



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

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Pipeline Safety In Whatcom County







Guys.
I'm fishing. Will
be back before dark.
Homework is done.

♡/Liam

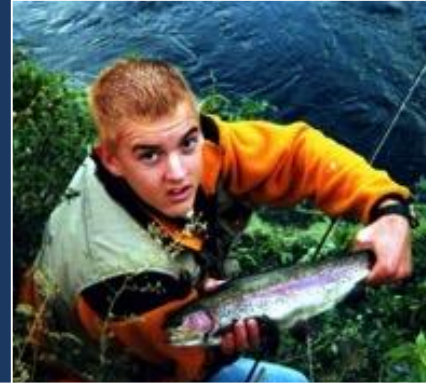


The Pipeline Safety Trust

Born from a pipeline tragedy

What happened in Bellingham

- Pipeline was damaged by 3rd party
- Damage known but not fixed
- Valve installed wrong but not fixed
- Valve malfunctioned multiple times
- SCADA failure
- Operator Error
- Pipeline burst and exploded killing 3 youngsters and an entire salmon stream



The Pipeline Safety Trust

Who we are and where we came from?



“... there’s going to be a Trust that’s going to be funded as part of today’s sentencing. With \$4,000,000 ... they’ve nowhere near the lobbying potential of the oil industry. It’s not even David and Goliath. It’s more like Bambi and Godzilla. You’ve heard people today that are going to spend their lives trying to make this right, and they should be listened to. No industry polices itself very well... you need outside people, and these are going to be the people so pay attention to them.”



The Honorable Barbara Rothstein
United States District Judge
At Olympic Pipe Line Co Sentencing

The things the Pipeline Safety Trust does to try to increase safety



- Improve pipeline safety regulations
- Increase transparency and access to pipeline information
- Provide a “public interest” voice to pipeline safety processes and events
- Partner with groups trying to move pipeline safety forward.



