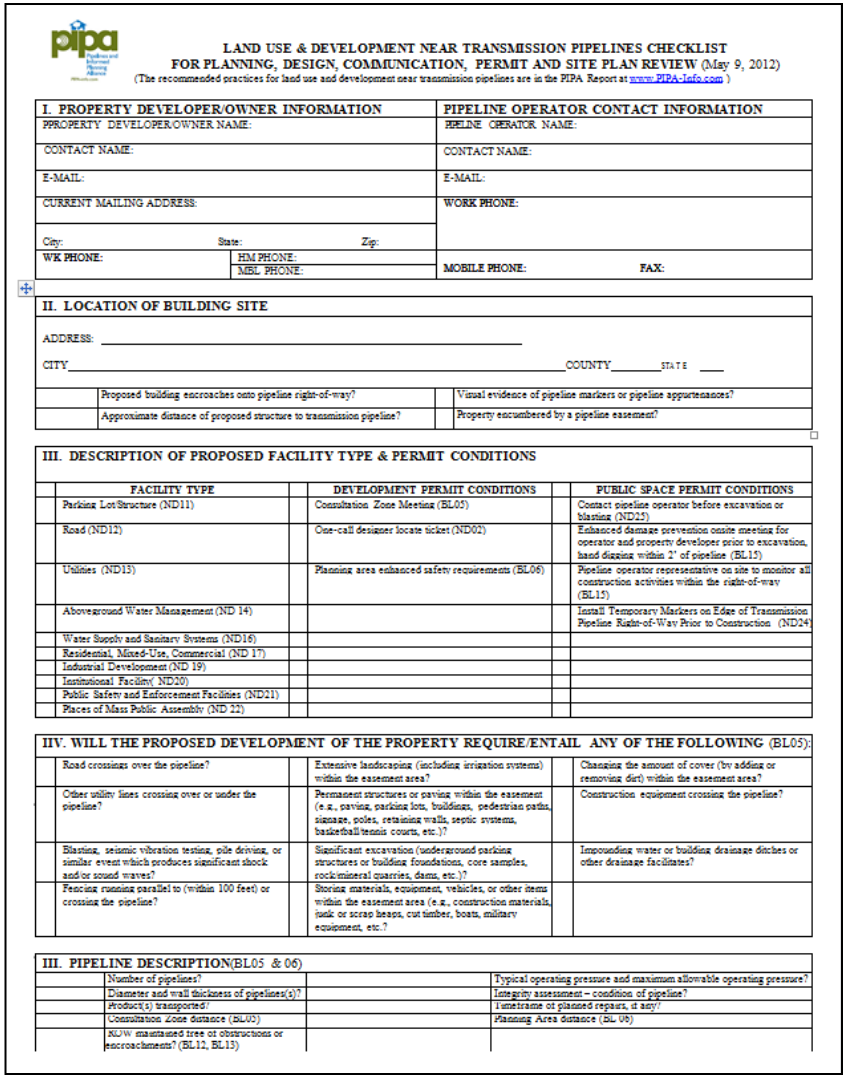
	Pipeline Diameter (inches)								
Pipeline MAOP (psig)	6	8	10	12	16	24	30	36	42
	PIR or Planning Area Distance from Pipeline Centerline (in feet)								
200	59	78	98	117	156	234	293	351	410
400	83	110	138	166	221	331	414	497	580
600	101	135	169	203	270	406	507	608	710
800	117	156	195	234	312	468	585	703	820
1000	131	175	218	262	349	524	655	786	916
1200	143	191	239	287	382	574	717	860	1004
1400	155	207	258	310	413	620	775	929	1084

Hazardous Liquid

- Model fire, explosion or toxic release impacts
- Site and product specific
- How much liquid spilled?
- Where would the spilled liquid go?
- What locations would be impacted?
- Engineering models and software programs – requires expertise in hazard analysis

Information to Cover at Consultation Zone/Planning Area Meeting

- **Punch List in BL05** – information transmission operator may need from the developer and from the operator to the developer
- **PIPA Tool** – Safe Integration with Pipeline Site Assessment Worksheet



LAND USE & DEVELOPMENT NEAR TRANSMISSION PIPELINES CHECKLIST
FOR PLANNING, DESIGN, COMMUNICATION, PERMIT AND SITE PLAN REVIEW (May 9, 2012)
(The recommended practices for land use and development near transmission pipelines are in the PIPA Report at www.PIPA-Info.com)

I. PROPERTY DEVELOPER/OWNER INFORMATION	PIPELINE OPERATOR CONTACT INFORMATION
PROPERTY DEVELOPER/OWNER NAME:	PIPELINE OPERATOR NAME:
CONTACT NAME:	CONTACT NAME:
E-MAIL:	E-MAIL:
CURRENT MAILING ADDRESS:	WORK PHONE:
City: State: Zip:	
WK PHONE: HM PHONE: MBL PHONE:	MOBILE PHONE: FAX:

II. LOCATION OF BUILDING SITE

ADDRESS: _____

CITY_____COUNTY_____STATE ____

	Proposed building encroaches onto pipeline right-of-way?		Visual evidence of pipeline markers or pipeline appurtenances?
	Approximate distance of proposed structure to transmission pipeline?		Property encumbered by a pipeline easement?

III. DESCRIPTION OF PROPOSED FACILITY TYPE & PERMIT CONDITIONS

	FACILITY TYPE		DEVELOPMENT PERMIT CONDITIONS		PUBLIC SPACE PERMIT CONDITIONS
	Parking Lot/Structure (ND11)		Consultation Zone Meeting (BL05)		Contact pipeline operator before excavation or blasting (ND25)
	Road (ND12)		One-call designer locate ticket (ND02)		Enhanced damage prevention onsite meeting for operator and property developer prior to excavation, hand digging within 2' of pipeline (BL15)
	Utilities (ND13)		Planning area enhanced safety requirements (BL06)		Pipeline operator representative on site to monitor all construction activities within the right-of-way (BL15)
	Aboveground Water Management (ND 14)				Install Temporary Markers on Edge of Transmission Pipeline Right-of-Way Prior to Construction (ND24)
	Water Supply and Sanitary Systems (ND16)				
	Residential, Mixed-Use, Commercial (ND 17)				
	Industrial Development (ND 19)				
	Institutional Facility(ND20)				
	Public Safety and Enforcement Facilities (ND21)				
	Places of Mass Public Assembly (ND 22)				

IIV. WILL THE PROPOSED DEVELOPMENT OF THE PROPERTY REQUIRE/ENTAIL ANY OF THE FOLLOWING (BL05):

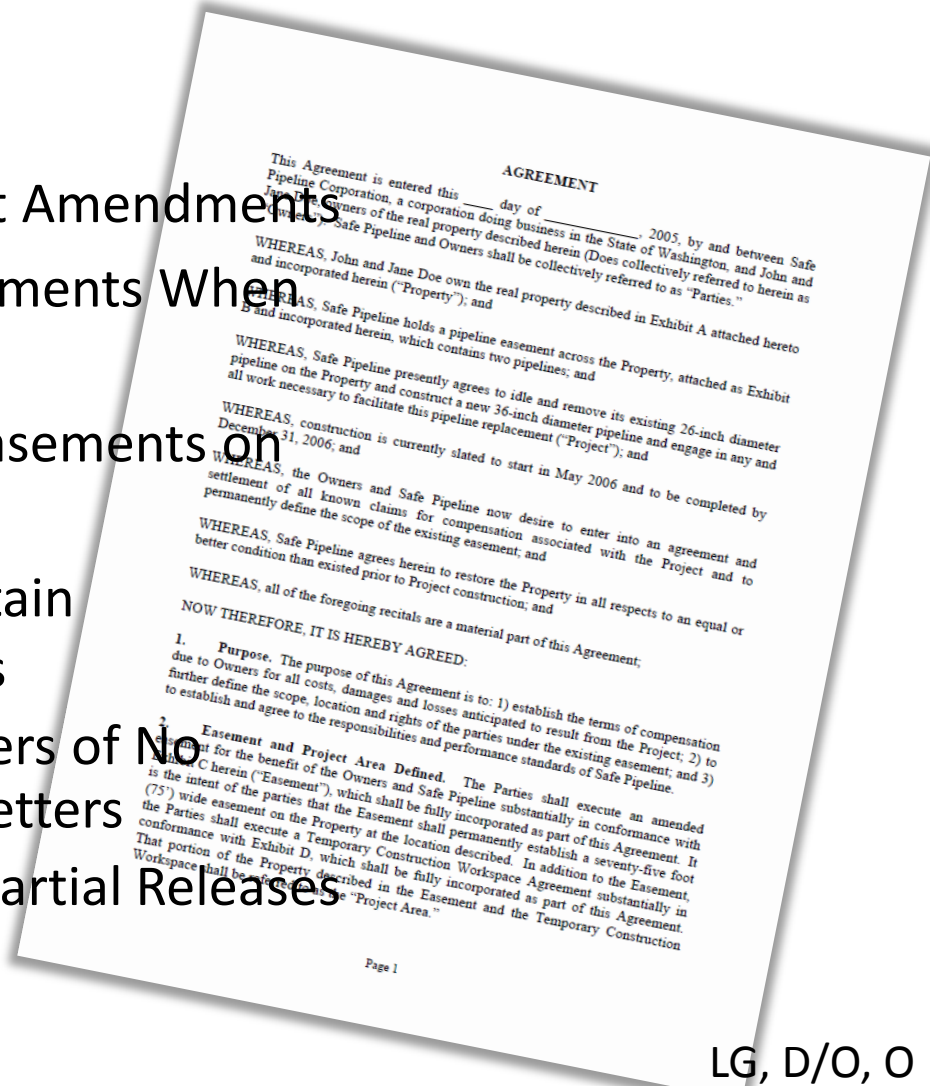
	Road crossings over the pipeline?		Extensive landscaping (including irrigation systems) within the easement area?		Changing the amount of cover (by adding or removing dirt) within the easement area?
	Other utility lines crossing over or under the pipeline?		Permanent structures or paving within the easement (e.g., paving, parking lots, buildings, pedestrian paths, signage, poles, retaining walls, septic systems, basketball/tennis courts, etc.)?		Construction equipment crossing the pipeline?
	Blasting, seismic vibration testing, pile driving, or similar event which produces significant shock and/or sound waves?		Significant excavation (underground parking structures or building foundations, core samples, rock/mineral quarries, dams, etc.)?		Impounding water or building drainage ditches or other drainage facilitates?
	Fencing running parallel to (within 100 feet) or crossing the pipeline?		Storing materials, equipment, vehicles, or other items within the easement area (e.g., construction materials, junk or scrap heaps, cut timber, boats, military equipment, etc.?		

III. PIPELINE DESCRIPTION(BL05 & 06)

	Number of pipelines?		Typical operating pressure and maximum allowable operating pressure?
	Diameter and wall thickness of pipelines(s)?		Integrity assessment – condition of pipeline?
	Product(s) transported?		Timeframe of planned repairs, if any?
	Consultation Zone distance (BL05)		Planning Area distance (BL 06)
	ROW maintained free of obstructions or encroachments? (BL12, BL13)		

Land Record Practices

- BL07 Understand the Elements of a Transmission Pipeline Easement
- BL08 Manage Land Records
- BL09 Document and Record Easement Amendments
- ND07 Define Blanket Easement Agreements When Necessary
- ND10 Record Transmission Pipeline Easements on Development Plans and Final Plats
- ND26 Use, Document, Record and Retain Encroachment Agreements or Permits
- ND27 Use, Document and Retain Letters of No Objection and Conditional Approval Letters
- ND28 Document, Record and Retain Partial Releases



AGREEMENT

This Agreement is entered this ____ day of _____, 2005, by and between Safe Pipeline Corporation, a corporation doing business in the State of Washington, and John and Jane Doe, owners of the real property described herein (Does collectively referred to herein as "Owners"). Safe Pipeline and Owners shall be collectively referred to as "Parties."

WHEREAS, John and Jane Doe own the real property described in Exhibit A attached hereto and incorporated herein ("Property"); and

WHEREAS, Safe Pipeline holds a pipeline easement across the Property, attached as Exhibit B and incorporated herein, which contains two pipelines; and

WHEREAS, Safe Pipeline presently agrees to idle and remove its existing 26-inch diameter pipeline on the Property and construct a new 36-inch diameter pipeline and engage in any and all work necessary to facilitate this pipeline replacement ("Project"); and

WHEREAS, construction is currently slated to start in May 2006 and to be completed by December 31, 2006; and

WHEREAS, the Owners and Safe Pipeline now desire to enter into an agreement and settlement of all known claims for compensation associated with the Project and to permanently define the scope of the existing easement; and

WHEREAS, Safe Pipeline agrees herein to restore the Property in all respects to an equal or better condition than existed prior to Project construction; and

WHEREAS, all of the foregoing recitals are a material part of this Agreement;

NOW THEREFORE, IT IS HEREBY AGREED:

1. **Purpose.** The purpose of this Agreement is to: 1) establish the terms of compensation due to Owners for all costs, damages and losses anticipated to result from the Project; 2) to further define the scope, location and rights of the parties under the existing easement; and 3) to establish and agree to the responsibilities and performance standards of Safe Pipeline.

2. **Easement and Project Area Defined.** The Parties shall execute an amended easement for the benefit of the Owners and Safe Pipeline substantially in conformance with Exhibit C herein ("Easement"), which shall be fully incorporated as part of this Agreement. It is the intent of the parties that the Easement shall permanently establish a seventy-five foot (75') wide easement on the Property at the location described. In addition to the Easement, the Parties shall execute a Temporary Construction Workspace Agreement substantially in conformance with Exhibit D, which shall be fully incorporated as part of this Agreement. That portion of the Property described in the Easement and the Temporary Construction Workspace shall be referred to as the "Project Area."

