

Informed Planning Near Transmission Pipelines

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&

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Credible.
Independent.
In the public interest.

Informed Planning Near Pipelines



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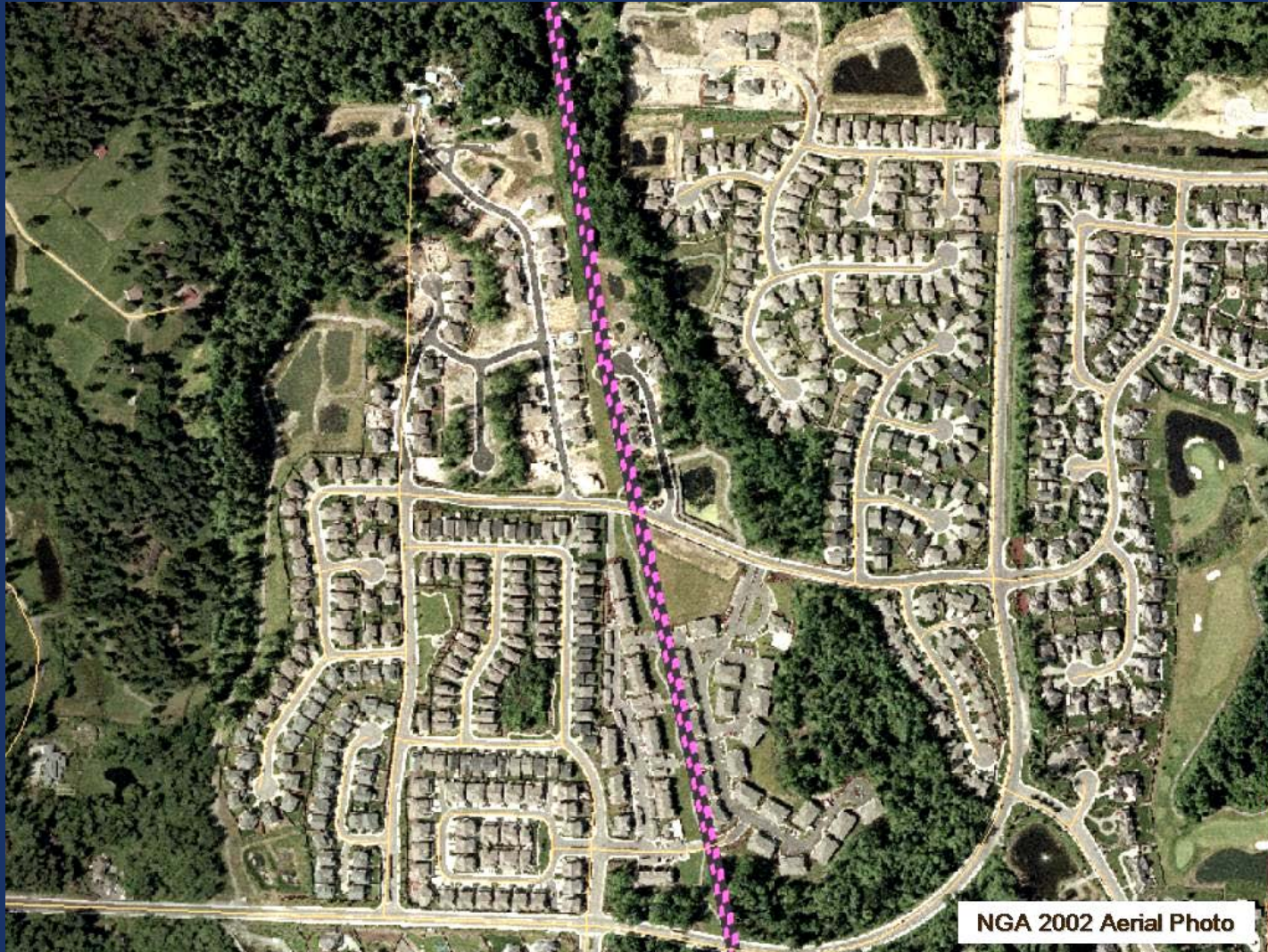


Planning Near Transmission Pipelines



Most
pipelines
were put
in rural
areas

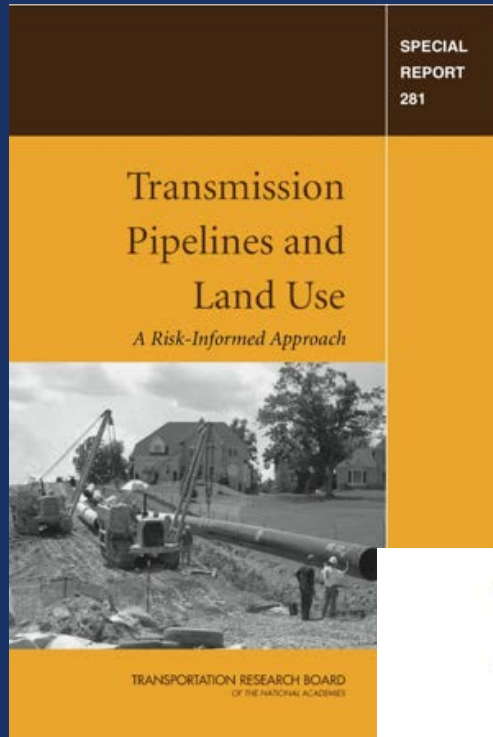
But now growth is encroaching on
many pipelines