- Provide technical assistance to impacted communities

Path to Greater Pipeline Safety



Regulators

The Public & Local
Government

Pipeline Operators

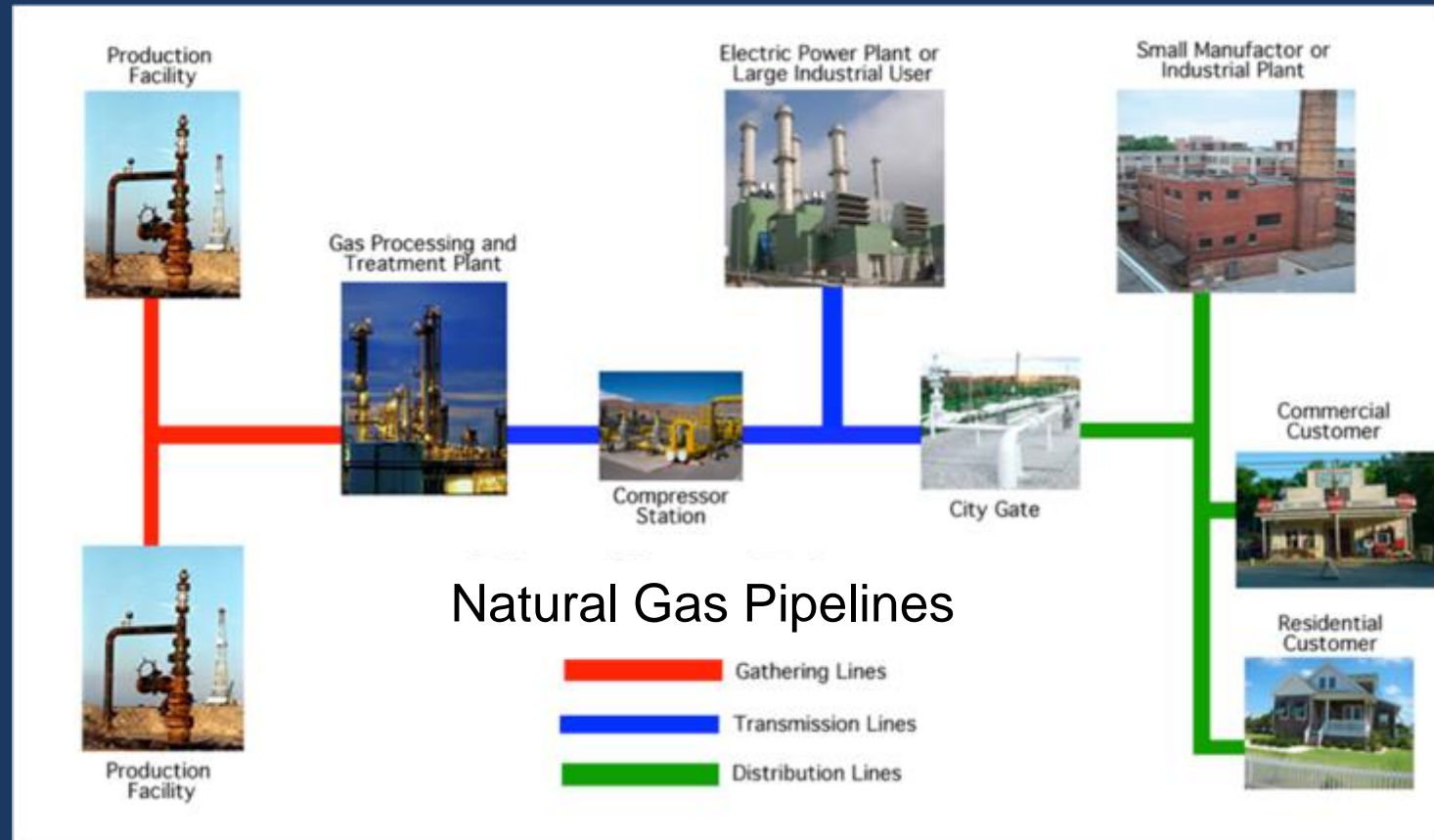
Pipeline Systems Near Bellingham

Natural Gas Pipelines

- Transmission lines
- Distribution lines

Hazardous Liquid Pipelines

- Transmission lines



INTERstate pipelines vs. INTRAstate pipelines

Hazardous Liquid Pipelines Carry

- **Crude oil**
- **Refined petroleum products** such as gasoline, diesel, jet fuel
- **Highly Volatile Liquids** such as propane, butane, ethylene, condensates
- **Carbon dioxide**
- **Anhydrous Ammonia**



National and Washington Pipeline System

Table 1: Mileage of Regulated Pipelines – U.S. and Washington*

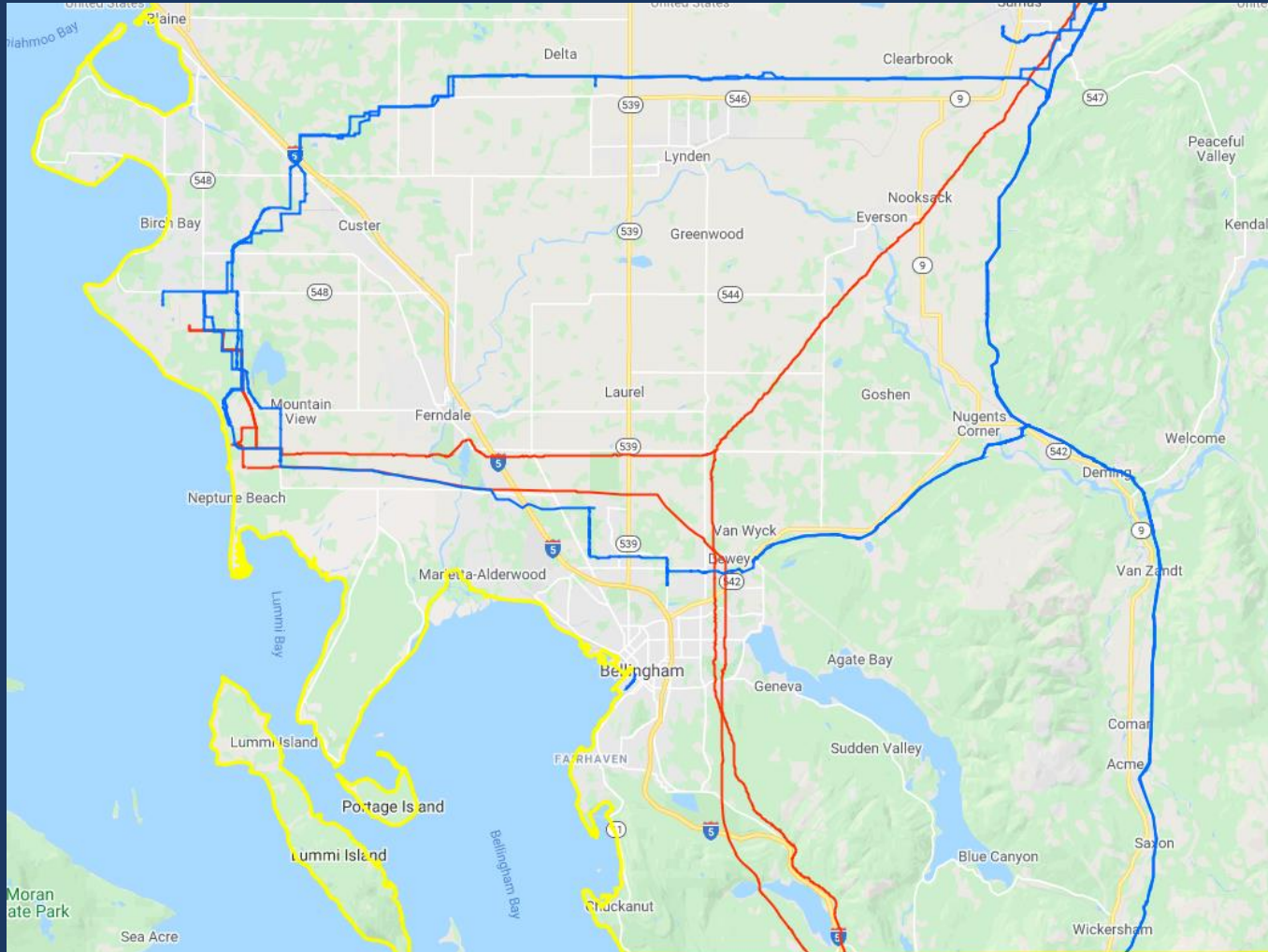
	U.S.	Washington
Gas Transmission	301,578	1,972
Gas Gathering	17,944	0
Gas Distribution Mains	1,307,735	22,337
Gas Distribution Service Lines	930,877	19,638
Crude Oil	80,528	69
Refined Products	62,751	732
HVLs (like propane, butane, etc)	70,130	5
Total	2,771,543	44,753