Page 1

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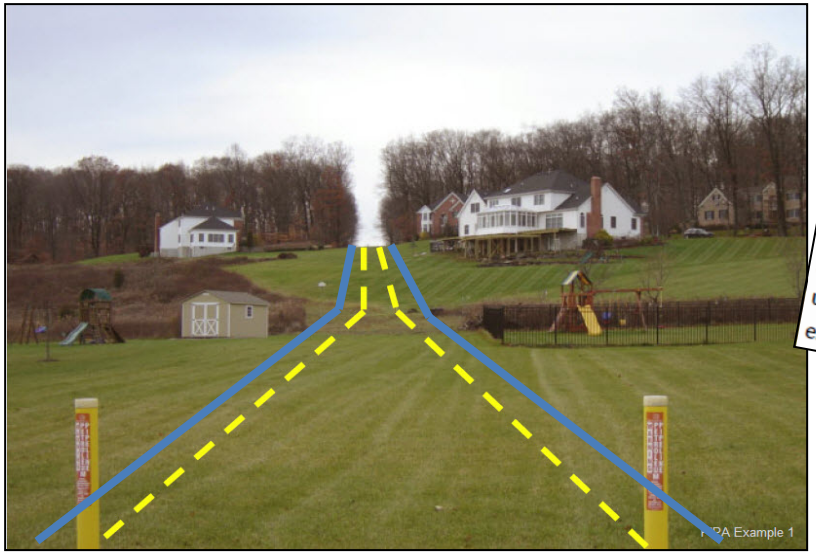
For Activities in the Transmission Pipeline ROW

- BL10 Implement Communication Plan (for operator)
- Appendix D: Proposed Land Uses
- Appendix E: Seven-Step Communication Model



Appendix E: Seven-Step Communication Model

Seven-Step Model for Communicating Acceptable Uses and Activities on Transmission Pipeline Rights-of-way to Land Owners and Other Stakeholders

Introduction

Typical communications from transmission pipeline operators to stakeholders regarding rights-of-way (ROW) activit
3) to cause a
uses are perfo
examples for

Appendix D: Proposed Land Uses for Transmission Pipeline ROW

PIPA Report, November 20

Use/Activity	Acceptable Use or Activity?	Additional Restrictions or Comments	Origin/ Rationale for Determining Acceptable Activity
Hiking Trails	Yes, but	Provided reasonable access to facilities is maintained. See also Landscaping lls.	Trails must be placed to allow transmission pipeline maintenance, inspection and repair activities to be conducted.
		access to facilities also Cuts and Fills.	Trails must be placed to allow transmission pipeline maintenance, inspection and repair activities to be conducted.
nic Yards	No		For safety reasons, no flame, fire, or flammable material is allowed.
			This use would

BL10 Implement Communications Plan

Practice Statement Transmission pipeline operators should develop and implement effective communications plans when communicating acceptable transmission pipeline right-of-way uses and activities to property developers/owners and other stakeholders.

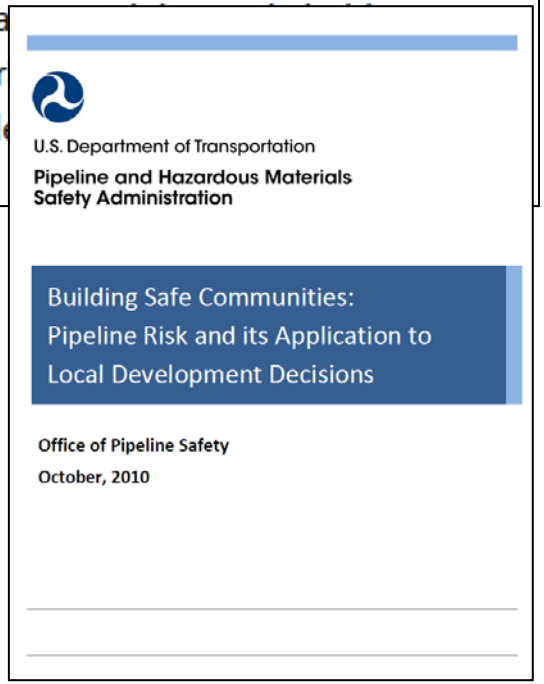
Audience Transmission Pipeline Operator

BL11 Effectively Communicate Pipeline Risk and Risk Management Information (by operators)

Appendix F: Barriers to Effective Communication

Appendix F: Barriers to Effective Communication

For communication to be effective it must be a two-way dialogue. However, personal experiences affect the way messages are received, making it essential to understand barriers to effective communication and how to better communicate with key stakeholders. The following section looks at communication barriers from the perspective of a transmission pipeline company communica
audiences. You may find that some, all, or none of these communication barr
actual situation. You are encouraged to communicate openly with stakehold
pipeline development.


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

Building Safe Communities:
Pipeline Risk and its Application to Local Development Decisions

Office of Pipeline Safety
October, 2010

National Perspective: *PIPA Risk Report*

Local Perspective: jurisdiction/pipeline specific, local risk tolerance and local resources

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BL12 Notify Stakeholders of ROW Maintenance Activities

Right of way tree removal near pipeline upsets landowners

April 25, 2012 | BY Jeff Natalie-Lees, jnatalie-lees@aberdeennews.com

Landowners north of Aberdeen are upset about dozens of trees that were removed along the NuStar pipeline that travels underground through that area.

The trees were removed to ensure adequa
visibility and access for maintenance and

Park Township residents mourn loss of trees for Wo Co. easement clearing

Photos Zoom

By ANNETTE MANWELL
The Holland Sentinel
Posted Jun 04, 2013 @ 08:00 AM

Recommend Be the first of your frie recommend this.

Business News

The Importance of Saving (Part II)

The Importance of Saving (Part I)

Home Buyers Get 'Aggressive,' and Sellers Get Their Costs Paid

Park Tow
Wolverin
the area
mature tr

The comp
property owners along its pipeline from Niles to Ferrysburg. All trees and shrubs taller than five feet would be removed. The pipeline, in

INTEGRATED VEGETATION MANAGEMENT PLAN

TENNESSEE GAS PIPELINE
RIGHTS-OF-WAY
in
NEW JERSEY

Tennessee Gas Pipeline
El Paso Corporation
8 Anngina Drive
Enfield, Connecticut 06082

February 2011

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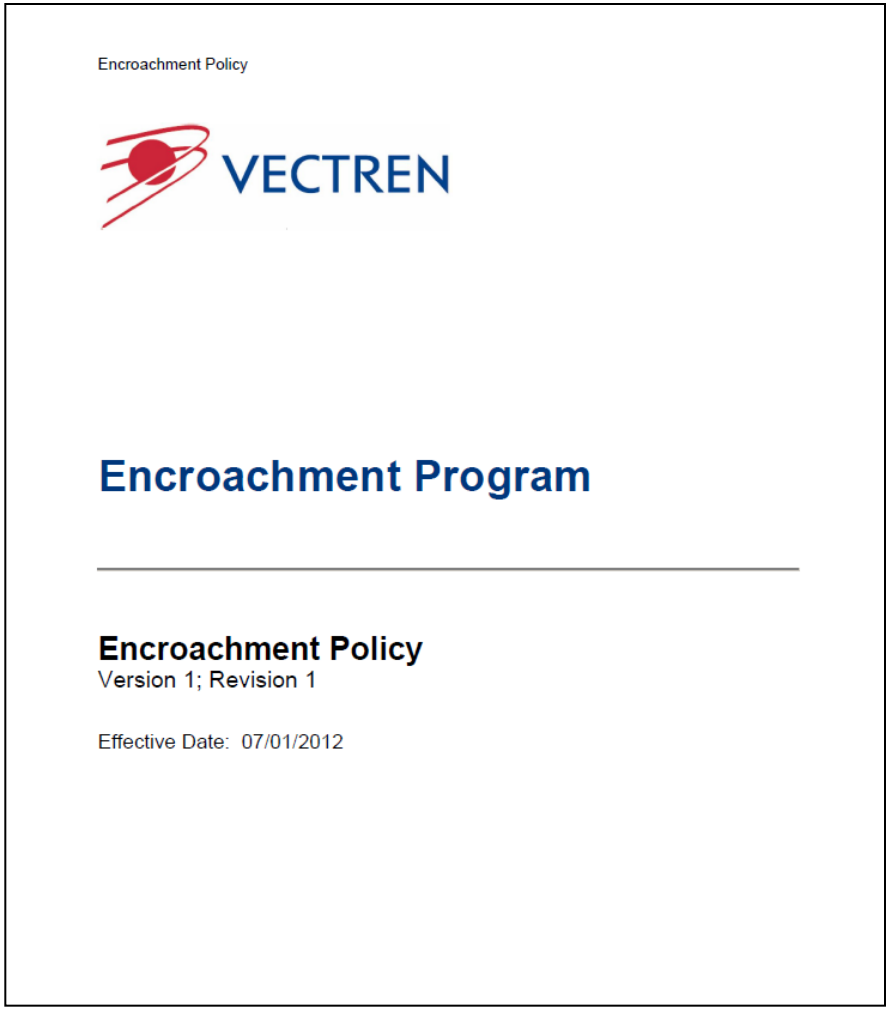
BL13 Prevent and Manage ROW Encroachment

Transmission pipeline operators should communicate in a documented and timely manner with property developers/owners to prevent or rectify unacceptable encroachments or inappropriate human activity within the transmission pipeline right-of-way.



BL 14 Participate to Improve State Excavation Damage Prevention Programs

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

Damage Prevention Assistance Program (DPAP):
Strengthening State Damage Prevention Programs

...ensuring the safe, reliable, and environmentally sound operation of the Nation's pipeline transportation system

1st Edition
September 2008

U.S. Department of Transportation | Pipeline & Hazardous Materials Safety Administration

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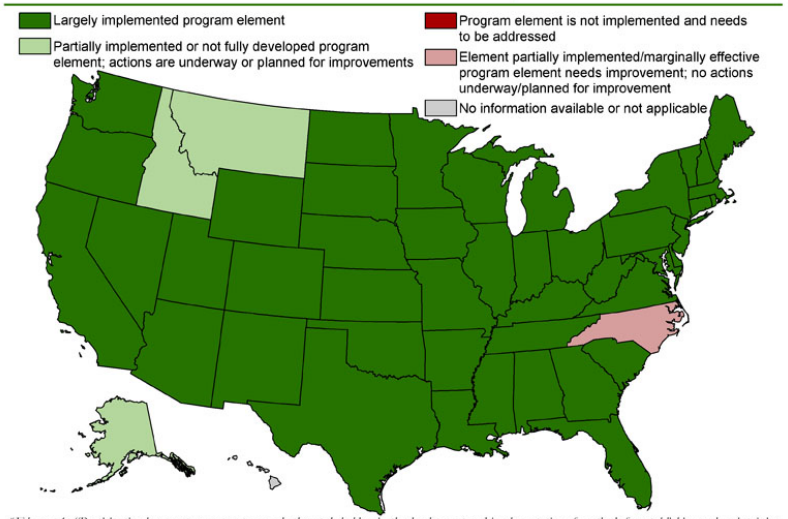
State Pipeline Profiles:
Choose One...
Print

Effective Damage Prevention – Element 1

Element 1 - Enhanced Communication between Operators and Excavators*



**Element 1: "Participation by operators, excavators, and other stakeholders in the development and implementation of methods for establishing and maintaining effective communications between stakeholders from receipt of an excavation notification until successful completion of the excavation, as appropriate."*

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BL15 Enhance Damage Prevention Practices near High-Priority Subsurface Facilities

Examples:

- Pre-excavation meeting on site with the operator and contractor
- “Pot hole“ to verify utility locates or mark-outs.
- Operator onsite during all excavation.

BL 16 Halt Dangerous Excavation Activities Near Transmission Pipelines

Transmission pipeline operators should have procedures and established contacts with local enforcement personnel in order to act appropriately to halt dangerous excavation activities that may damage their pipelines and potentially cause an immediate threat to life or property

LG, O

BL17 Map Abandoned Pipelines

Practice Statement: When a transmission pipeline operator abandons a transmission pipeline, information regarding the abandoned pipeline should be maintained and included in the information provided to the one-call center.

http://www.pipelineandgasjournal.com/who-owns-abandoned-pipelines?page=show

BL18 Disclose Transmission Pipeline Easements in Real Estate Transactions

Example Laws:

- **California Department of Real Estate**
  California Bill Number AB 1511 – Every contract for the sale of residential real property shall contain a notice that information about the general location of gas and hazardous liquid transmission pipelines is available to the public via the National Pipeline Mapping System (NPMS).

- **Arizona Department of Real Estate**
  Arizona state law requires that subdivision developers have a disclosure document, called a Public Report, on file with their office in order to have permission to sell subdivision lots. The Public Report must be given to new home buyers prior to the purchase so that they may make an informed decision. Disclosure of hazardous liquid and natural gas pipelines must be made when the pipelines are located within 500 feet of the subdivision boundary.

New Development (ND) Practices

- Implement these recommended practices when the stakeholder first learns that land use/development is proposed near existing HL and GT pipelines

ND02-06 Early Communication/Due Diligence The Key to Risk-informed Planning

ND02 Gather Information for Design of Property Development near Transmission Pipelines

Practice Statement In designing a proposed property development the property developer/owner should use all reasonable means to obtain information about transmission pipeline facilities in the area of the proposed development.

ND03 Review Acceptability of Proposed Land Use of Transmission Pipeline Right-of-Way Prior to Design

Practice Statement The property developer/owner should review preliminary information about acceptable land uses on a transmission pipeline right-of-way prior to the design of a property development.

ND04 Coordinate Property Development Design and Construction with Transmission Pipeline Operator

Practice Statement When property development is planned within the consultation zone (reference PIPA Recommended Practice BL05), the property developer/owner and the transmission pipeline operator should communicate to ensure possible impacts of pipeline incidents and maintenance needs are considered during development design and construction.

ND06 Require Consideration of Transmission Pipeline Facilities in Land Development Design

Practice Statement Whenever development is proposed on property containing transmission pipeline facilities, local governments should require that the submitted land development plans address in detail the steps necessary to safely integrate the transmission pipeline into the design of the project.