This creates an increased risk that communities should consider when planning

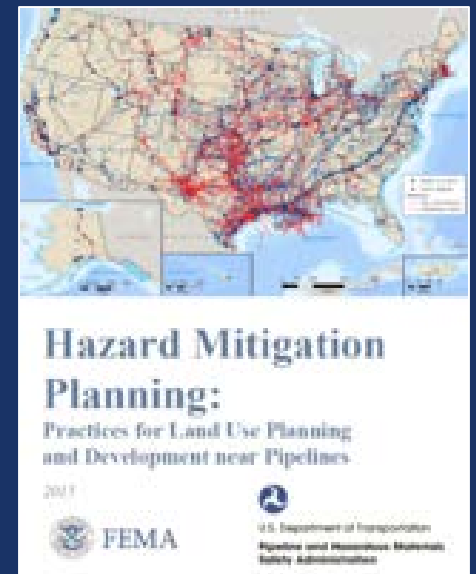
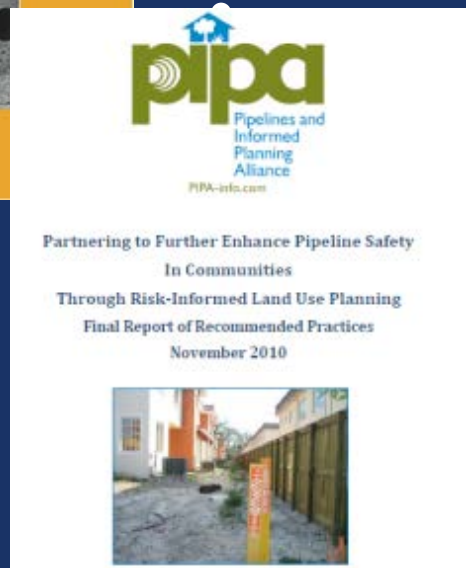


Growing Recognition of Problem with Development Encroaching on Pipelines



- National Academy of Science in 2004
- Washington Utilities & Transportation Commission in 2006
- Pipelines and Informed Planning Alliance, U.S. Department of Transportation – 2008

- FEMA - 2015



How much risk is there?

- The chance of a pipeline failing in any one specific place is extremely small, so the risk is very very small
- But if a pipeline does fail the consequences can be catastrophic

Each pipeline has different risks, and should be considered separately

Significant Pipeline Incidents

Washington State Past Decade

Date	Operator Name	County	Reported Cause of Incident	Property Damage Reported	Gallons Spilled	Gallons Recovered
11/03/2008	EXXONMOBIL PIPELINE	SPOKANE	INCORRECT OPERATION	\$580,170	3570	2982
12/26/2008	AVISTA	LINCOLN	MATERIAL/WELD/EQUIP FAILURE	\$55,200	0	0
01/08/2009	NORTHWEST PIPELINE	SNOHOMISH	MATERIAL/WELD/EQUIP FAILURE	\$128,035	0	0
05/05/2009	CASCADE NATURAL GAS	YAKIMA	OTHER OUTSIDE FORCE DAMAGE	\$54,300	0	0
06/01/2009	NORTHWEST PIPELINE	WHITMAN	MATERIAL/WELD/EQUIP FAILURE	\$320,578	0	0
08/19/2009	PUGET SOUND ENERGY	KING	EXCAVATION DAMAGE	\$108,667	0	0
09/02/2010	NORTHWEST PIPELINE	SKAGIT	INCORRECT OPERATION	\$300,100	0	0
06/04/2011	PUGET SOUND ENERGY	KING	EXCAVATION DAMAGE	\$103,133	0	0
09/13/2011	CASCADE NATURAL GAS	KITSAP	OTHER OUTSIDE FORCE DAMAGE	\$59,201	0	0
09/26/2011	PUGET SOUND ENERGY	KING	OTHER OUTSIDE FORCE DAMAGE	\$511,500	0	0
04/28/2012	PUGET SOUND ENERGY		OTHER OUTSIDE FORCE DAMAGE	\$155,350	0	0
03/14/2013	GAS TRANSMISSION NORTHWEST	WHITMAN	MATERIAL/WELD/EQUIP FAILURE	\$544,030	0	0
04/12/2013	AVISTA	SPOKANE	EXCAVATION DAMAGE	\$147,349	0	0
12/16/2013	NORTHWEST PIPELINE	CHELAN	NATURAL FORCE DAMAGE	\$250,847	0	0
03/31/2014	WILLIAMS PARTNERS OPERATING		INCORRECT OPERATION	\$46,503,060	0	0
11/10/2014	OLYMPIC PIPE LINE	SKAGIT	MATERIAL/WELD/EQUIP FAILURE	\$1,561,513	314.58	0
06/18/2015	PUGET SOUND ENERGY	KING	OTHER OUTSIDE FORCE DAMAGE	\$8,972	0	0
08/18/2015	CASCADE NATURAL GAS	KITSAP	OTHER OUTSIDE FORCE DAMAGE	\$1,006,935	0	0
03/09/2016	PUGET SOUND ENERGY	KING	OTHER OUTSIDE FORCE DAMAGE	\$3,018,172	0	0
10/07/2016	PUGET SOUND ENERGY	KING	ALL OTHER CAUSES	\$783,243	0	0
Totals				\$56,200,355	3,884.58	2,982.00

The main pipelines through the state include:

- The Olympic Pipe Line (refined fuels)
- William's – Northwest Pipeline (natural gas)
- TransCanada's GTN System (natural gas)
- Phillips 66 Pipe Line (refined fuels)
- Tesoro Logistics Northwest Pipeline (refined fuels)
- Kinder Morgan - Trans Mountain Pipeline (crude oil)

In addition there are 14 smaller transmission pipelines operated in the state that range in length from 1 to 36 miles

Trans Mountain Route



Crude oil pipeline
from Alberta to the
Cherry Point and
Anacortes refineries.