* Data from PHMSA as of 10/30/2019

Transmission Pipelines In Washington



Where are the major pipelines in Whatcom County?



National Pipeline Mapping System

<https://www.npms.phmsa.dot.gov/PublicViewer/>



2128	
Attribute	Value
Category: PIPELINE ATTRIBUTES	
OPERATOR ID	2128
OPERATOR NAME	CASCADE NATURAL GAS CORP
SYSTEM NAME	BELLINGHAM TRANSMISSION SYS...
SUBSYSTEM NAME	
PIPELINE ID	42491
MILES	5.53
COMMODITY CATEGORY	Natural Gas
COMMODITY DESCRIPTION	
INTERSTATE DESIGNATION	N
PIPELINE STATUS CODE	Active (filled)
REVISION DATE	02/20/2019
FRP SEQUENCE NUMBER	
Category: GENERAL CONTACT	
FIRST NAME	Lynsay
LAST NAME	Demko-Edwards
TITLE	Public Awareness Coord
ENTITY	
PHONE	(509) 734-4584
EMAIL	lynsay.demko-edwards@cngc.com
ADDRESS	8113 W. Grandridge Blvd.
CITY	Kennewick
STATE	WA
ZIP	99336

Who Currently Operates Pipelines in Whatcom County?

Pipeline Operator ID & Name	Person To Contact	Phone / Fax / Email
13845 - NORTHWEST PIPELINE LLC	Katy Rich (Director - GIS)	Phone: (405) 250-7894 Fax: Email: Katy.Rich@williams.com
19585 - TRANS MOUNTAIN PIPELINE	Patrick Davis (Operations Supervisor)	Phone: (360) 398-1541 Fax: Email: patrick_davis@transmountain.com
2128 - CASCADE NATURAL GAS CORP	Lynsay Demko-Edwards (Public Awareness Coord)	Phone: (509) 734-4584 Fax: Email: lynsay.demko-edwards@cngc.com
22189 - PUGET SOUND ENERGY	Cheryl McGrath (Mgr Compliance & Reg Audits - Gas)	Phone: (425) 462-3207 Fax: Email: cheryl.mcgrath@pse.com
30781 - OLYMPIC PIPE LINE COMPANY	Bobby Roye (Damage Prevention Manager)	Phone: (800) 548-6482 Fax: Email: bobby.roye@bp.com
31189 - BP PIPELINE	Bobby Roye (Damage Prevention Manager)	Phone: (800) 548-6482 Fax: Email: bobby.roye@bp.com
39663 - PETROGAS WEST, LLC	Gavin Carscallen (Public Relations)	Phone: (403) 296-1667 Fax: Email: GCarscallen@petrogascorp.com
570 - FERNDALE PIPELINE SYSTEM	Bobby Roye (Damage Prevention Manager)	Phone: (800) 548-6482 Fax: Email: bobby.roye@bp.com

Who Regulates Pipeline Safety in WA?



The federal Office of Pipeline Safety (OPS) within the Pipelines and Hazardous Materials Safety Administration (PHMSA) enforces the pipeline safety regulations for interstate gas and hazardous liquid pipeline operators in Washington based on inspections performed by the state.



Through certification and agreements with OPS, the state inspects and enforces the pipeline safety regulations for intrastate gas and hazardous liquid pipeline operators, and also, inspects interstate gas and hazardous liquid pipeline operators in Washington

Where Do The Regulations Come From?

Main Sources of Pipeline Regulations

- U.S. Congress – the Statutes
- U.S. Department of Transportation, Office of Pipeline Safety (PHMSA) – the safety regulations
- The States – Can pass stronger rules for intrastate pipelines
- Local Government – Cannot regulate the safety of pipelines, but can use their authority to help increase the safety of people living near pipelines

What Do The Regulations Cover?

- Materials
- Pipe Design
- Design of Components
- Welding of Steel in Pipelines
- General Construction Requirements
- Requirements for Corrosion Control
- Test Requirements
- Operations
- Maintenance
- Qualifications of Pipeline Personnel
- Pipeline Integrity Management

Main Things To Remember About The Regulations

- Rules often have multiple layers to prevent a single threat
- Many parts of the regulations are based on risk assessment and management
- Regulations are more stringent in higher consequence areas



Important parts of the Regulations

Integrity Management – A set of regulations that only apply to pipeline segments in High Consequence Areas. These regulations require more stringent identification of risks, and testing and analysis to mitigate those risks. This is the set of regulations that require physical inspections, mainly using in-line inspection devices (smart pigs). These regulations also set repair criteria for problems found.