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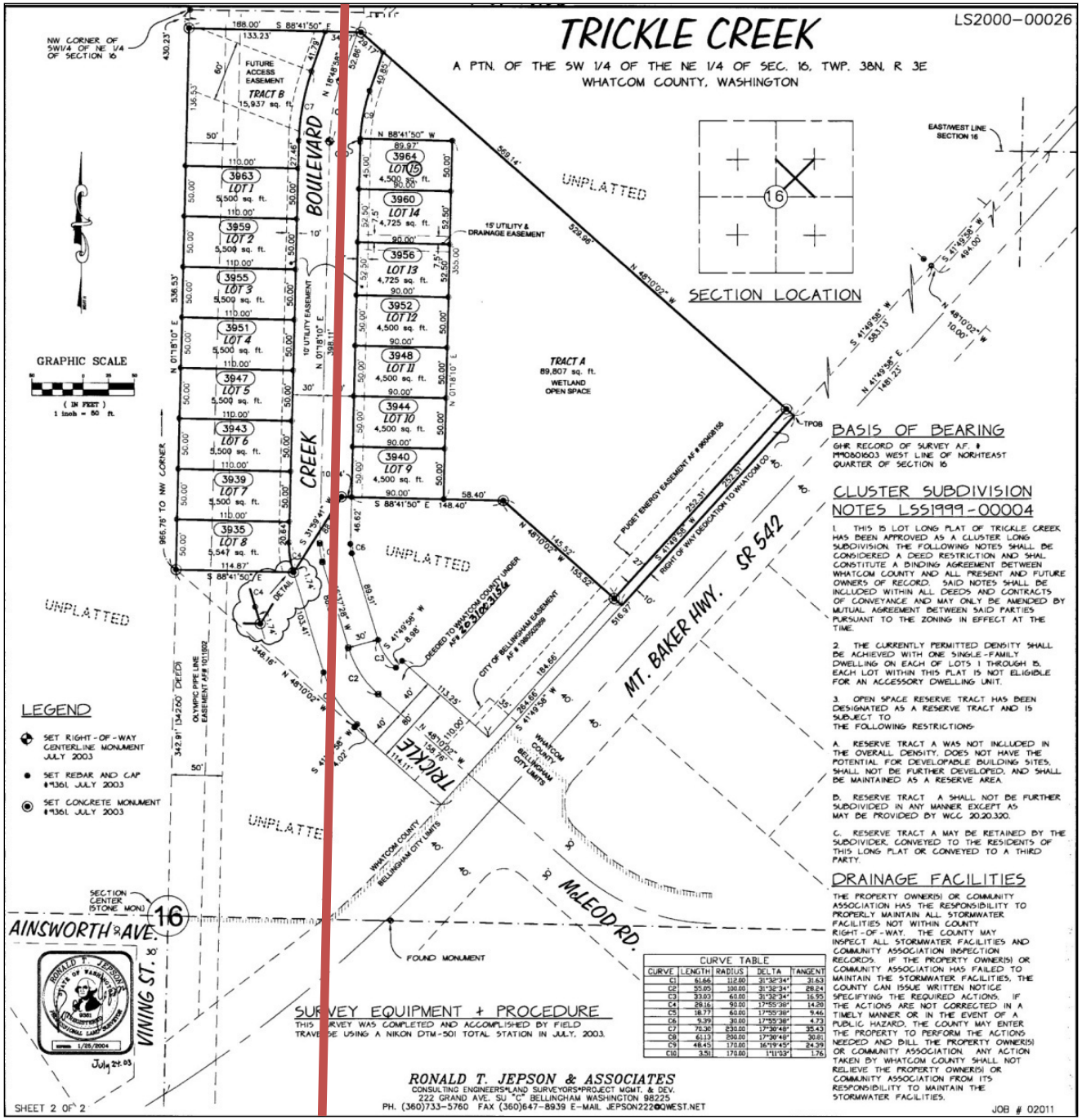
LS2000-00026

TRICKLE CREEK

A PTN. OF THE SW 1/4 OF THE NE 1/4 OF SEC. 16, TWP. 38N, R 3E
WHATCOM COUNTY, WASHINGTON



GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

LEGEND

- SET RIGHT-OF-WAY CENTERLINE MONUMENT JULY 2003
- SET REBAR AND CAP #9361 JULY 2003
- SET CONCRETE MONUMENT #9361 JULY 2003

BASIS OF BEARING

GHR RECORD OF SURVEY A.F. # 9905201503 WEST LINE OF NORTHEAST QUARTER OF SECTION 16

CLUSTER SUBDIVISION NOTES LSS1999-00004

1. THIS IS LOT LONG PLAT OF TRICKLE CREEK HAS BEEN APPROVED AS A CLUSTER LONG SUBDIVISION. THE FOLLOWING NOTES SHALL BE CONSIDERED A DEED RESTRICTION AND SHAL CONSTITUTE A BINDING AGREEMENT BETWEEN WHATCOM COUNTY AND ALL PRESENT AND FUTURE OWNERS OF RECORD. SAID NOTES SHALL BE INCLUDED WITHIN ALL DEEDS AND CONTRACTS OF CONVEYANCE AND MAY ONLY BE AMENDED BY MUTUAL AGREEMENT BETWEEN SAID PARTIES PURSUANT TO THE ZONING IN EFFECT AT THE TIME.

2. THE CURRENTLY PERMITTED DENSITY SHALL BE ACHIEVED WITH ONE SINGLE-FAMILY DWELLING ON EACH OF LOTS 1 THROUGH 15. EACH LOT WITHIN THIS PLAT IS NOT ELIGIBLE FOR AN ACCESSORY DWELLING UNIT.

3. OPEN SPACE RESERVE TRACT HAS BEEN DESIGNATED AS A RESERVE TRACT AND IS SUBJECT TO THE FOLLOWING RESTRICTIONS

A. RESERVE TRACT A WAS NOT INCLUDED IN THE OVERALL DENSITY, DOES NOT HAVE THE POTENTIAL FOR DEVELOPABLE BUILDING SITES, SHALL NOT BE FURTHER DEVELOPED, AND SHALL BE MAINTAINED AS A RESERVE AREA.

B. RESERVE TRACT A SHALL NOT BE FURTHER SUBDIVIDED IN ANY MANNER EXCEPT AS MAY BE PROVIDED BY WCC 20.20.320.

C. RESERVE TRACT A MAY BE RETAINED BY THE SUBDIVIDER, CONVEYED TO THE RESIDENTS OF THIS LONG PLAT OR CONVEYED TO A THIRD PARTY.

DRAINAGE FACILITIES

THE PROPERTY OWNER(S) OR COMMUNITY ASSOCIATION HAS THE RESPONSIBILITY TO PROPERLY MAINTAIN ALL STORMWATER FACILITIES NOT WITHIN COUNTY RIGHT-OF-WAY. THE COUNTY MAY INSPECT ALL STORMWATER FACILITIES AND COMMUNITY ASSOCIATION INSPECTION RECORDS. IF THE PROPERTY OWNER(S) OR COMMUNITY ASSOCIATION HAS FAILED TO MAINTAIN THE STORMWATER FACILITIES, THE COUNTY CAN ISSUE WRITTEN NOTICE SPECIFYING THE REQUIRED ACTIONS. IF THE ACTIONS ARE NOT CORRECTED IN A TIMELY MANNER OR IN THE EVENT OF A PUBLIC HAZARD, THE COUNTY MAY ENTER THE PROPERTY TO PERFORM THE ACTIONS NEEDED AND BILL THE PROPERTY OWNER(S) OR COMMUNITY ASSOCIATION. ANY ACTION TAKEN BY WHATCOM COUNTY SHALL NOT RELIEVE THE PROPERTY OWNER(S) OR COMMUNITY ASSOCIATION FROM ITS RESPONSIBILITY TO MAINTAIN THE STORMWATER FACILITIES.

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	61.66	112.60	31°22'34"	31.63
C2	55.05	100.00	31°32'34"	28.24
C3	33.03	60.00	31°32'34"	16.95
C4	28.16	90.00	17°55'38"	14.20
C5	18.77	60.00	17°55'38"	9.46
C6	9.39	30.00	17°55'38"	4.73
C7	70.30	230.00	17°30'48"	35.43
C8	61.13	200.00	17°30'48"	30.81
C9	48.45	170.00	16°19'45"	24.39
C10	3.51	170.00	1°11'03"	1.76

SURVEY EQUIPMENT + PROCEDURE

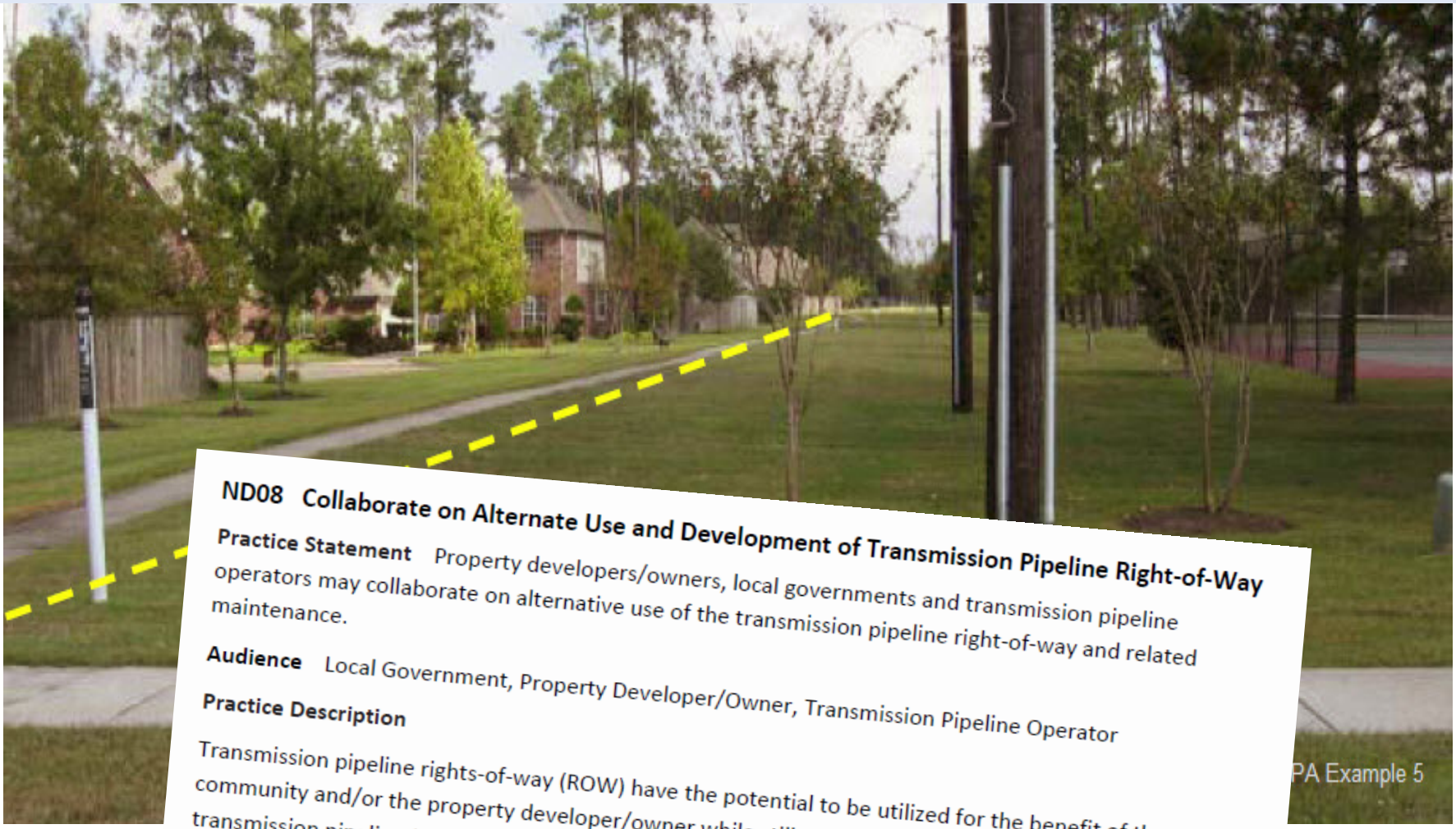
THIS SURVEY WAS COMPLETED AND ACCOMPLISHED BY FIELD TRAVERSE USING A NIKON DTM-501 TOTAL STATION IN JULY, 2003.

RONALD T. JEPSON 9361 REGISTERED LAND SURVEYOR STATE OF WASHINGTON
1/25/2004
July 21, 03

RONALD T. JEPSON & ASSOCIATES
CONSULTING ENGINEERS*LAND SURVEYORS*PROJECT MGMT. & DEV.
222 GRAND AVE. SU "C" BELLINGHAM WASHINGTON 98225
PH. (360)733-5760 FAX (360)647-8939 E-MAIL JEPSON222@QWEST.NET

JOB # 02011

ND08 Collaborate on Alternate Use and Development of Transmission Pipeline ROW (Examples in Appendix C)



ND08 Collaborate on Alternate Use and Development of Transmission Pipeline Right-of-Way

Practice Statement Property developers/owners, local governments and transmission pipeline operators may collaborate on alternative use of the transmission pipeline right-of-way and related maintenance.

Audience Local Government, Property Developer/Owner, Transmission Pipeline Operator

Practice Description

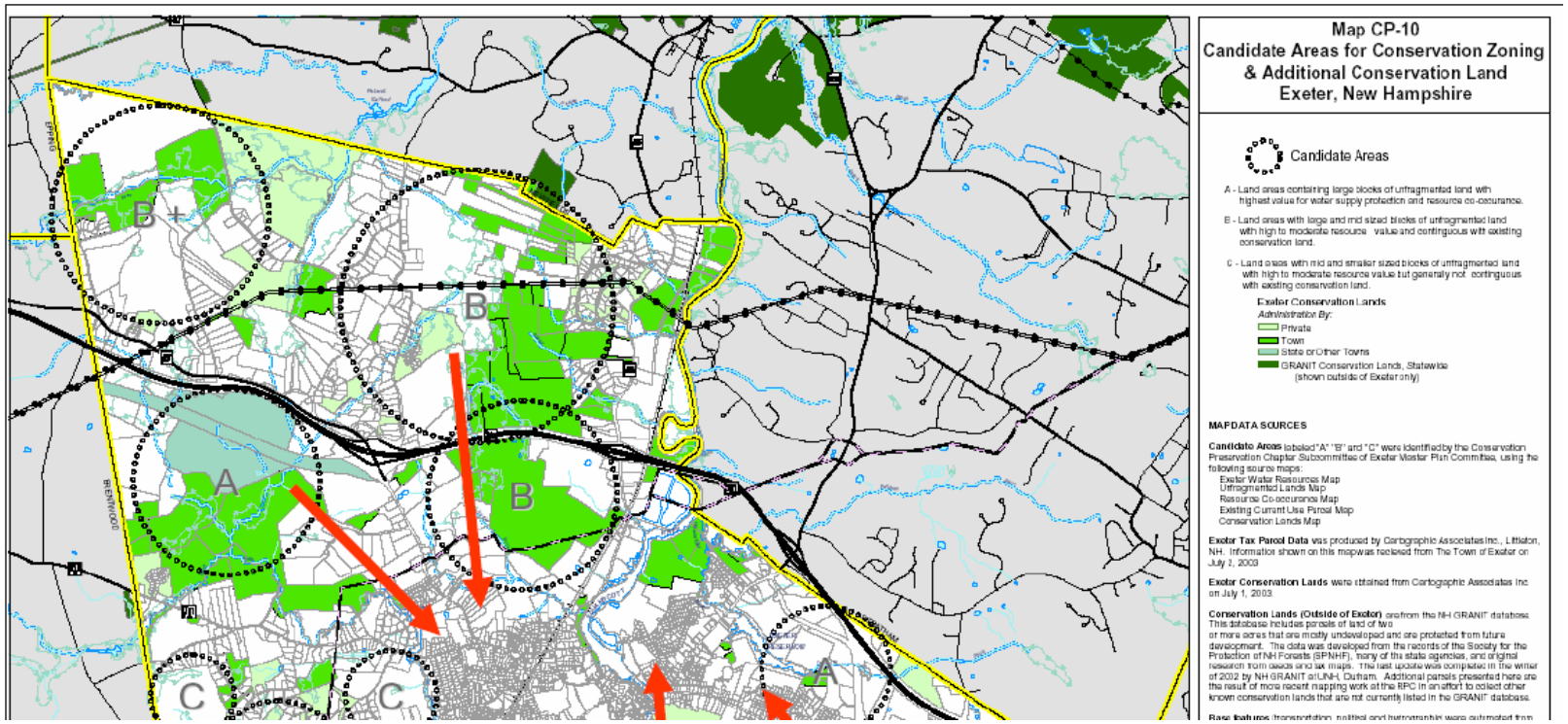
Transmission pipeline rights-of-way (ROW) have the potential to be utilized for the benefit of the community and/or the property developer/owner while still maintaining the safety and integrity of the transmission pipeline facilities. Property developers/owners and local gover
pipeline operators to explore possibl

LG, D/O, O

ND09 Provide Flexibility for Developing Open Space along Transmission Pipeline ROW

Practice Statement Local governments should consider allowing site planning flexibility in the development of commercial, industrial or residential property whenever a transmission pipeline is located in, or in close proximity to, the proposed development.