16-20 inch diameter

7.5 million
gallons/day

Operated by Kinder Morgan

Consequences of spills from crude oil pipelines



Potential large liability to local government,
businesses, property owners

Damage to property and expensive clean up



Environmental damage and drinking water contamination

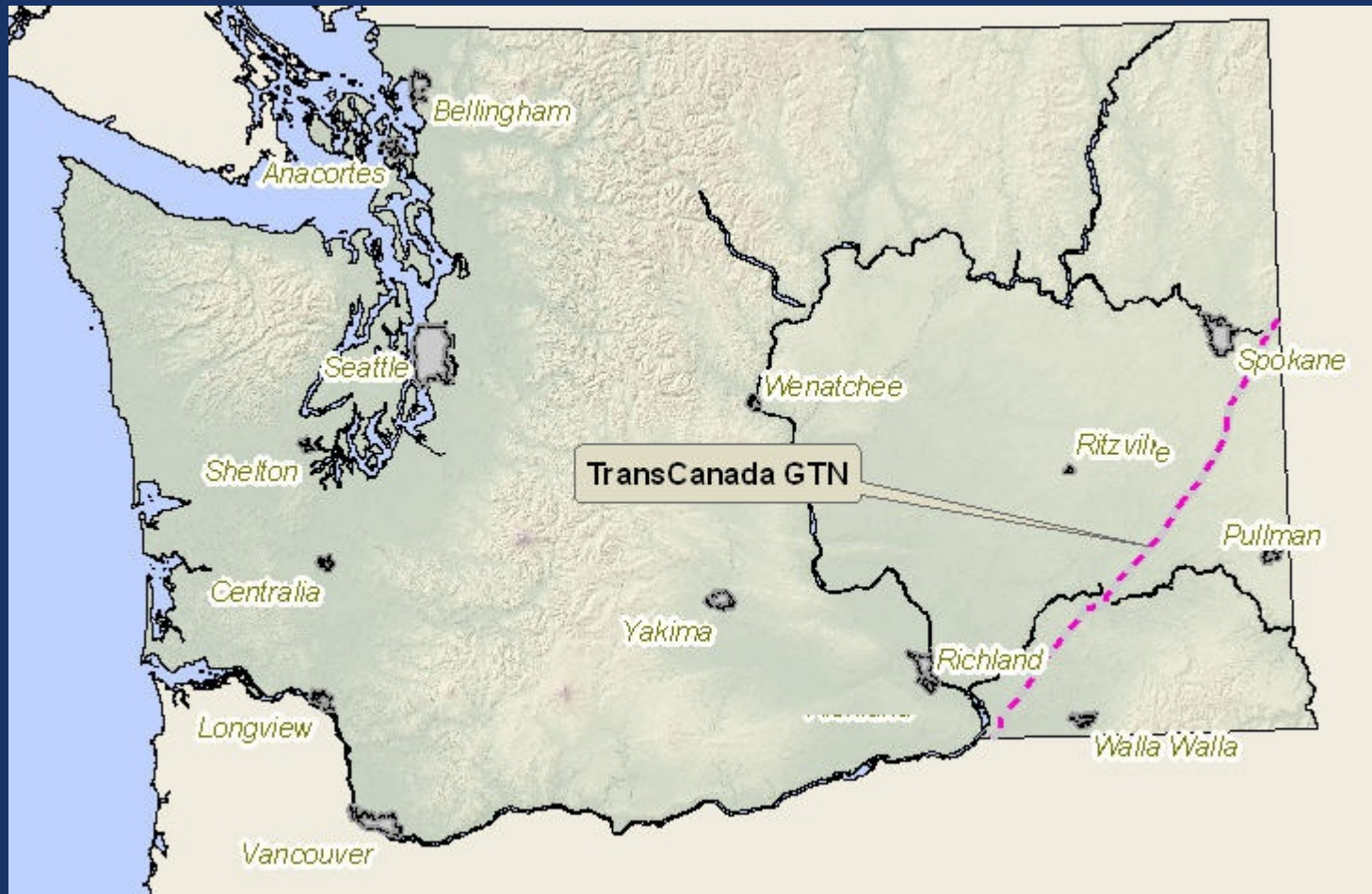


Williams Northwest Pipeline is a 3900 mile bi-directional pipeline bringing about 1.8 billion cubic feet of natural gas per day from Alberta and Colorado/Utah

The pipeline varies from 24-36 inches in diameter



TransCanada's Gas Transmission Northwest system is 612 miles long in the United States with 309 miles in Washington State. It system typically transports 2.9 billion cubic feet of natural gas each day



Consequences of natural gas pipeline failures



Explosions & Fires

Pressure Impacts



Olympic Pipeline



Liquid products pipeline
(jet fuel, gasoline, diesel)
from Whatcom/Skagit
refineries to SeaTac and
Portland.