Thinking About Risk



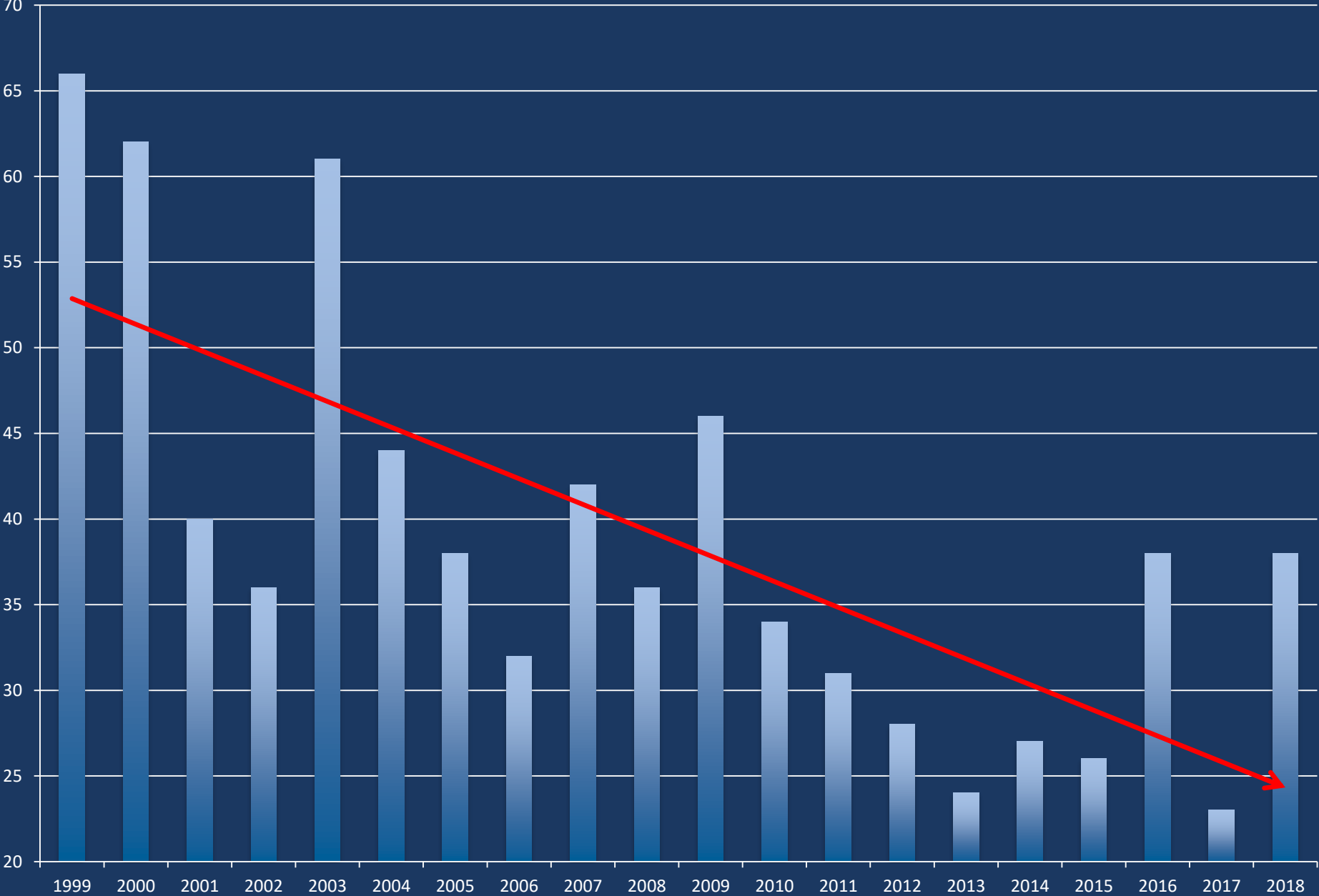
What can the consequences be?