Identification of Sending and Receiving areas should be part of a comprehensive planning process…



LG

ND11-23 Facility Types
Reduce Transmission Pipeline Risk Thru…

Parking Lot/Structure (ND11)
Road (ND12)
Utilities (ND13)
Aboveground Water Management (ND 14)
Water Supply and Sanitary Systems (ND16)
Residential, Mixed-Use, Commercial (ND 17)
Industrial Development (ND 19)
Institutional Facility(ND20)
Public Safety and Enforcement Facilities (ND21)
Places of Mass Public Assembly (ND 22)

ND11-23 Reduce Transmission Pipeline Risk Thru… (Review Design for Safe Integration with Pipeline)

	XV. REVIEW DESIGN FOR SAFE INTEGRATION WITH THE TRANSMISSION PIPELINE (ND06)
	Consider ways to decrease the population density near the right of way (ND09)
	Consider measures to prevent excavation damage during construction and in the future (BL15, ND08, ND12, ND16, ND22, ND24)
	Review potential for other damage to the pipeline from development (e.g. run off, interference with cathodic protection) (ND11, ND12, ND13, ND14, ND16, ND17)
	Review to ensure adequate access for operations/maintenance activities (ND 11, ND12, ND13, ND 14, ND 15, ND16, ND17, ND19, ND 20, ND21, ND22)
	Review to ensure adequate access and resources for emergency response (BL06, ND 12, ND14, ND 16, ND 17, ND 19, ND 20, ND21, ND22, ND23)
	Review ability for a safe and timely evacuation, difficult to evacuate populations (ND12, ND17, ND20, ND22)
	Review for enhanced fire protection and/or endurance if needed, NFPA 1 Fire Code (ND11, ND 17, ND20, ND 21, ND22)
	Review for potential of gas or liquid migration in the event of a release (ND13, ND14, ND16, ND19)
	Review to minimize the consequences of a pipeline incident. (All) • Minimum separation within the ROW to other structures? • Are buildings clustered away from the pipelines? • Are higher-density or difficult to evacuate development located with a maximum separation from the pipeline? • Are open spaces closest to the pipeline, thereby creating a buffer? (ND09, ND 11, ND 12, ND13, ND 14, ND 16, ND17, ND 19, ND 20)
	Review selection and design of vegetation (ND15)
	Consider the effects of noise and odor of pipeline operations (ND18)
	Consider escalation of risk due to cascading effects. (ND19, ND21)
	Consider proposed use of pipeline ROW for alternative use such as green spaces, parks, golf courses, hike and bike trails, horse trails, and other recreational spaces. (ND 08 and see Appendix C for examples.)

LG, D/O

Collaboration with Emergency Management

In the event of a transmission pipeline incident, evacuation of a building or shelter-in-place may be necessary. Evacuation routes should be considered during the design of a development to ensure that the potential impacts of a transmission pipeline incident will not compromise a necessary evacuation. For example, buildings should have a safe means of egress with exits located where they would not be made inaccessible by the impacts of a pipeline incident. Similarly, cul-de-sac streets should not be designed crossing a transmission pipeline as the only route of ingress or egress could be blocked during a pipeline incident.

High-rise buildings such as hotels, dormitories, apartment complexes, and office buildings may not lend themselves to a timely evacuation. Specific emergency plans addressing transmission pipeline incidents should be developed for these buildings and integrated with overall emergency plans for the site. Site emergency plans should be developed in coordination with the transmission pipeline operator (see PIPA Recommended Practice ND23).

Several codes have been issued to address these concerns, including:

- NFPA 1 – National Fire Protection Association (NFPA): Fire Code
- NFPA 101 – NFPA: Life Safety Code
- NFPA 5000 – NFPA: Building and Construction Safety Code
- IBC – International Code Council (ICC): International Building Code
- IRC – ICC: International Residential Code
- IFC – ICC: International Fire Code

These codes provide minimum standards for means of building egress, including capacity, quantity, arrangement, location, protection, and marking of means of egress. Minimum standards for emergency plans are also provided, where applicable.

Enhanced fire protection of buildings (i.e. automatic sprinklers, water screens, exposure protection, air handling/ventilation systems, etc.) and/or enhanced fire endurance (non-combustible construction, window limitation, etc.) may also be implemented to further mitigate the impact of a potential transmission pipeline incident. NFPA 1, Fire Code, provides minimum standards for separation distances for various occupancies based on fire endurance (in hours), and incorporates many other NFPA codes and standards (by reference) for fire protection. NFPA 5000 and IBC provide minimum standards for fire endurance for various buildings. Enhanced fire protection and fire endurance measures may be implemented for all categories of buildings considered under this recommended practice.

Local government agencies and property developers should consider modeling of fire, explosion, or toxic release impacts that could occur during a transmission pipeline incident for the specific land use under consideration. Egress models should also be considered. If appropriate, land use development and facility design should take this modeling into account to minimize potential impacts. The model should be fit-for-purpose and the model user should have appropriate expertise.

ND11 – Placing New Parking Lots

Reduce Transmission Pipeline Risk through Design and Location of New Parking Lots and Parking Structures

LG, D/O

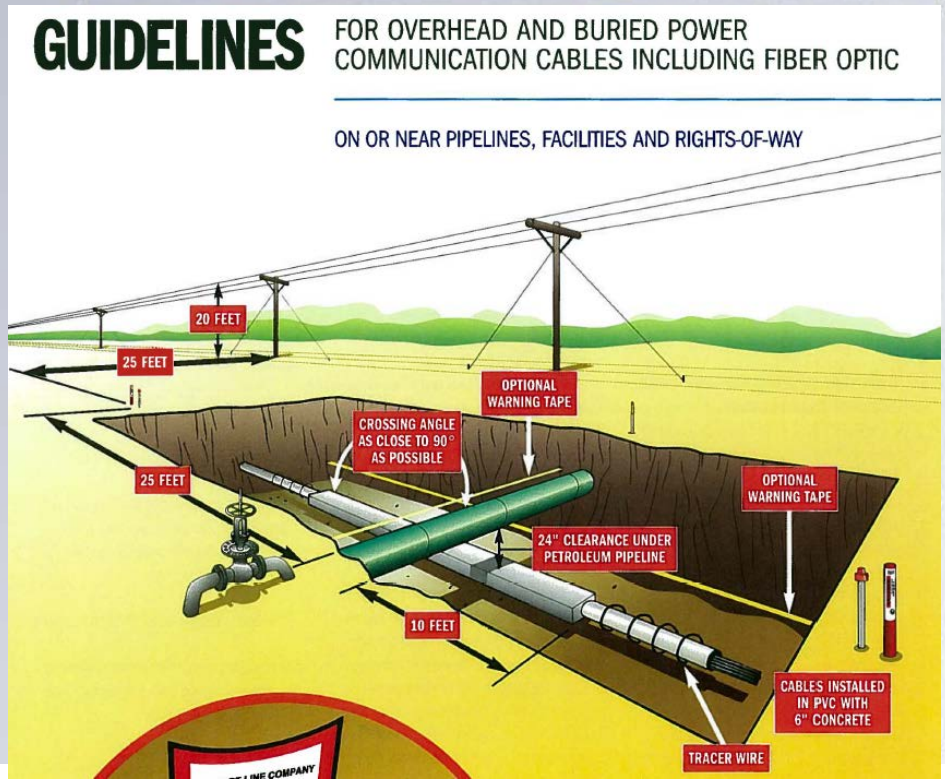
ND12 New Roads

- No adverse affect on pipeline
- Maintain depth of cover & road sub-grade/carrying capacity
- No intersections on ROW
- Perpendicular to pipe
- Locate in median
- Road Appurtenances not to affect pipeline/cathodic protection
- Design storm drains to avoid conflict with pipe

A 20” natural gas transmission pipeline ruptured 100’ west of Interstate 77 in Sissonville, WV. It burned for more than an hour and melted four lanes of I-77.
Photo - West Virginia State Police/Reuters
December 11, 2012

ND13 New Utilities and Related Infrastructure

- Approx 750 BBL of crude spill into Salt Lake City creeks and small lakes on June 11/12, 2010.
- Power company built substation immediately adjacent to pipeline. Fence post directly on top of pipeline.
- Fault current burned dime sized hole in pipeline.



ND14 Aboveground Water Management Infrastructure

Practice Statement Storm water and irrigation water management facilities, retention ponds, and other above-ground water management infrastructure should be preferentially located and designed to reduce the consequences that could result from a transmission pipeline incident and to reduce the potential of interference with transmission pipeline operations and maintenance.

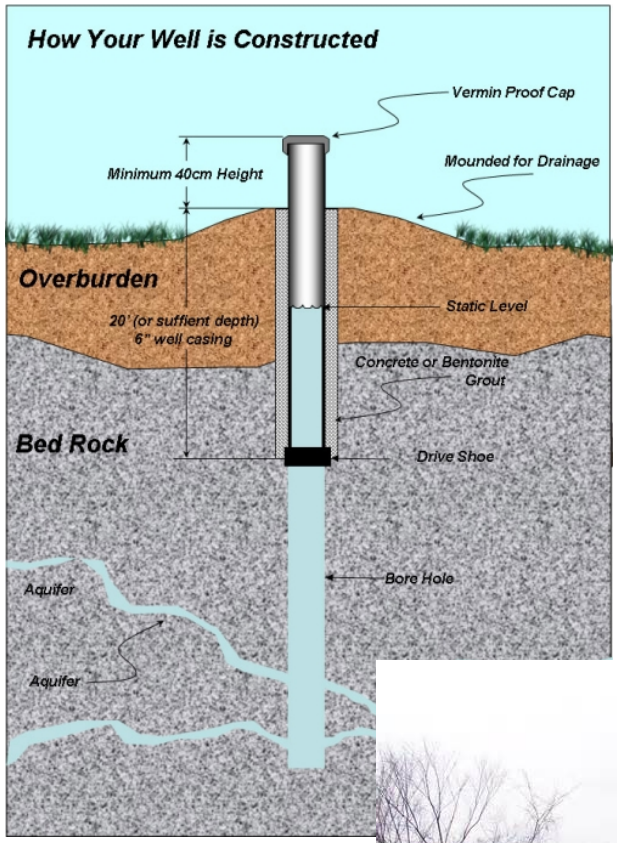
40 CFR 122 NPDES - Prevent stormwater runoff from washing hazardous liquids or gas into local surface waters such as streams, rivers, lakes or coastal waters.

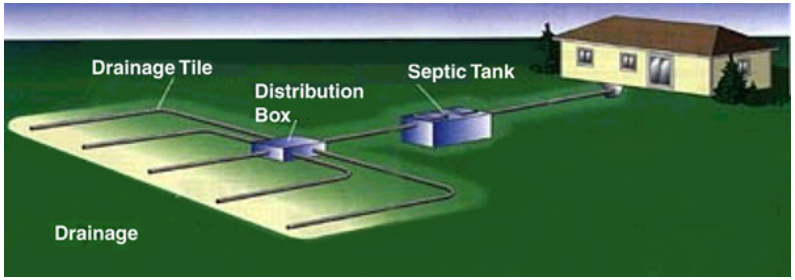
ND15 Location and Types of Vegetation

- Keep Deep Rooted Trees Out of the Pipeline ROW
- Work With the Pipeline Owner For Location of Other Approved Plantings

LG, D/O

ND16 Water Supply and Sanitary Systems to Prevent Contamination and Excavation Damage

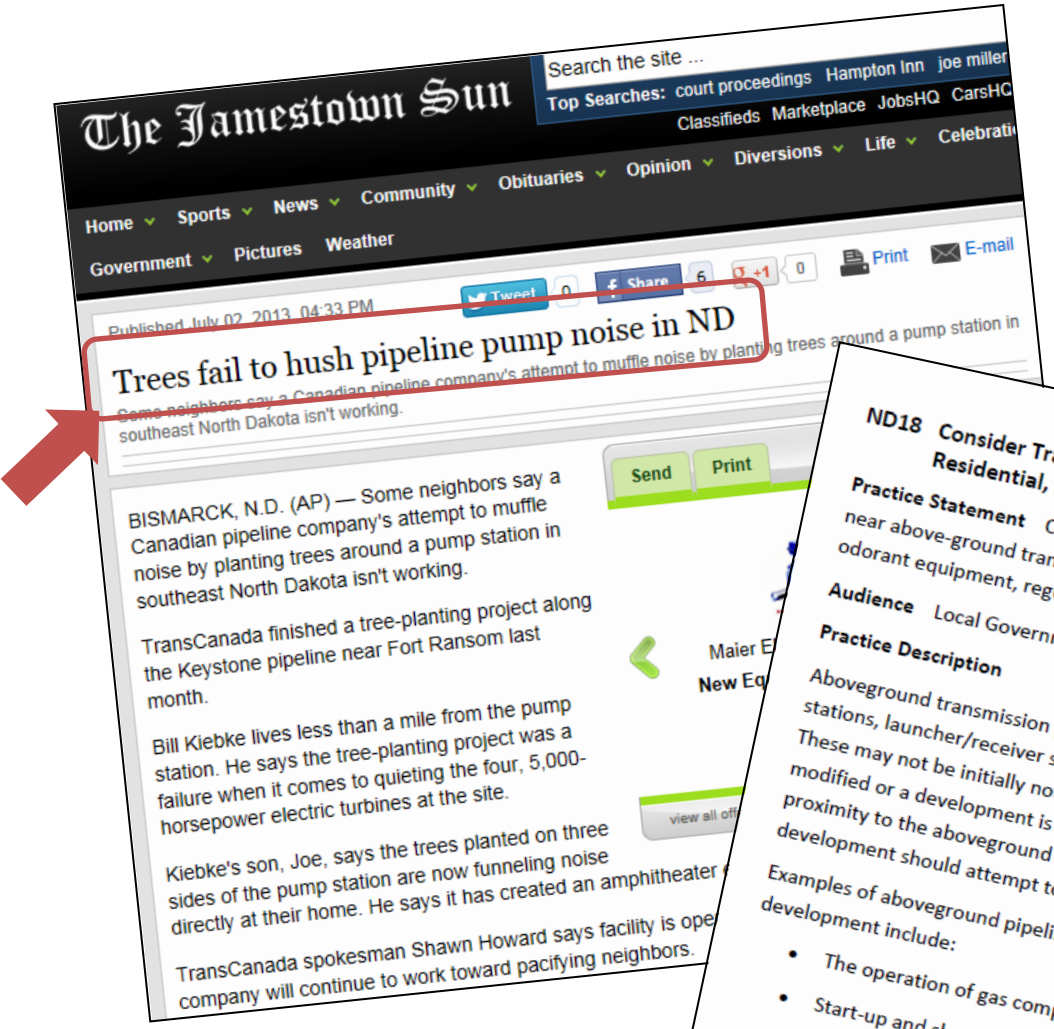




ND17 Residential, Mixed-Use, and Commercial Land Use

…cul-de-sac streets should not be designed crossing a transmission pipeline as the only route of ingress or egress… LG, D/O

ND18 Consider Transmission Pipeline Operation Noise and Odor in Design and Location of Residential, Mixed-Use and Commercial Land Use Development



ND18 Consider Transmission Pipeline Operation Noise and Odor in Design and Location of Residential, Mixed-Use, and Commercial Land Use Development

Practice Statement Consider noise, odor and other issues when planning and locating developments near above-ground transmission pipeline facilities, such as compressor stations, pumping stations, odorant equipment, regulator stations and other pipeline appurtenances.