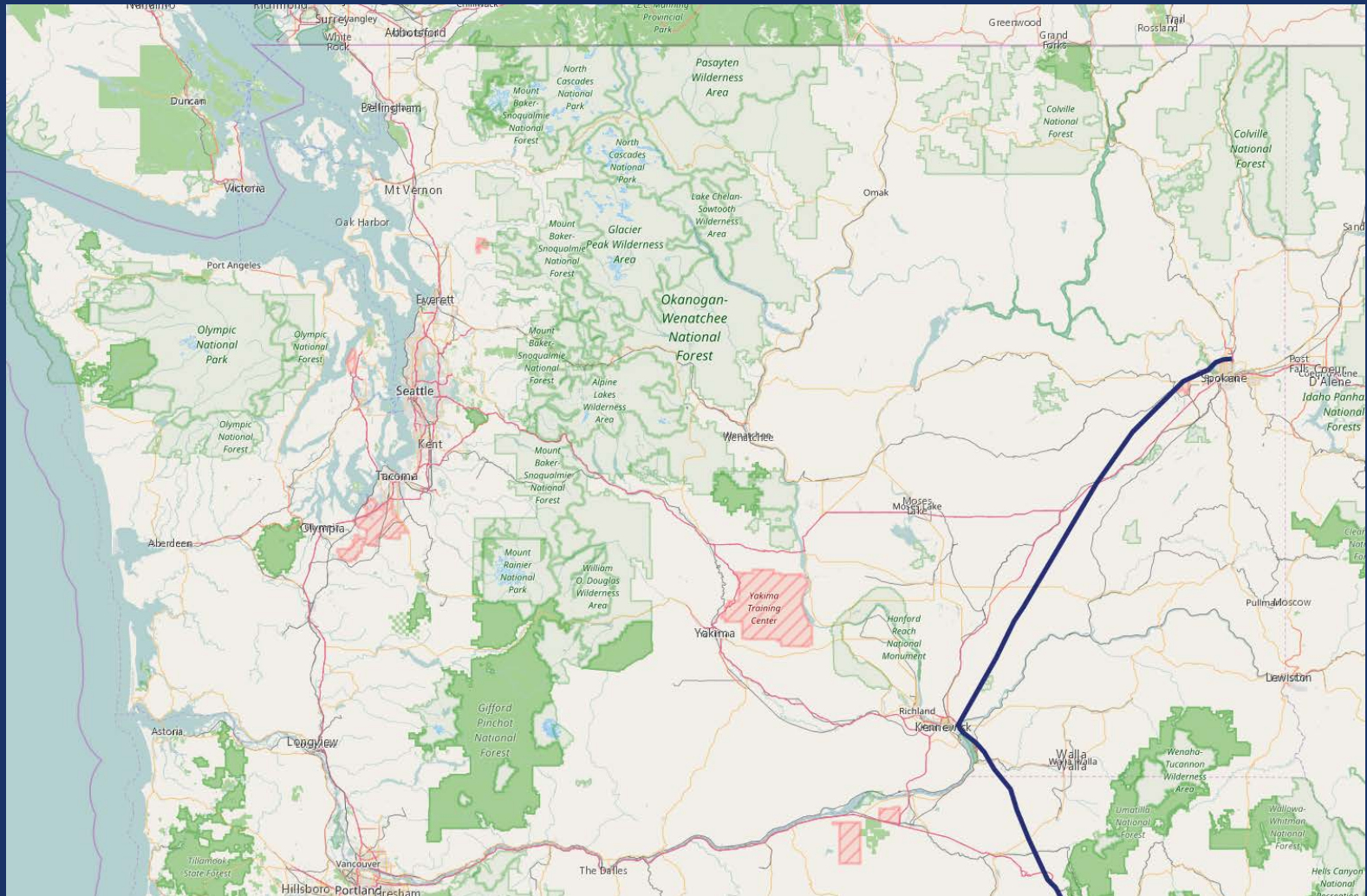
Moves about 13 million
gallons/day

16 inch diameter

Operated by BP,
Majority Owner Enbridge

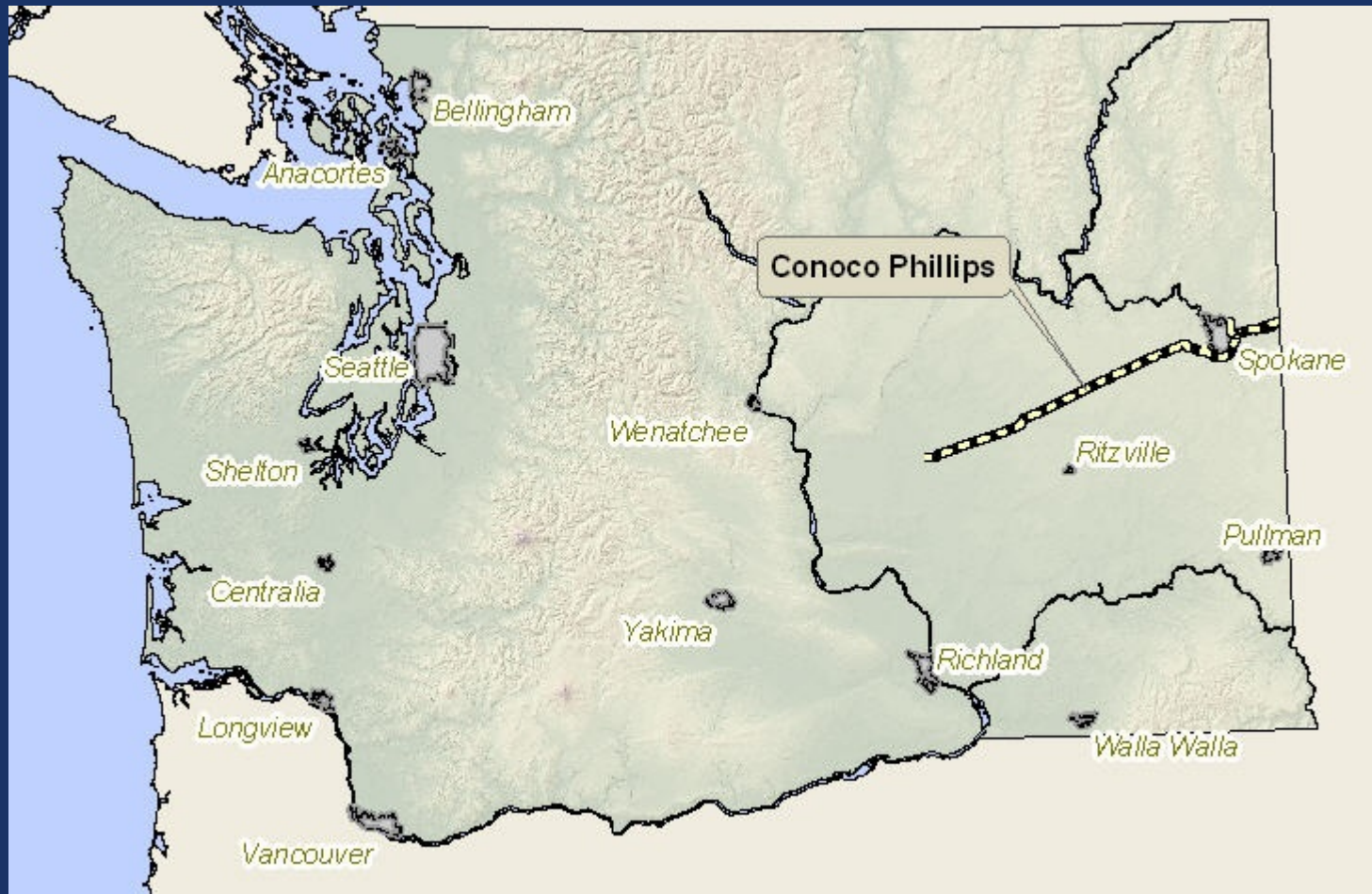
The Tesoro Logistics Northwest Pipeline

157 miles long in Washington state and transports gasoline, diesel, and jet fuel



Conoco Phillips “Yellowstone” Pipeline

129 miles long in Washington State and carries gasoline, diesel, and jet fuel



Consequences of liquid product pipeline failures



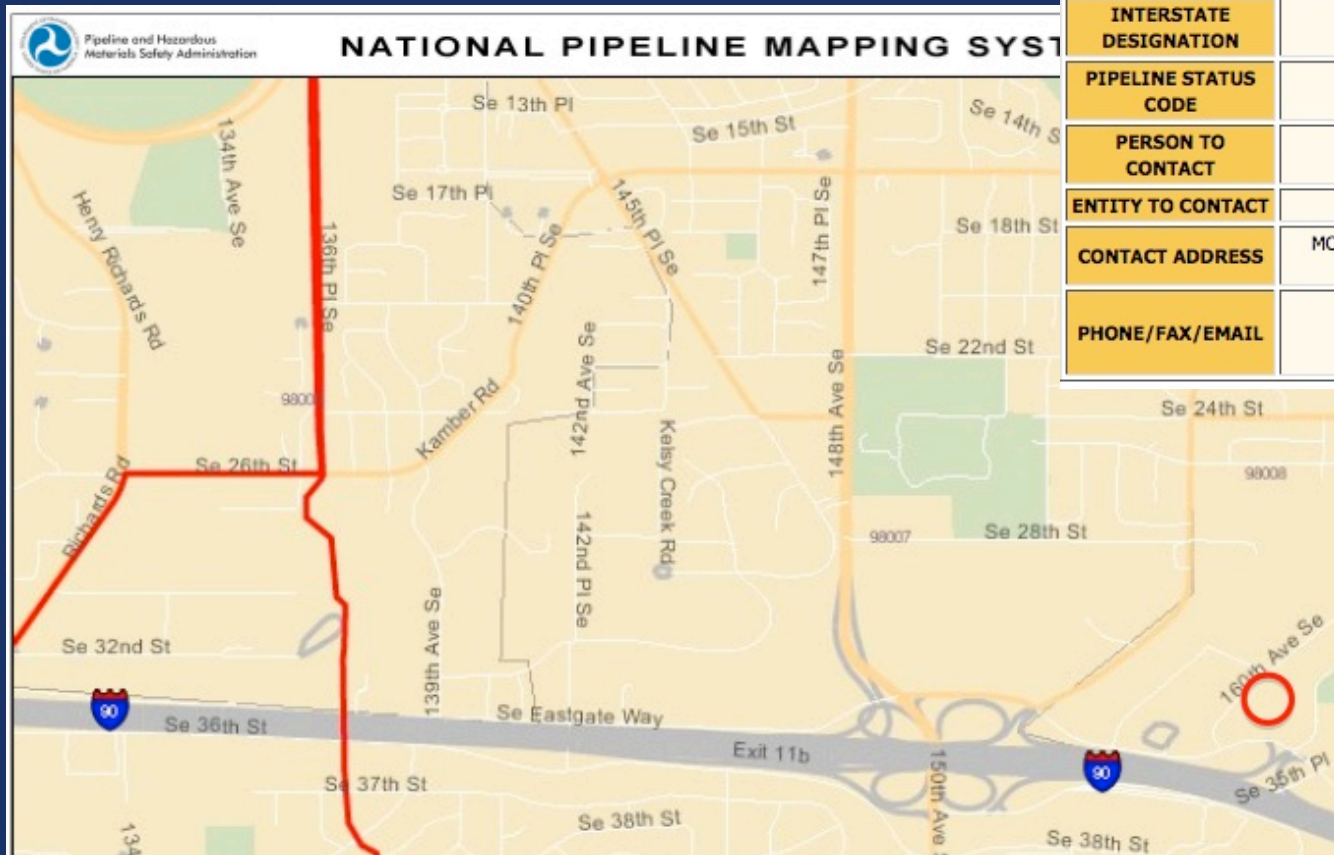
Explosions and Fires

Soil & Groundwater Contamination



National Pipeline Mapping System

Way for the public and local government to know about pipelines near by



Hazardous Liquid Pipelines

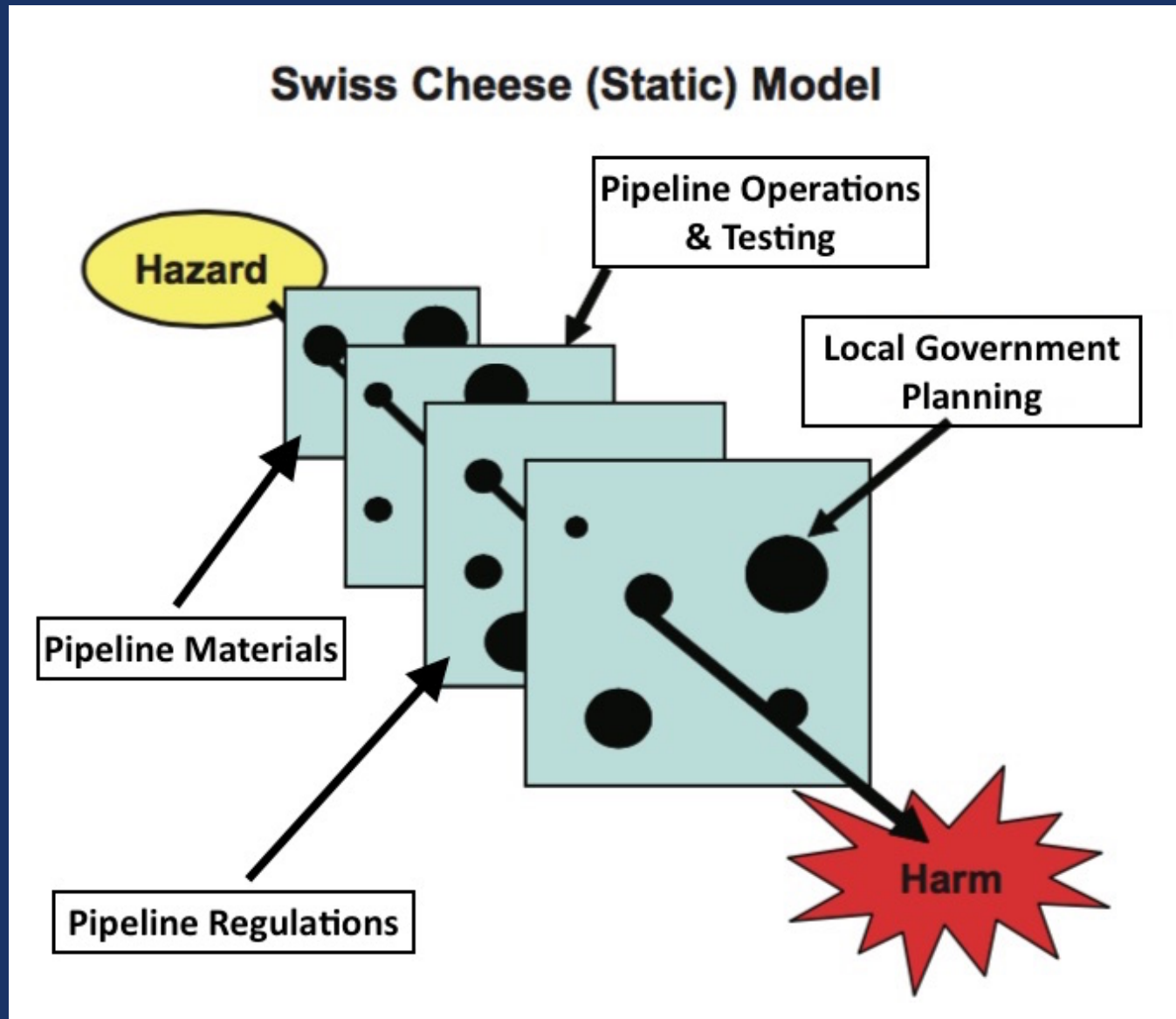
OPERATOR NUMBER	30781
OPERATOR NAME	OLYMPIC PIPE LINE COMPANY
SYSTEM NAME	OLYMPIC PIPELINE
COMMODITY CATEGORY	NON-HVL PRODUCT