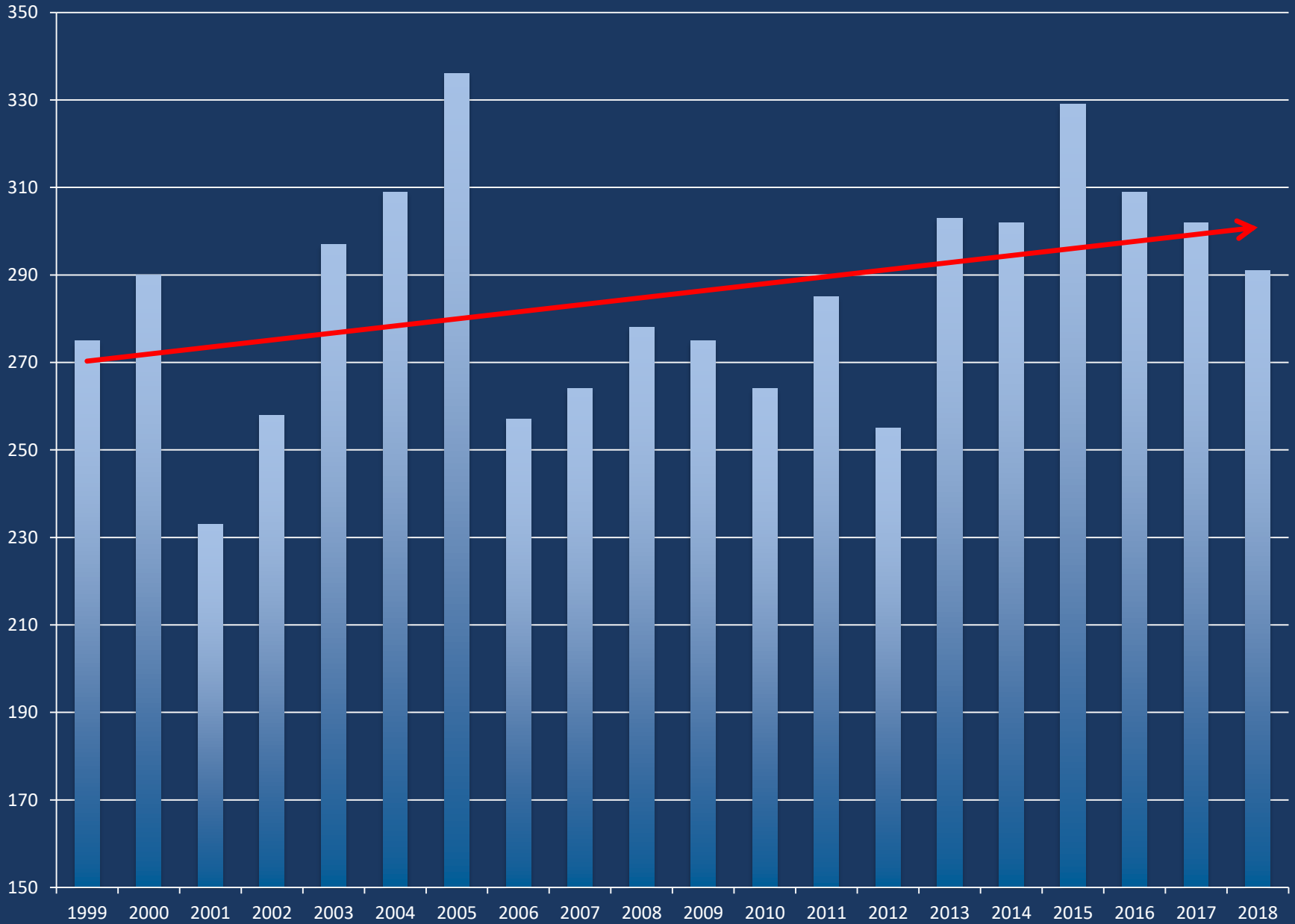
What can the consequences be?