Audience Local Government, Property Developer/Owner, Transmission Pipeline Operator

Practice Description

Aboveground transmission pipeline facilities, such as compressor stations, pumping stations, regulator stations, launcher/receiver stations and other pipeline appurtenances may generate noise and odors. These may not be initially noticed in some settings. However, they may be noticeable when land use is modified or a development is placed near the pipeline facility. These changes may place people in close proximity to the aboveground pipeline facilities for extended periods of time. Plans for land use and development should attempt to minimize exposures to these types of facilities.

Examples of aboveground pipeline operation and maintenance activities that may impact adjacent land development include:

- The operation of gas compressor or pump station machinery may
- Start-up and shut-down activities may produce
- Heat exchangers or oth

LG, D/O

ND19 New Industrial Land Use Development

Onsite power plants, gas plants, water supplies, processing of flammable liquids, toxic chemicals, etc.

- Compounded risk
- More complex emergency response
- NFPA 1 Fire Code – std. on spacing of hazardous materials to minimize escalation of a hazard
- Model fire, explosion or toxic release
- Egress models
- Operator required to provide emergency liaison and consultation

ND20 New Institutional Land Use Development

Difficult to evacuate facilities; special needs populations

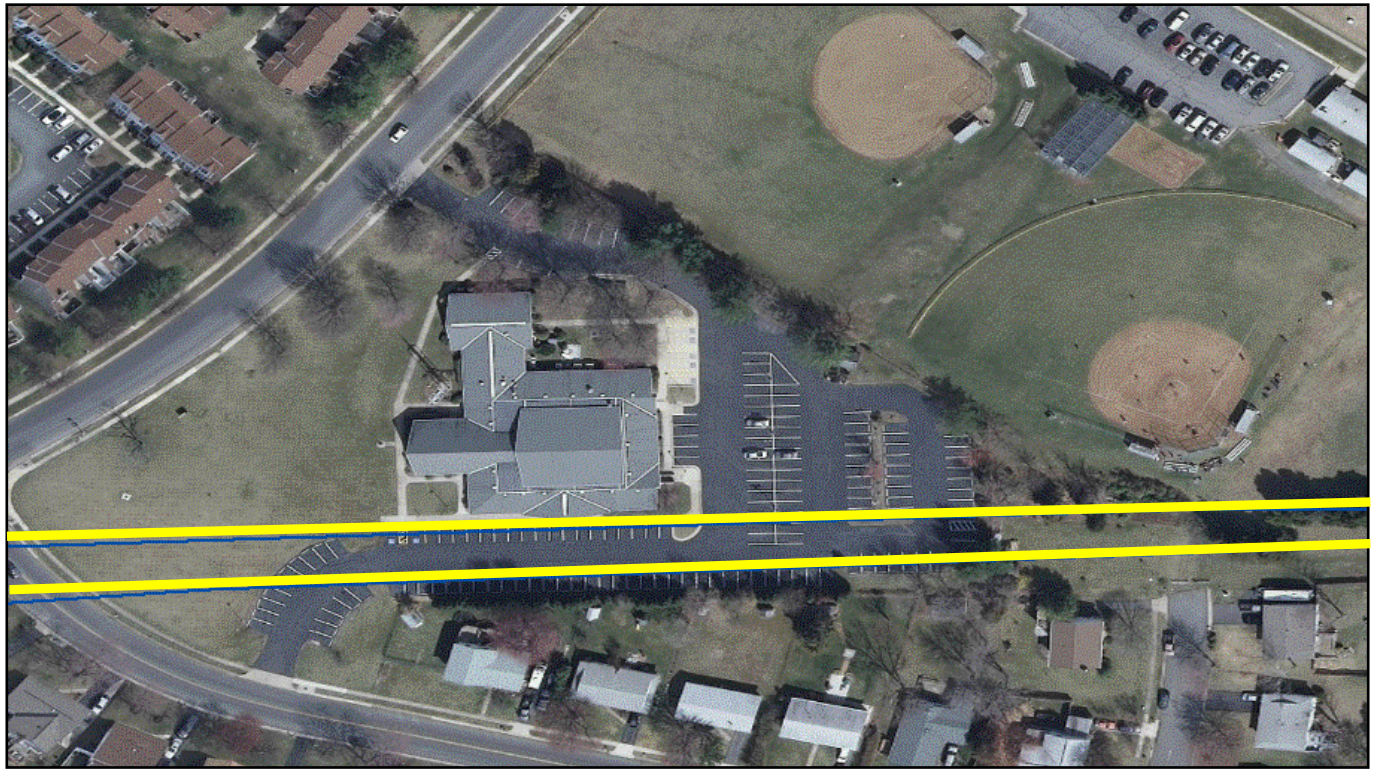
- Place to reduce consequences
- Consider evacuation routes during design
- Site emergency plans developed with operator
- Enhanced fire protection and/or fire endurance
- Model fire, explosion or toxic release
- Pipeline operator required to provide emergency liaison

ND21 New Public Safety and Enforcement Facilities

Facilities that house emergency responders and critical emergency response communications

- Place to reduce consequences
- Consider evacuation routes during design
- Site emergency plans developed with operator
- Enhanced fire protection and/or fire endurance
- Model fire, explosion or toxic release
- Pipeline operator required to provide emergency liaison

ND22 New Places of Mass Public Assembly



…Evacuation routes should…have a safe means of egress with exits located where they would not be made inaccessible by the impacts of a pipeline incident…

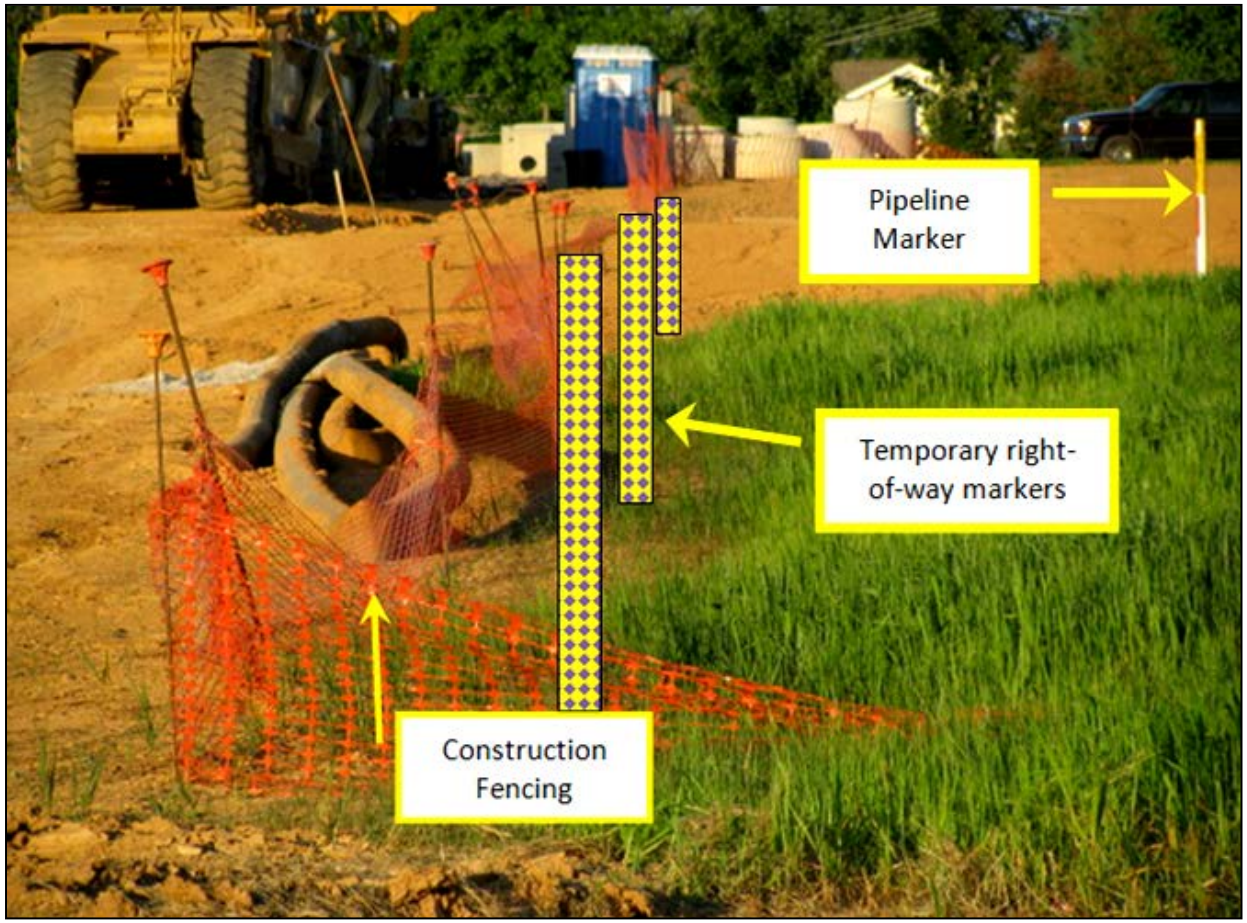
LG, D/O

ND 23 Consider Site Emergency Response Plans in Land Use Development

- Access to shutoff valves
- Access for emergency response personnel/equipment
- Location/capacity of water supply/fire hydrants
- Potential ICS, triage, and staging areas

LG, D/O

ND24 Temporary Markers for Construction



Install Temporary Markers on
Edge of Transmission Pipeline Right-of-Way
Prior to Construction Adjacent to Right-of-Way

LG, D/O

ND25 Contact Transmission Pipeline Operator Prior to Blasting

Sunoco Logistics

SUNOCO PIPELINE L.P.

BLASTING REQUIREMENTS – BLASTING BY OUTSIDE PARTIES

1. Any outside party contemplating blasting operations within 300 feet of the pipeline right-of-way shall submit a plan to Sunoco Pipeline L.P. for approval.

    1.1.1. This plan must include size of holes, depth, spacing, burden, soil types and amounts, type of delays, delay sequence, maximum amount and type of explosives on any one delay period, depth of blast area, and depth of overburden, if any.

    1.1.2. **The peak particle velocity of any one component of the three-component seismograph reading must not exceed the U.S. Bureau of Mines RI 8507 criteria limits as recorded on a seismograph placed over the pipeline.**

2. If the outside party anticipates using explosives within 200 feet of our pipelines, test blasts, monitored by a seismograph, must be conducted.

    2.1.1. A maximum of one pound per delay charge shall be used during the initial test last.

    2.1.2. Subsequent test blasts may be made if the seismograph readings indicate that further blasting can be safely conducted routine blasting may continue after test blasts, with the allowable charge per delay based on the seismograph vibration recordings of the blasts. All blasting shall be continuously monitored by a seismograph to ensure the recorded peak particle velocity components do not exceed the U.S. Bureau of Mines RI 8507 criteria limits as noted in paragraph 1.1.2.

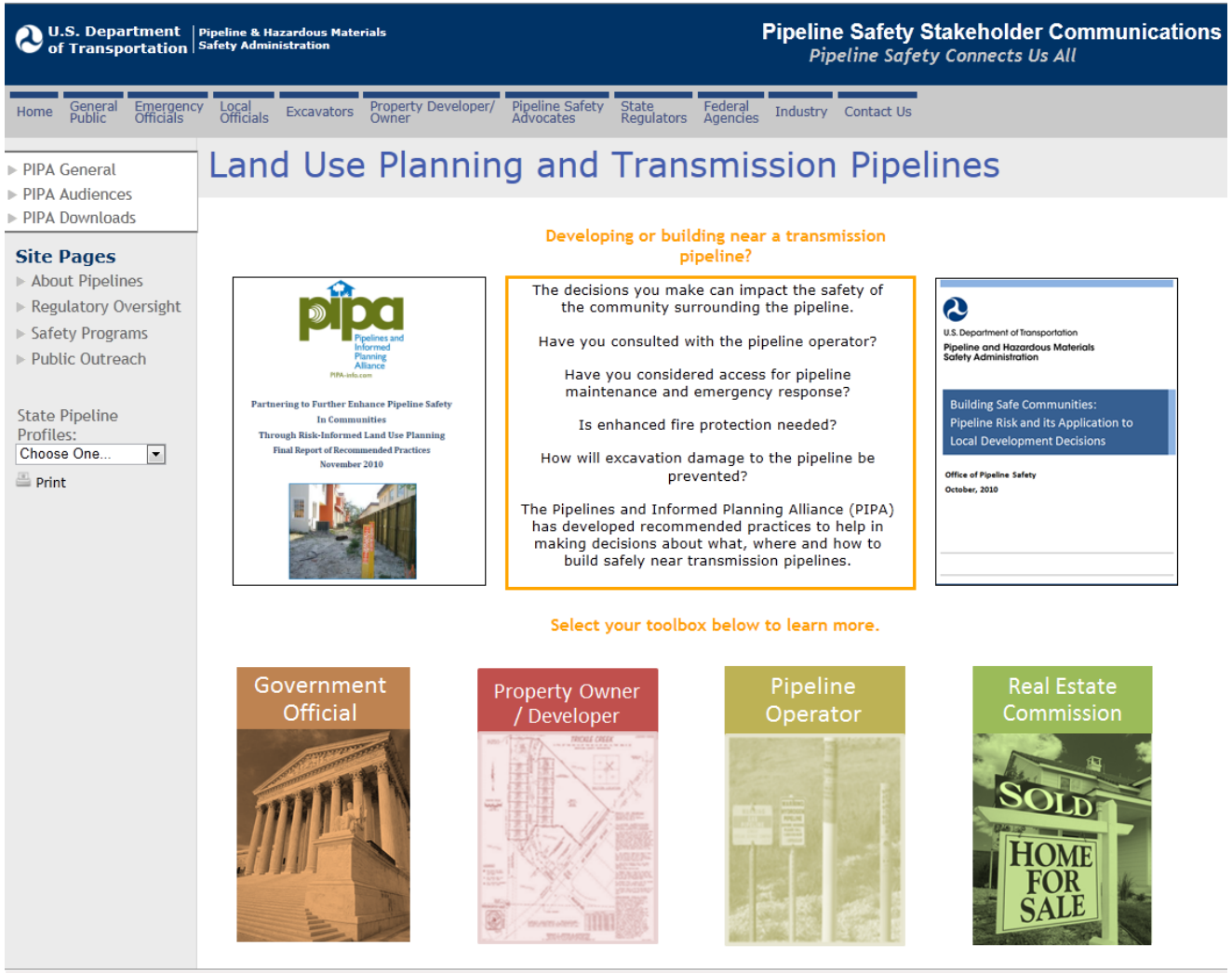
    2.1.3. Seismograph readings over the pipeline are to be recorded and submitted (tapes, reproducible files or print-outs) to Sunoco Pipeline L.P.'s representative each day after blasting.