COMMODITY DESCRIPTION	
INTERSTATE DESIGNATION	YES
PIPELINE STATUS CODE	IN SERVICE
PERSON TO CONTACT	MIKE SCURLOCK (S&I TEAM LEADER)
ENTITY TO CONTACT	
CONTACT ADDRESS	MC 5W 28100 TORCK PARKWAY, WARRENVILLE, IL 60555
PHONE/FAX/EMAIL	PHONE: (630) 836-3514 FAX: (630) 836-3586 EMAIL: SCURLOMW@BP.COM

Two ways to protect communities

- Protect the pipelines from damage so they stay safe
- Protect people near pipelines in case something happens



Why Local Planning In Important



Just Last Month

“While the state requires companies drilling new oil and gas wells to keep pipelines 500 feet from homes (unless companies make deals with landowners and get special permission), state officials leave it to local governments to determine how close to such pipelines new houses can be built.”

The Denver Post



Different types of development near pipelines







Multiple layers of bad planning



Allowing space for repairs



Pipeline right-of-ways and green space



The Bottom Line - Better planning can help ensure safe fuel transport and avoid tragedies



Whatcom County Code

20.81.010 Purpose.

The purpose of this chapter is to help minimize unnecessary risk to the public from hazardous liquid and natural gas transmission pipelines by:

- A. Minimizing the likelihood of accidental damage to pipelines by ensuring early communication between those developing property and pipeline operators.
- B. Limiting exposure of land uses with high on-site populations that are difficult to evacuate and land uses that serve emergency functions to the risk of injury or damage in the event of a pipeline failure.
- C. Ensuring that there is adequate protection of existing pipelines from inadvertent damage during nearby construction.