U.S. Incidents With Deaths or Hospitalizations



Significant Incidents - All U.S. Regulated Pipelines

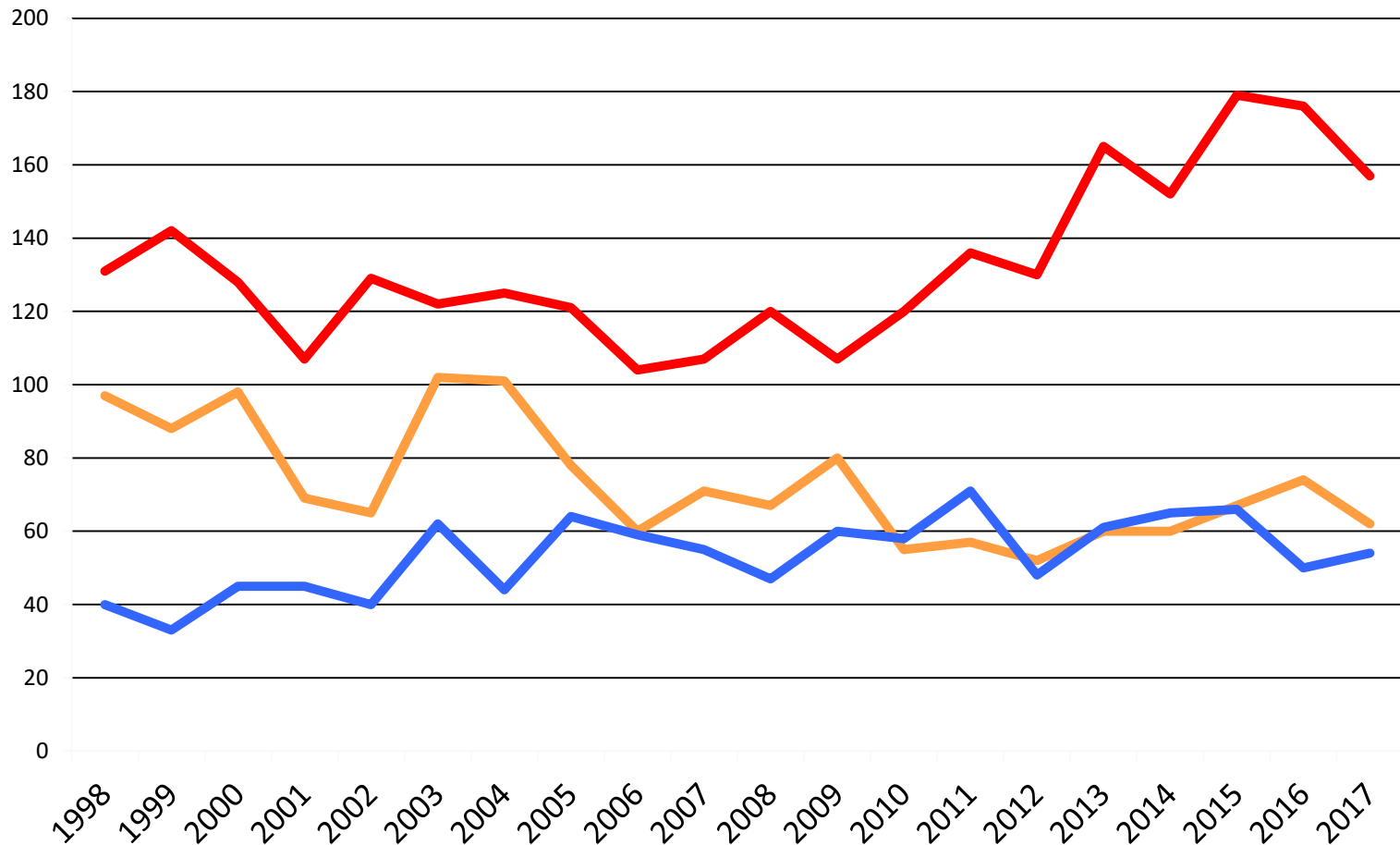


What's the Probability?

Incident Trends – U.S.

Onshore Significant Incidents - Entire U.S.

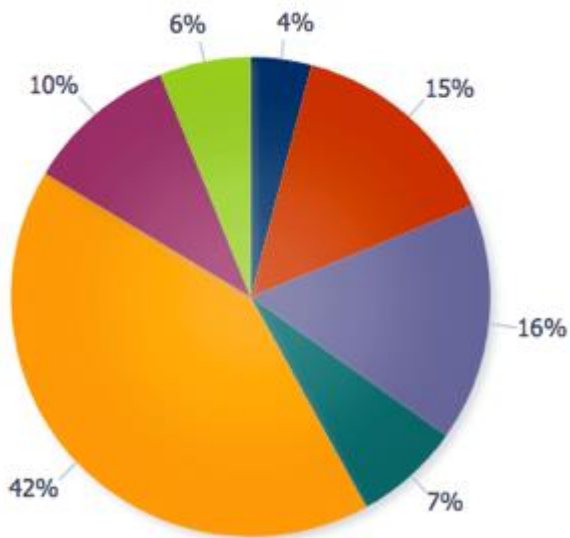
Gas Distribution Gas Transmission Hazardous Liquid



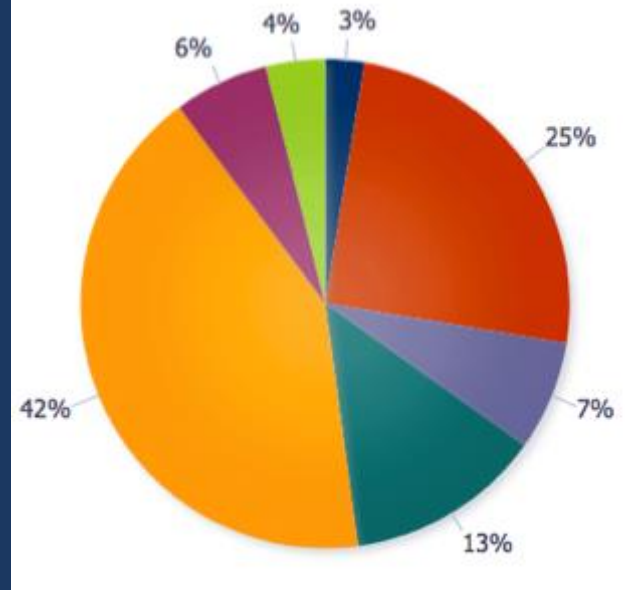
Washington Significant Incidents – Past Decade