    2.1.4. The blasting operations must be conducted using a drilling pattern and blast initiation procedure that will provide the greatest relief possible in a direction away from the pipeline, to keep the resulting vibration and actual ground movement to the lowest possible level.

LG, D/O, O

PIPA Online Resources

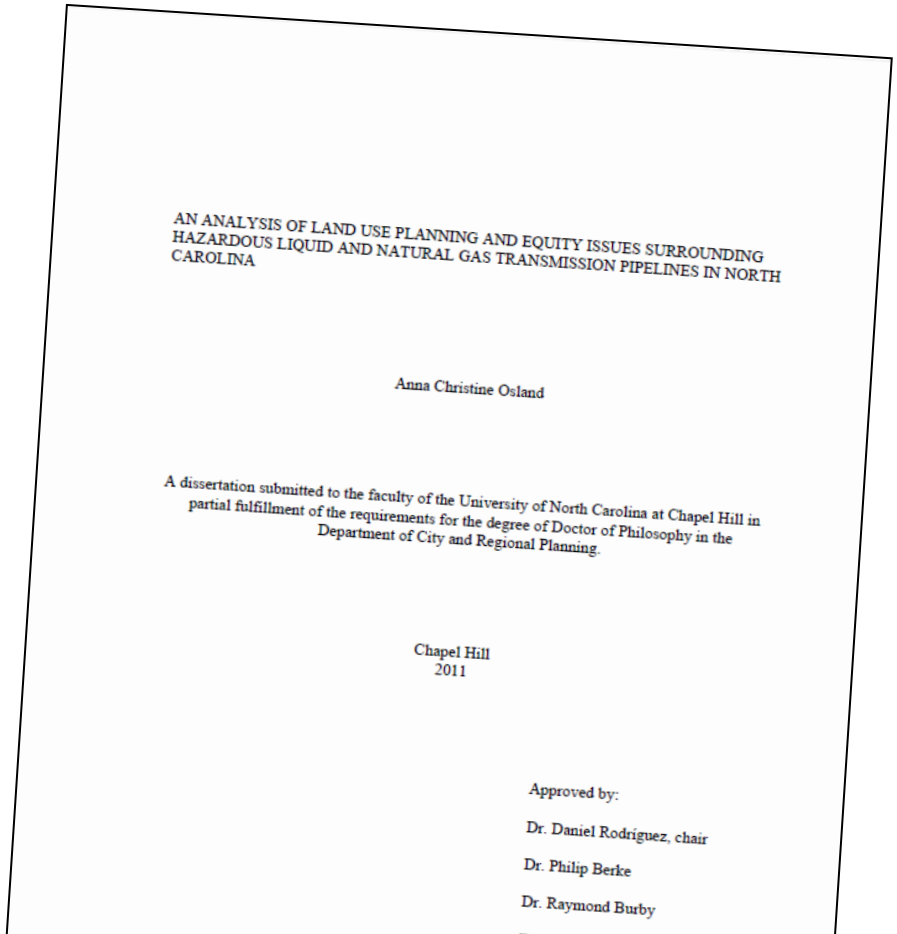
PIPA-info.com



- Pick & Choose Presentation Template
- Articles
- Press Release
- Webinars
  - PIPA & NPMA Brochures
- Flyers
- TAGs
- CATS
- PIPA & NPMS Logo
- HMP Primer

People and Pipelines: Land Use Management and Collaborative Planning Practices in NC

Anna Osland



AN ANALYSIS OF LAND USE PLANNING AND EQUITY ISSUES SURROUNDING HAZARDOUS LIQUID AND NATURAL GAS TRANSMISSION PIPELINES IN NORTH CAROLINA

Anna Christine Osland

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of City and Regional Planning.

Chapel Hill
2011

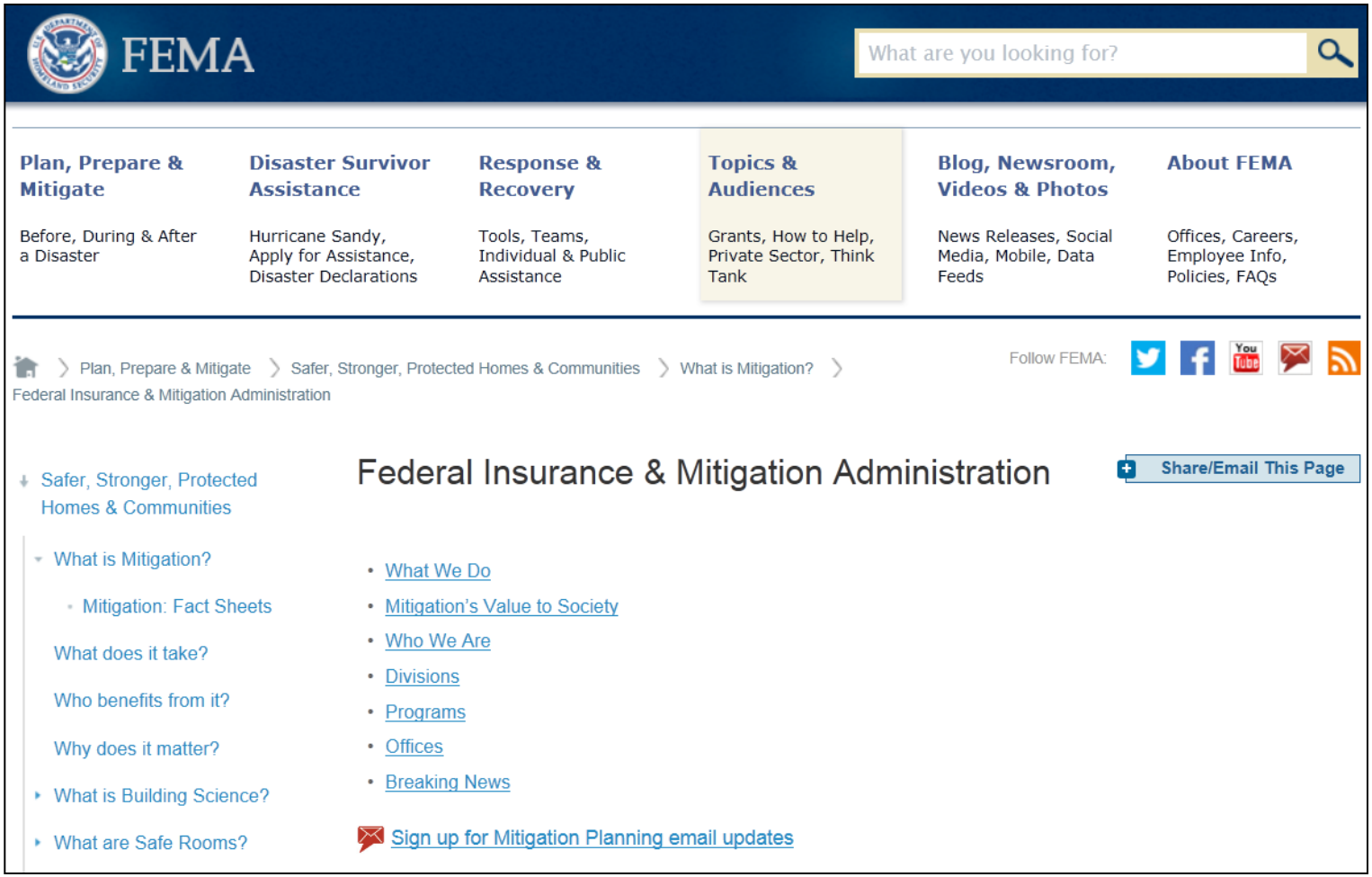
Approved by:

Dr. Daniel Rodriguez, chair

Dr. Philip Berke

Dr. Raymond Burby

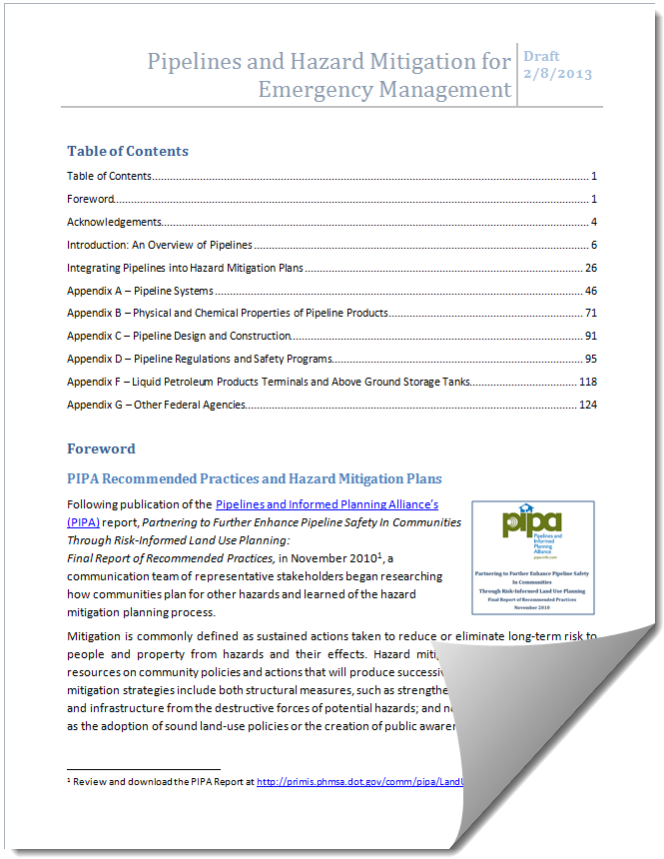
Kathy Smith, Federal Emergency Management Agency (FEMA)



Hazard Mitigation for Pipelines Primers

Primers for Hazard Mitigation Managers - Currently in draft. Reviewed by:

- PIPA Communication Team
- Stakeholder Organizations - FEMA, VDEM, NACo, NLC, AGA, INGAA, AOPL, API, NAHB, NAPSR



Pipelines and Hazard Mitigation for Emergency Management | Draft 2/8/2013

Table of Contents

Foreword

PIPA Recommended Practices and Hazard Mitigation Plans

Following publication of the Pipelines and Informed Planning Alliance's (PIPA) report, *Partnering to Further Enhance Pipeline Safety In Communities Through Risk-Informed Land Use Planning: Final Report of Recommended Practices,* in November 2010[1], a communication team of representative stakeholders began researching how communities plan for other hazards and learned of the hazard mitigation planning process.

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard miti resources on community policies and actions that will produce successi mitigation strategies include both structural measures, such as strengthe and infrastructure from the destructive forces of potential hazards; and n as the adoption of sound land-use policies or the creation of public awarer

[1] Review and download the PIPA Report at http://primis.phmsa.dot.gov/comm/pipa/Land

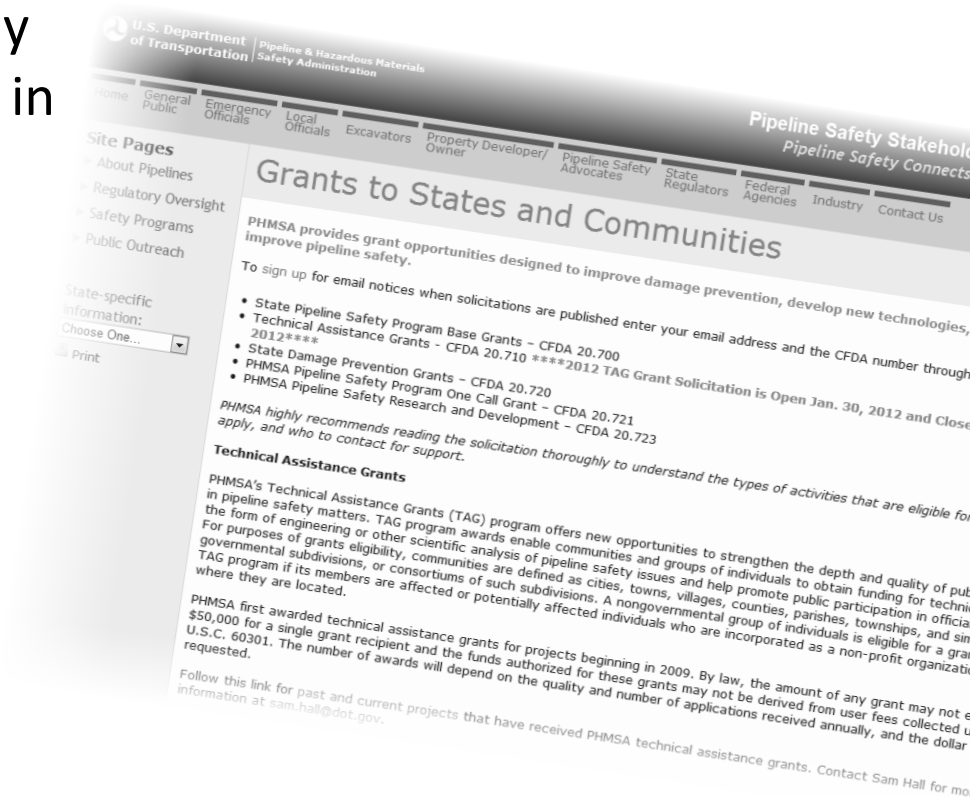
Agenda – Aug. 7

- PIPA related TAGs
- Review of previous implementation plan
- Review past outreach efforts
- Review “Idea List”
- Discuss strategy and develop communications plan for next year
- Team Building/Sustaining
  - Member Recruitment
  - Re-engagement of/update to previous PIPA participants

US DOT PHMSA Technical Assistance Grants

Purpose: *to make grants to local communities and organizations for technical assistance related to pipeline safety issues* (includes implementing PIPA RPs & enhancing hazard mitigation plans to incorporate pipelines)

- Annual grants up to $50K typically posted in Jan – Feb and awarded in September
- Sign up for alerts when the solicitation is posted on http://www.grants.gov
- CFDA number 20.710
- Funding number DTPH56-12-SN-000001



GRANTS.GOV℠

View Previously Awarded PIPA TAGs 2012 & 2009 (3 of 9)

"IL - Will County - 2012 Technical Assistance Grant" (DTPH56-12-G-PHPT14, End FY: 2013)

Under this grant award the Will County will establish a Pipeline Task Force to strengthen linkages and coordination throughout Will County and perform an inventory of pipelines, associated facilities, product information and emergency information from available sources that will be compiled into a single reference for emergency responders and land use officials. Also, plan to identify emergency planning information related to special populations, sensitive environmental areas and other locations that are particularly vulnerable to pipeline incidents will be identified and organized for quick reference during a pipeline emergency. Develop public safety education materials to inform the public living in proximity to pipelines.