**Credible.
Independent.
In the public interest.**

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<http://www.pstrust.org>

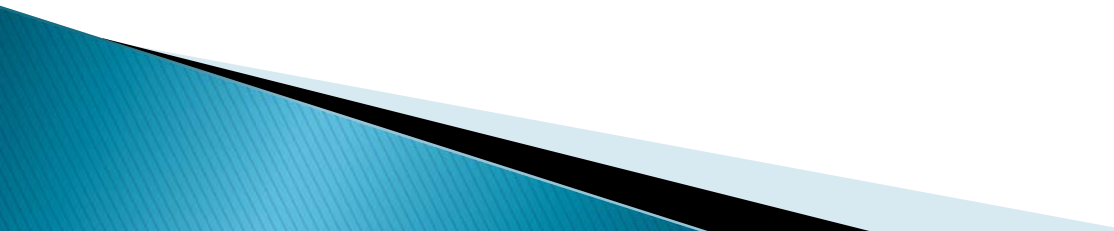
PIPA and the Recommended Practices

Jim Doherty
MRSC Legal Consultant
jdoherty@mrsc.org

How did we get to this point?

- ▶ In 2003 & 2004 Meetings in the State of Washington
 - ▶ 2005 AWC/MRSC/WUTC workshops
 - ▶ 2008 PIPA meetings
 - ▶ 2009 PIPA – conflict resolution
 - ▶ 2010 Final PIPA Report
-
- ▶ Pipelines and Informed Planning Alliance

Why “Recommended” Practices

- ▶ Feds don't (typically) control local land use regulations
 - ▶ State does not want to issue regulations
 - ▶ Pipeline Operators have no direct authority over land uses outside their easements
 - ▶ So it is up to local governments to decide what is appropriate in their communities
- 

MAPS

BL 01

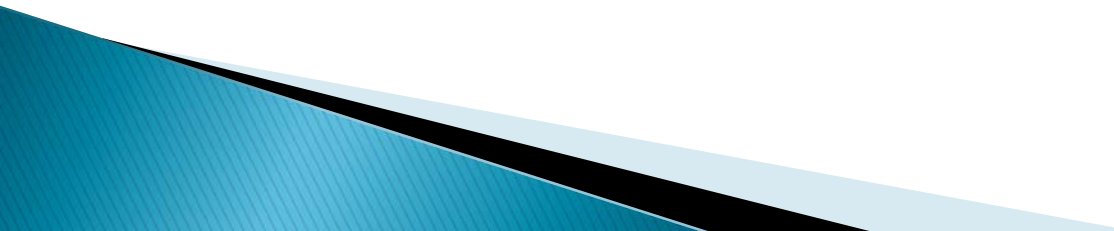
Know your pipeline locations and mark them on all relevant maps

Maps are only good for “approximate” locations

National Pipeline Mapping System

<http://www.npms.phmsa.dot.gov/>

Maps and GIS layers also available from the WUTC



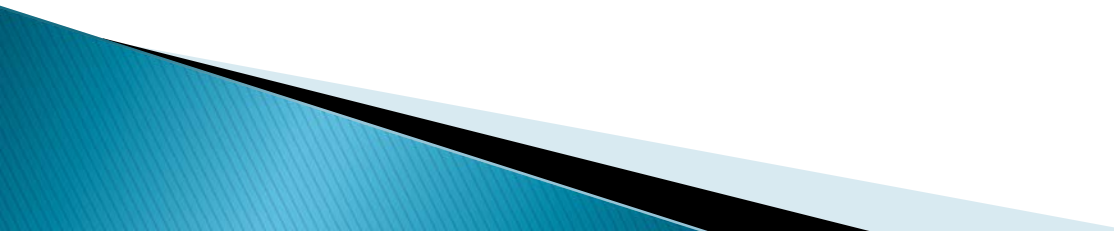
Consultation Zone

BL05 & BL06

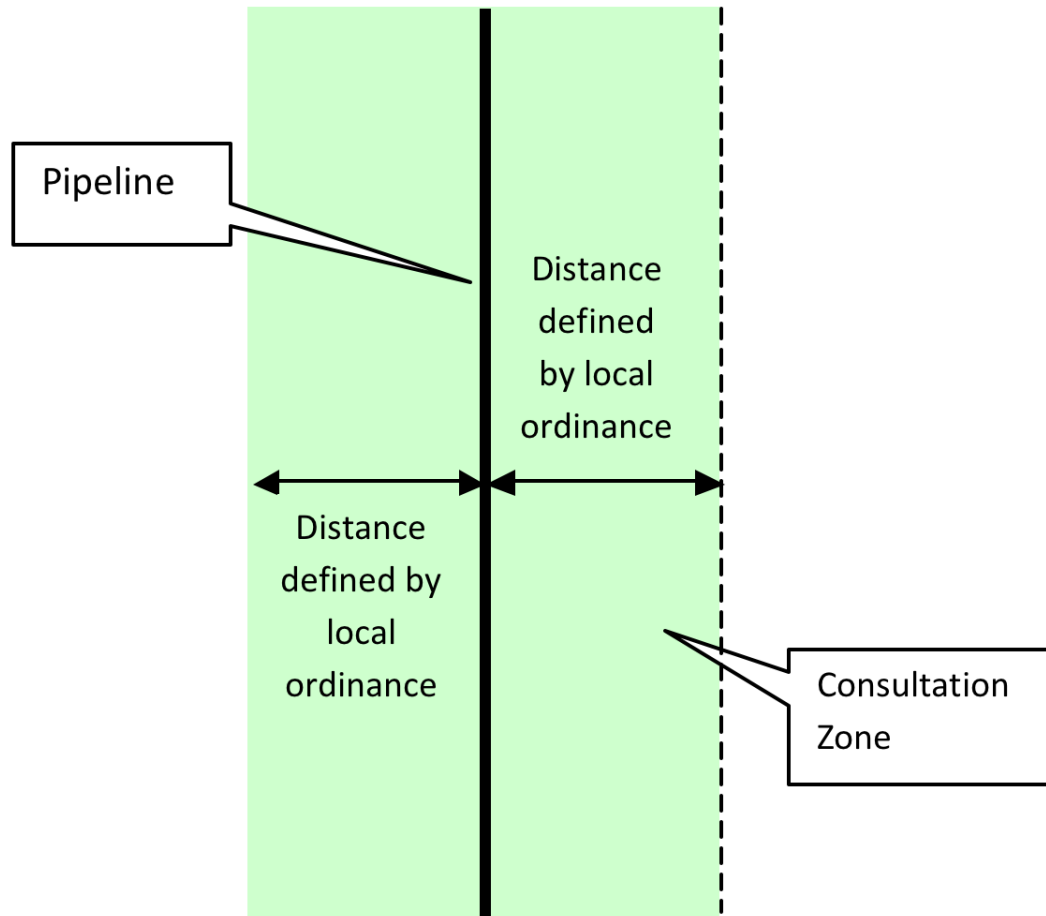
Relatively easy change in your process that may do more to promote pipeline safety than any other practice

Consultation Zone 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 are consistent with the needs of the operators and minimize risks to the populace living or working nearby.