Date	Reported Cause of Incident	County	Operator Name	System Type	Fatalities	Injuries	Total Cost As Reported
09/02/2010	INCORRECT OPERATION	SKAGIT	NORTHWEST PIPELINE LLC	GAS TRANSMISSION	0	0	\$300,100
06/04/2011	EXCAVATION DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	0	\$103,133
09/13/2011	OTHER OUTSIDE FORCE DAMAGE	KITSAP	CASCADE NATURAL GAS CORP	GAS DISTRIBUTION	0	1	\$59,201
09/26/2011	OTHER OUTSIDE FORCE DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	2	\$511,500
04/28/2012	OTHER OUTSIDE FORCE DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	0	\$155,350
03/14/2013	MATERIAL/WELD/EQUIP FAILURE	WHITMAN	GAS TRANSMISSION NORTHWEST LLC	GAS TRANSMISSION	0	0	\$544,030
04/12/2013	EXCAVATION DAMAGE	SPOKANE	AVISTA CORP	GAS DISTRIBUTION	0	0	\$147,349
12/16/2013	NATURAL FORCE DAMAGE	CHELAN	NORTHWEST PIPELINE LLC	GAS TRANSMISSION	0	0	\$250,847
03/31/2014	INCORRECT OPERATION	BENTON	WILLIAMS PARTNERS OPERATING LLC	LIQUEFIED NATURAL GAS	0	1	\$46,503,060
11/10/2014	MATERIAL/WELD/EQUIP FAILURE	SKAGIT	OLYMPIC PIPE LINE COMPANY	HAZARDOUS LIQUID	0	0	\$1,561,513
06/18/2015	OTHER OUTSIDE FORCE DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	2	\$8,972
08/18/2015	OTHER OUTSIDE FORCE DAMAGE	KITSAP	CASCADE NATURAL GAS CORP	GAS DISTRIBUTION	0	1	\$1,006,935
03/09/2016	OTHER OUTSIDE FORCE DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	0	\$3,018,172
03/29/2017	MATERIAL/WELD/EQUIP FAILURE	PIERCE	NORTHWEST PIPELINE LLC	GAS TRANSMISSION	0	0	\$68,250
06/12/2017	MATERIAL/WELD/EQUIP FAILURE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	0	\$183,374
08/02/2017	EXCAVATION DAMAGE	PIERCE	MCCHORD PIPELINE CO.	HAZARDOUS LIQUID	0	0	\$1,550,000
10/31/2018	EXCAVATION DAMAGE	THURSTON	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	0	\$127,509
09/01/2019	OTHER OUTSIDE FORCE DAMAGE	WHATCOM	CASCADE NATURAL GAS CORP	GAS DISTRIBUTION	0	0	\$401,753
10/11/2019	EXCAVATION DAMAGE	KING	PUGET SOUND ENERGY	GAS DISTRIBUTION	0	1	\$9,738

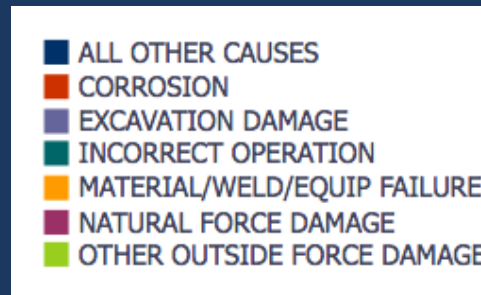
Causes of Onshore Significant Incidents 2014 – 2018 1533 Total Incidents



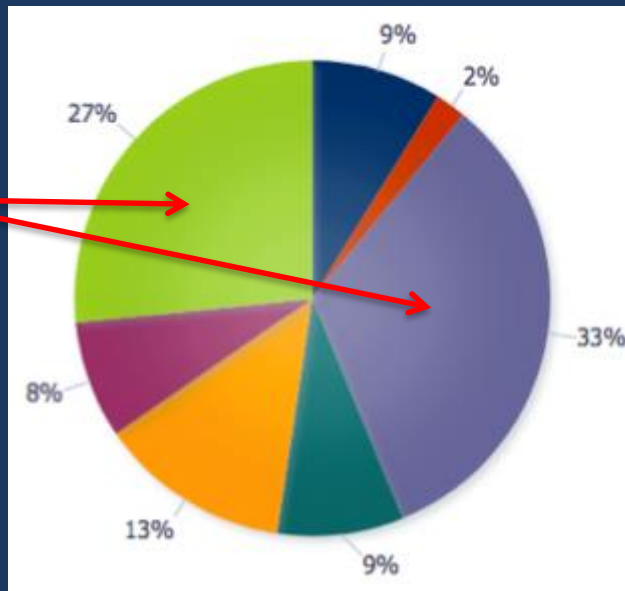
Gas Transmission



Hazardous Liquids



Local Government
can help reduce
these causes



Gas Distribution

U.S. Fatalities - Pipelines Compared to other Causes – 2014 data

- Heart Disease – 633,842
- Flu and Pneumonia – 57,062
- Occupant in passenger vehicle crash – 21,022
- Assault by firearm – 10,945
- Hit by vehicle while walking – 6,259
- Falling on stairs – 2,285
- Drowning in a swimming pool – 701
- Air transport accident – 412
- Earthquake and ground movement – 86
- Killed by tornado - 47
- Bitten or struck by dog – 36
- All Types of Pipelines - 26
- Hit by lightning - 25
- Gas Transmission Pipeline – 2



What Can Local Government Do?