"IL - Village of Worth - 2012 Technical Assistance Grant" (DTPH56-12-G-PHPT23, End FY: 2013)

Under this grant award the City of Worth will create a GIS of natural gas and petroleum pipelines within their community. The GIS data will be made available to emergency responders to improve emergency response capabilities. The data will be provided to land use planners to help reduce conflicts between pipelines and other land use. The data will also be used for pipeline risk analysis and pipeline replacement studies.

"PA - East Brandywine Township - 2012 Technical Assistance Grant" (DTPH56-12-G-PHPT09, End FY: 2013)

Under this grant award the East Brandywine Township will research and develop a standardized notification protocol for informing Chester County officials of projected pipeline projects which will lead to enhanced engineering and scientific analysis of pipeline projects that begins with full stakeholder participation in the planning stage.

"SD - Brookings County - Develop a pipeline safety appendix to the Brookings County Zoning Ordinance" (DTPH56-09-G-PHPT03, End FY: 2010)

The County will use the Pipelines and Informed Planning Alliance (PIPA) Consultation and/or Planning Zone best practices to developing a zoning ordinance to protect pipeline rights of way.

"TX - City of Fort Worth - GIS to manage expanding pipeline systems within Dallas/Fort Worth metro area" (DTPH56-09-G-PHPT01, End FY: 2010)

The City will convert paper-based pipeline records to a public geographic information system (GIS) to be used for land use planning.

"VA - Montgomery County - Underground pipeline inventory and assessment for incident management" (DTPH56-09-G-PHPT04, End FY: 2010)

The County will develop a GIS of pipelines and utilize PIPA Consultation Zone best practices for land use planning; analyze pipeline Consultation Zones and revise the development review process to emphasize pipeline safety; examine zoning ordinances in relation to PIPA best practices; develop Consultation/Planning Zone educational materials in cooperation with the pipeline industry; develop a pipeline emergency response plan and exercise the plan.

Technical Assistance Grants – NACo 2012

DC - National Association of Counties Research Foundation - 2012 Technical Assistant Grant

Main Objective

Under this grant award the National Association of Counties Research Foundation will provide public education and community outreach to assure that county officials, planners, engineers, and emergency managers are aware of the pipeline issues and to build county officials' awareness about and capacity to implement local land use practices adjacent to transmission pipelines through conferences, workshops, training, publications, decision flowcharts, and fact sheets.

Public Abstract

Under the terms of this agreement, the Recipient will:

- Provide public education and community outreach to assure that county officials, planners, engineers, and emergency managers are aware of the pipeline issues; and
- Build county officials' awareness about and capacity to implement local land use practices adjacent to transmission pipelines through conferences, workshops, training, publications, decision flowcharts, and fact sheets.

Evolution of PIPA Communication Plan 2011-12 & 2012-13

Communication Team Implementation Plan Goal

Engage local governments to promote their awareness of and support their implementation of the PIPA recommended practices for land use planning and development near transmission pipelines.

Communication Plan Tenets

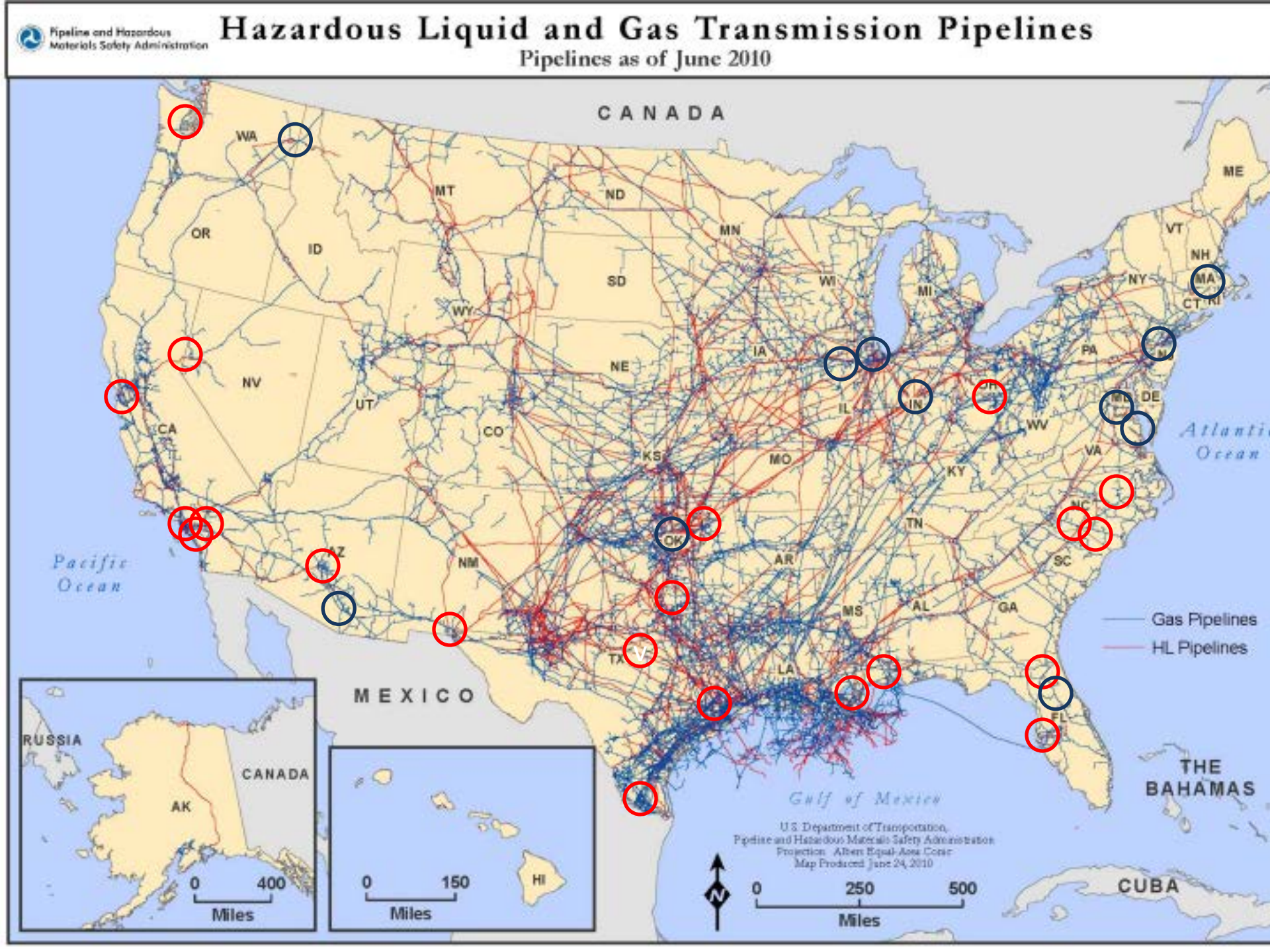
- Focus on local governments
- Speak in local government terminology
- Risk is local, planning is local
- Utilize existing, authoritative, trusted communication channels
- Develop a sustainable path – institutionalize RPs
- Recognize the long-term, evolutionary process of planning
- Implement actionable, short-term tasks
- Build pipeline awareness
- Foster government/operator/regulator relationships

2011- 12 Implementation Plan Objectives

1. Prepare Promotional Material
2. Engage, Communicate with, and Educate Candidate Local Governments to Raise Awareness of PIPA RPs
3. Encourage and Support Candidate Local Governments in Their Efforts to Implement PIPA RPs with Emphasis on the Consultation Zone Concept (BL04 & BL 05)
4. Support Local Government to Sustain Consultation Zone Implementation
5. Engage, Communicate With, and Educate a Broad Range of Stakeholders to Raise Awareness of PIPA RPs

Methodology for Selecting Candidate Counties

1. Using 2010 Census & NPMS data rank counties by various attributes which assess the level of benefit a consultation zone ordinance may provide.
   - *Ranking of the number of new private housing units authorized by building permits in 2009
   - *Ranking of Pipeline Mileage per number of new units authorized
   - Ranking of percent population increase from 2000-2010
   - Ranking of absolute population increase from 2000-2010
   - Ranking of density weighting (New units authorized * Population per square mile)
   - Ranking of miles of pipeline
   - Ranking of miles of pipeline per land area
2. Cut of list around top 200 counties (eliminated counties with no/few pipelines or new/few new housing authorized, using ranking above, eliminated lower ranking counties)
3. Identify and group counties in same metro area
4. Review PIMMA maps of candidate counties/metro areas to gain visual confirmation that pipelines are in proximity of growth areas
5. Consider if the new units are infill or extending out from a metro area.
6. Consider proximity of area to PIPA contacts, cost of travel (who besides me and you should be considered?)
7. Consider the level of resistance/acceptance of adopting a CZ ordinance in the county
   - History of incidents
   - General acceptance of safety related laws
8. Add counties who have expressed an interest in introducing a CZ ordinance to the list (left in SD)
9. Communication Team input


Pipeline and Hazardous Materials Safety Administration
Hazardous Liquid and Gas Transmission Pipelines
Pipelines as of June 2010
CANADA
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
WV
GA
FL
SC
NC
VA
PA
NY
ME
VT
NH
MA
CT
RI
DE
Pacific Ocean
Atlantic Ocean
Gulf of Mexico
MEXICO
CUBA
THE BAHAMAS
RUSSIA
CANADA
AK
HI
Gas Pipelines
HL Pipelines
0 400 Miles
0 150 Miles
0 250 500 Miles
N
U.S. Department of Transportation,
Pipeline and Hazardous Materials Safety Administration
Projection: Albers Equal-Area Conic
Map Produced: June 24, 2010

Challenges

- Pipelines previously unaddressed by local governments
- Which local government official do we need to talk with???

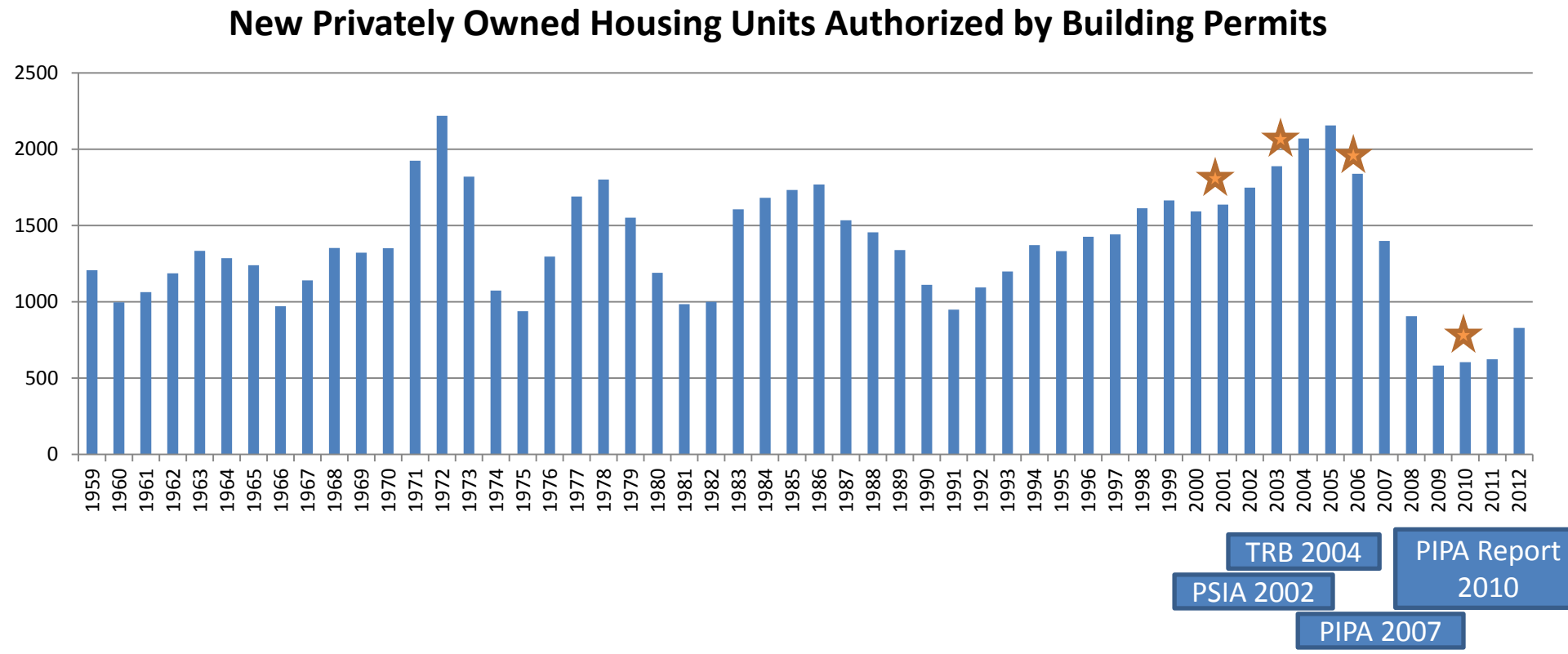
25,000 local governments x 6 potential officials affected by PIPA RPs

(25,000 X 6 = 150,000 government officials)

(elected official, planning director, emergency manager, public works, GIS, zoning, permitting)

- Current low level of awareness about PIPA
- Pipelines are not a priority except when incident happens or new pipeline is proposed
- Need to find ways to integrate PIPA RPs into planning discussions
- Timing of message …

New Housing Timeline



Consultation Zone Challenges

Pipeline Safety Trust efforts in Washington were coming up on this “wall of reality”. Every community will require some degree of hand-holding to ensure, for example, that the correct information is distributed among the others affected in the community. Getting the planners’ attention is difficult. It does require focus on specific communities.