Consultation Zone



A local government may determine the appropriate width of the consultation zone based on its own research and discussions with pipeline operators.

The Hammer

No permit is issued until the local government jurisdiction is notified, by the pipeline operator, that the plans have been reviewed and the project will not effect the integrity of the pipeline.

Roy City Code, Title 11, chapter 39



Goals

Get developer to reasonably
“incorporate” pipeline into project:

- Land disturbance, location of utilities, accessibility of pipeline for repair, emergency egress, orientation of structures, etc.

The “Zone”

How big?

What projects or permits should be covered?

Talk with your pipeline operator –
what are they concerned about?



Planning Zone and ND 11 through ND 23

The area where you may want to impose additional development regulations restricting the allowed land uses or the conditions under which those uses will be permitted

Trees, utilities, parking lots, public safety facilities, new industrial uses, etc.



Conditional Uses

How close do you want schools or day-care facilities, hospitals, theatres, etc.?

Allow with conditions?



Common Sense Practices

Temporary markers/fencing during construction (ND 24)

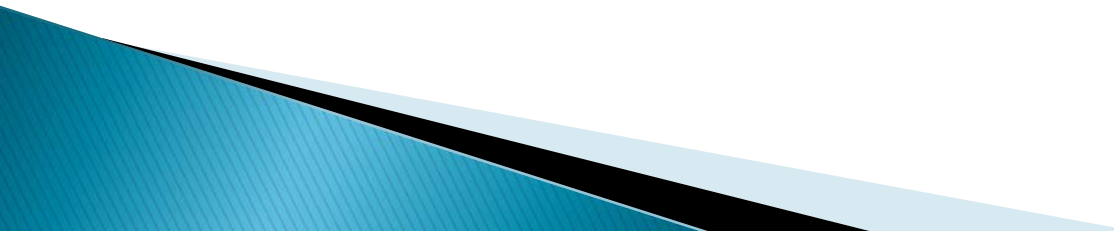
Halting dangerous excavation activities (BL 16)

811 – “call before you dig” compliance



Design Flexibility

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. (ND 09)



Planning Near Pipelines

Review the webpage


<http://mrsc.org/Subjects/PubSafe/transpipes.aspx>

Info Available

- Model Ordinances
- Ordinances adopted by various jurisdictions
- Recommended Practices
- Technical Reports
- Other Pipeline Safety Reference Sources

Call to ask questions

Arrange for a presentation to your planning department, legislative body or planning commission





DEC 13 2003

Washington Utilities And Transportation Commission

Pipeline Safety Program

Alan Rathbun
Pipeline Safety Director
arathbun@utc.wa.gov
(360) 664-1219

Washington Utilities and Transportation Commission - Pipeline Safety Program

- Safety Regulation of Intrastate Operators
- Agents for Interstate Operators – Pipeline and Hazardous Material Safety Administration (PHMSA)
- Not a “Siting” Agency

Types of Pipelines and Related Facilities

Natural Gas Distribution	Biogas
Natural Gas Transmission	Crude Oil
Liquefied Natural Gas (LNG)	Refined Oil
Propane	Highly Volatile Liquid (Butane)
Hydrogen	Breakout Tanks

- Enforce RCW 19.122 – Underground Utilities – Dig Law

Post Bellingham Initiatives

- City/County Consortium
- Pipeline Awareness Study
- Citizens Committee on Pipeline Safety (CCOPS)
- Land Use Planning in Proximity to Natural Gas and Hazardous Liquid Transmission Pipelines (June 2006)
 - WUTC
 - Association of Washington Cities
 - Washington State Association of Counties
 - Municipal Research Services Center
 - Pipeline Safety Trust

Underground Utilities – Dig Law – RCW 19.122

- External (or outside force) damage remains a leading cause of pipeline failures
- 2011 rewrite further defined roles and responsibilities and established an enforcement mechanism



Underground Utilities – Dig Law – RCW 19.122

Local government responsibility under 19.122.033 (3) and (4)

(3) The state, and any subdivision or instrumentality of the state, including any unit of local government, must, when planning construction or excavation within one hundred feet or greater distance if required by local ordinance, or a right-of-way or utility easement containing a transmission pipeline, notify the pipeline company of the scheduled commencement of work.

(4) Any unit of local government that issues permits under codes adopted pursuant to chapter 19.27 RCW must, when permitting construction or excavation within one hundred feet, or greater distance if required by local ordinance, of a right-of-way or utility easement containing a transmission pipeline:

(a) Notify the pipeline company of the permitted activity when it issues the permit; or

(b) Require, as a condition of issuing the permit, that the applicant consult with the pipeline company.

The Utilities and Transportation Commission is a resource!

All our pipeline system inspections are posted online: www.utc.wa.gov

Questions for the Pipeline Safety Program:
pipelinesafety@utc.wa.gov

We share pipeline GIS layer with local government - **RCW 81.88.080**

(Subject to restrictions on public disclosure)