Help prevent excavation damage

- Require use 811 system
- Report others not using 811



What Can Local Government Do? Planning Near Transmission Pipelines



USGS DOQQ 1990 Aerial Photo

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



Different types of development near pipelines



Multiple layers of bad planning



What Can Local Government Do?

Ensure Your People Are Ready



What Else Can Local Government Do?

Push for inclusion and engage your state and federal officials

Consider applying to be a member of CCOPS

STATE OF WASHINGTON
Citizens Advisory Committee on
Pipeline Safety



Ensure there is a 3rd leg

Lots of good information available!



Come On Down to New Orleans and Join Us For The Pipeline Safety Trust's 9th Annual Conference

This year's theme is Developing Industry Awareness, which is a long-term effort to develop Public Awareness as is now even required in federal pipeline safety regulations. While we believe Public Awareness is a good thing, greater Public Involvement would be even better, so we will be examining how to "close the gap between what the industry and public want to talk about."

We Need Your Help!
What makes our conference special are the ideas from, and interactions with, concerned and affected citizens. We have lots of people who would like to attend, but most of these people cannot afford to take time off work and spend \$1000 out-of-pocket for travel expenses to attend the conference.

A few of this year's conference topics:

- Public Awareness vs. Public Involvement
- The wisdom of reporting near misses
- New state efforts on spill response
- Climate change and pipelines
- Safety Management Systems
- Why clear cut rights-of-way?
- Local government efforts to improve safety
- New pipeline siting and construction
- They do it differently in California
- Fees or no fees - Differing strategies

This year the conference will be held at the Royal Sonesta Hotel, bordering the heart of the historic French Quarter. Sessions are wonderfully educational, and the best part of the conference is the informal interactions with attendees, the conference organizers, while in New Orleans, or at the annual in the Café Du Monde for a piece of beignets.



**Partnering to Further Enhance Pipeline Safety
In Communities
Through Risk-Informed Land Use Planning**
Final Report of Recommended Practices
November 2010

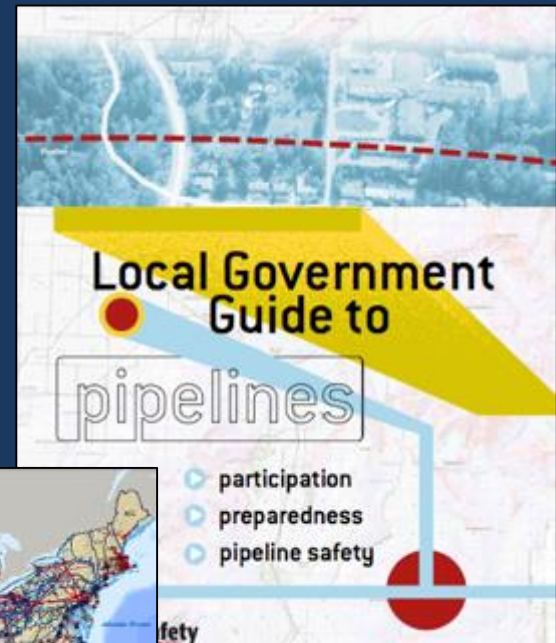


Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines

2015



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



Guide to Pipeline Safety Rulemaking

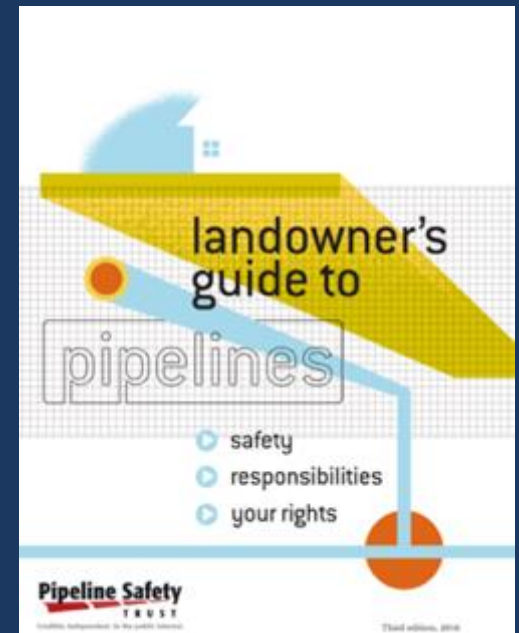


- understanding
- participation
- pipeline safety



Where to get more information?

- PHMSA Stakeholder website –
<http://primis.phmsa.dot.gov/comm/Index.htm>
- Washington Utilities and Transportation Commission
<https://www.utc.wa.gov/publicSafety/pipelineSafety/>
- Pipeline Safety Trust - <http://pstrust.org/>
- Individual Pipeline Companies
- Pipeline Association of the Northwest –
<https://panw.pipelineawareness.org/>



Thanks for listening and for your
interest in pipeline safety



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