Communication Plan Reset

Criteria

- Focus on local governments
- Use target audience's terminology
- Foster government/operator/regulator relationships
- Use existing, authoritative, trusted communication channels
- Sustainable path
- Recognize the long-term, evolutionary process of planning

Objective

- Raise awareness of pipelines and PIPA
- Implement tangible, short-term actions
- Locate and map transmission pipelines
- Urgent and important message – "Hazard"

2011 -12 Efforts

- Identified Top 10 Communities = Development + Pipeline
- Developed Communication and Marketing Materials
  - Talking points for communicating
  - List of Communication Opportunities
  - Published Articles
  - PIPA Brochures
  - INGAA Action Plan
  - NACo Brochure to Local Government Officials
- Presented at many conferences
- INGAA Webinar
- Focus outreach on implementing Consultation Zone and Planning Area and mapping pipelines
- PST TAG – WA State ordinances
- Developed Tools (gap analysis, site evaluation form, etc.)
- PIPA FAQs

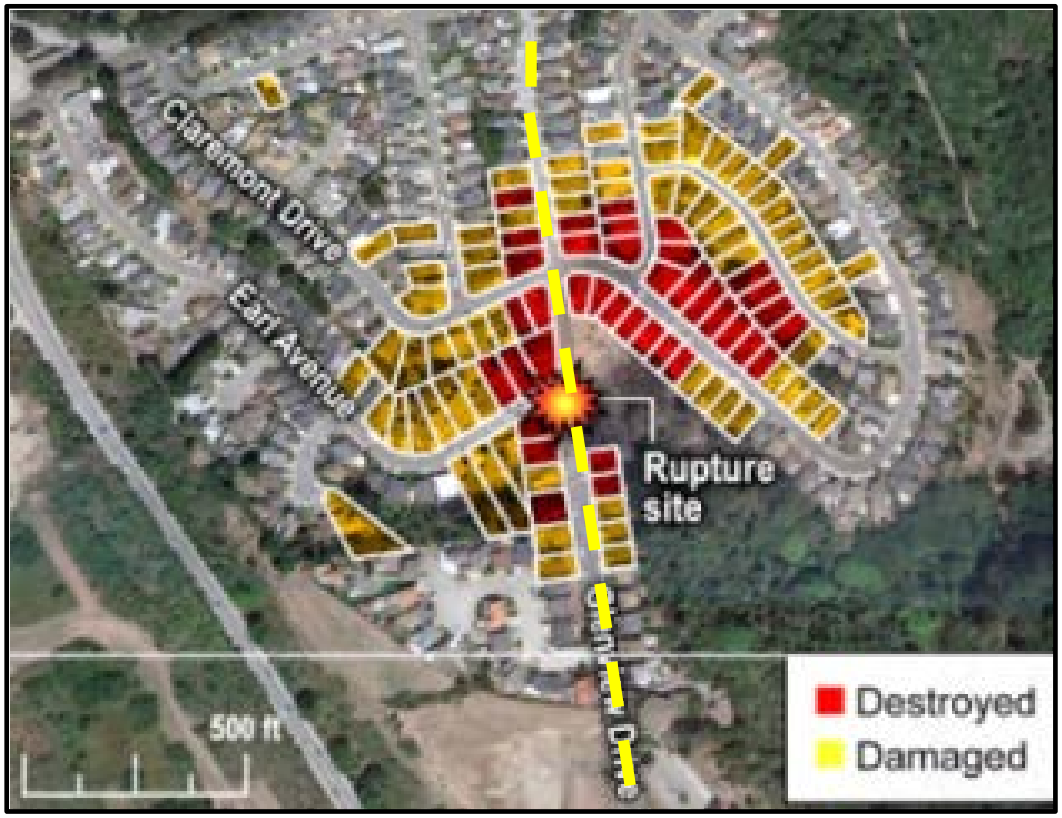
2012-13 Communication Plan

- Overhauled PIPA Website
- Developed Ad
- Promoting through effective/efficient communication channel - Webinars
- “Email blasting”
- Promoting - National Building Museum Exhibit
- Awarding of 2012 PIPA TAGs
- Presenting at Conferences on Request
- Integrating pipelines into Hazard Mitigation Planning for Pipelines
- Leveraging FEMA’s resources/relationship with target audience through partnership???

2012 -13 Efforts

- Revamped PIPA Website and developed stakeholder toolkits
- NPMS Logo
- Explored partnership with APA for PAS Report
- VDEM Pilot with VA Pipeline Operators
- Reviewed and commented on VDEM's THIRA
- Drafted HMP Primers
- PIPA State Specific Webinars/AICP CM Credits
- National Building Museum HMP Exhibit
- Pilot review existing built environment using RP ND 23 with community
- Links to PIPA in WinDOT
- SAIC articles

Land Use and Development Planning near Transmission Energy Pipelines
~ State ~



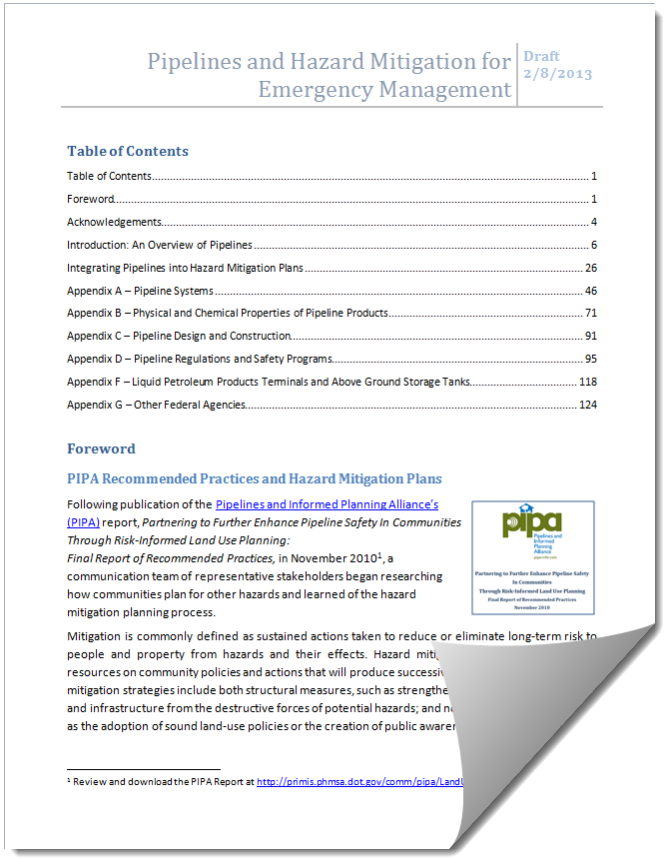
Impact Area , Natural Gas Transmission Pipeline Explosion
San Bruno, CA

- AICP CM Credits
- Invite State APA, NACo, NLC, NATaT, EM
- Safe the Date Flyer
- Survey
- Held 7 in 2013 to date

Hazard Mitigation for Pipelines Primers

Primers for Hazard Mitigation Managers - Currently in draft. Reviewed by:

- PIPA Communication Team
- Stakeholder Organizations - FEMA, VDEM, NACo, NLC, AGA, INGAA, AOPL, API, NAHB, NAPSR



Pipelines and Hazard Mitigation for Emergency Management | Draft 2/8/2013

Table of Contents

Foreword

PIPA Recommended Practices and Hazard Mitigation Plans

Following publication of the Pipelines and Informed Planning Alliance's (PIPA) report, *Partnering to Further Enhance Pipeline Safety In Communities Through Risk-Informed Land Use Planning: Final Report of Recommended Practices,* in November 2010[1], a communication team of representative stakeholders began researching how communities plan for other hazards and learned of the hazard mitigation planning process.

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard miti resources on community policies and actions that will produce successi mitigation strategies include both structural measures, such as strengthe and infrastructure from the destructive forces of potential hazards; and n as the adoption of sound land-use policies or the creation of public awarer

[1] Review and download the PIPA Report at http://primis.phmsa.dot.gov/comm/pipa/Land

Develop 2013-14
PIPA Communication Plan

PIPA Website Stats

	2011	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Hits	LandUsePlanning.htm	1019	1012	870	1005	734	809	761	772	799	720	756	814
Downloads	pipa-pipelineriskreport-final-20101021.pdf							85	50	40	40	47	37
Downloads	pipa-report-final-20101117.pdf							130	167	114	93	166	74
	2012	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
Hits	LandUsePlanning.htm	927	1037	987	861	846	745	849	No data	893	1026	989	695
Downloads	pipa-pipelineriskreport-final-20101021.pdf	35	37	36	16	31	20	38	No data	16	46	18	38
Downloads	pipa-report-final-20101117.pdf	139	93	88	56	49	58	77	No data	102	108	88	88
			INGAA Webinar										
	2013	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Hits	LandUsePlanning.htm	960	739	805	1032	1016	791	809					
Downloads	pipa-pipelineriskreport-final-20101021.pdf	56	66	82	56	60	103						
Downloads	pipa-report-final-20101117.pdf	128	100	121	86	110	89						
	State Specific Webinar Attendance	VA - 51			OH - 49	PA - 80	MA - 24						
		ND - 69			TX - 62								
					APA - 191								

10. STAKEHOLDER OVERALL - TOP 20 PAGES (83,904 hits , 18,796,08

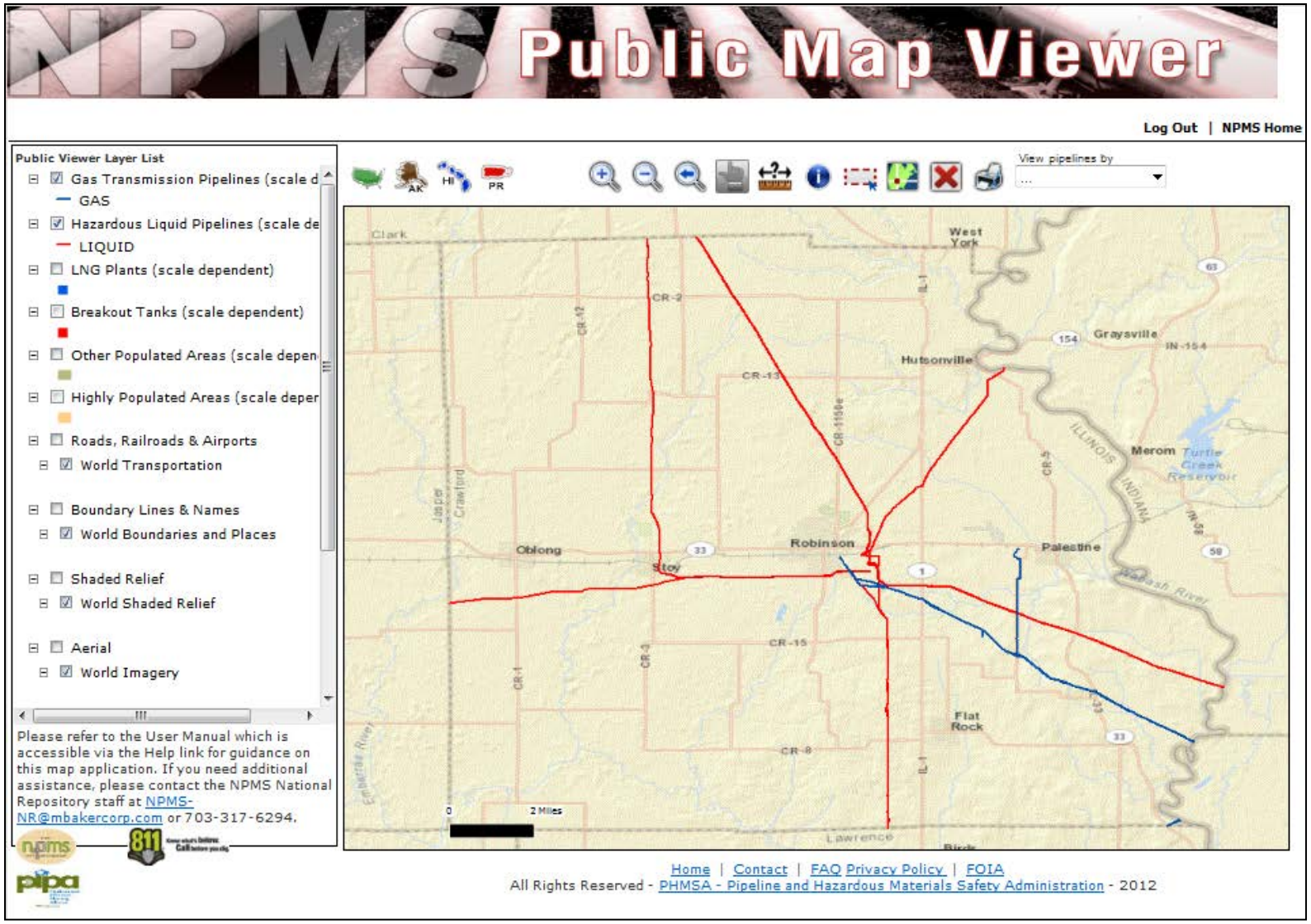
Top 20 Summary for hits with LogicalPath like "/comm/.htm?", Status like "*

No.	Logical Path	Hits
1.	/comm/reports/enforce/actions_opid_0.html	20,671
2.	/comm/reports/enforce/casesopen_opid_0.html	16,926
3.	/comm/reports/enforce/opsearch.html	15,669
4.	/comm/reports/safety/psi.html	1,684
5.	/comm/reports/enforce/enforcement.html	1,200
6.	/comm/reports/safety/allpsi.html	1,008
7.	/comm/reports/safety/sigpsi.html	931
8.	/comm/reports/safety/sida.html	596
9.	/comm/reports/safety/serpsi.html	591
10.	/comm/reports/operator/operatorlist.html	442

Webpage	Hits - July 2013
damageprevention.htm	289
emergencyofficials.htm	191
publicawareness.htm	270
Total	750

NPMS ~10,000 unique visitors per month

NPMS ~10,000 Unique Hits/Month



Outreach Past Idea List – Not Yet Implemented

Institutionalize PIPA RPs

- Work with academia and organizations with certification programs to incorporate the practices into the curriculum.
- Real estate disclosure – perhaps similar to lead based paint in that info is provided at leasing and sale – to include information about 811 and ROW encroachments.
- Work with ICC of NFPA on enhanced fire codes near pipelines

Promotional Opportunities

- Outreach to engineering firms and associations that do site development.
  - ASCE – American Society of Civil Engineers
  - ISPE – Indiana Society of Professional Engineers
  - ACEC – American Council of Engineering Companies
- Stakeholder Organizations/ Conferences/Committees
  - State APA Conferences
  - NAHB Conference
  - NEMA, IAEM
  - SGA

Outreach Past Idea List – Not Yet Implemented

- Publications
  - American City & County
  - Industry Newsletters
  - API/AOPL Newsletter
  - NAHB alerts
- INGAA Action Plan (relative to PIPA)
- Better promotion of TAGs
- PIPA "Living Document"
  – FERC white paper
  PIPA for new pipelines

Team Building

- Team Member Recruitment
  - Local governments – APA members
  - Emergency managers involved in hazard mitigation process
  - Developers
- Re-engagement of/update to previous PIPA participants
  - Message?
  - Action?
  - Ideas?

Thank You for Your Contribution to Pipeline Safety!!!