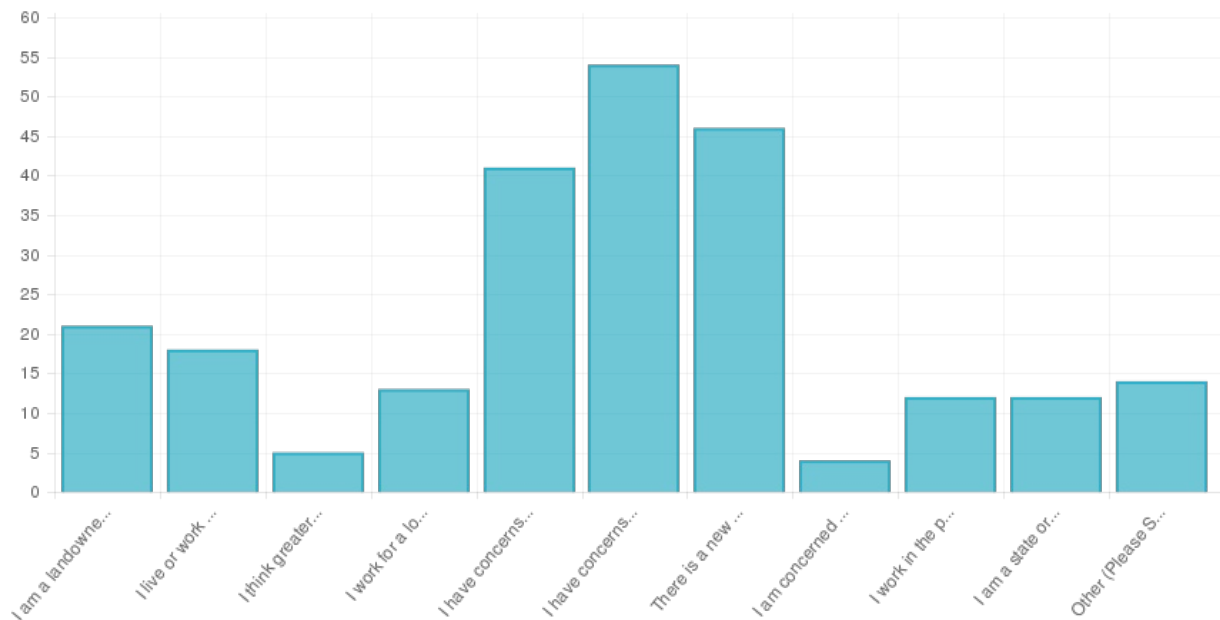


Indicator Survey - United States Respondents

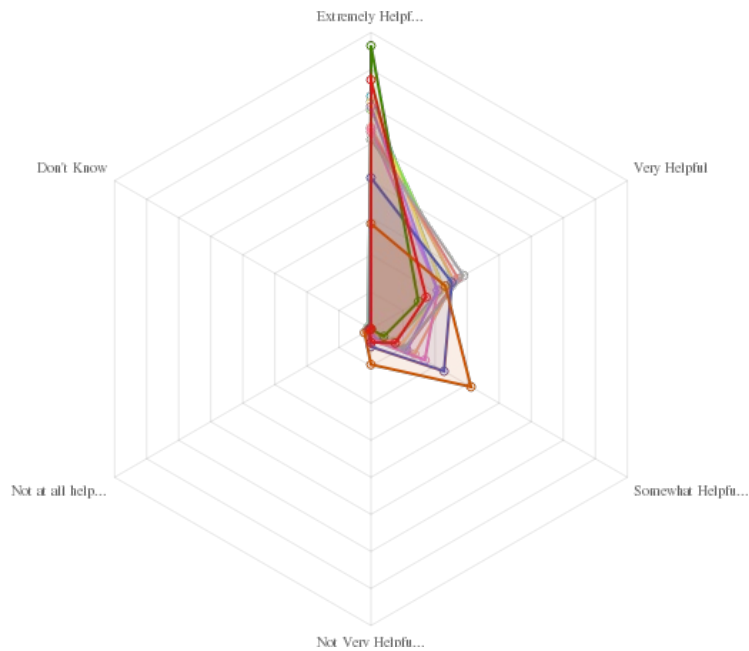
Which one of the following best describes why you are interested in pipeline safety?

| | I am a landowner with a pipeline on my land, or proposed to be on my land | I live or work very near a pipeline | I think greater pipeline safety is key to being able to expand energy production, which is important to the economy | I work for a local government that needs to ensure the safety of our citizens | I have concerns about the materials pipelines carry and the potential effects on the public and environment should they be released | I have concerns that pipelines enable greater production of fossil fuels, and that such production can have serious impacts on our health, waters and climate | There is a new pipeline proposed nearby, and many concerns have been raised | I am concerned about effects pipelines may have on First Nations rights and cultural heritage | I work in the pipeline industry and safety of our employees and the public is a high priority | I am a state or federal pipeline safety regulator and I have made it my career to keep people and the environment safe. | Other (Please Specify) | Standard Deviation | Responses |
|----------|---|-------------------------------------|---|---|---|---|---|---|---|---|------------------------|--------------------|-----------|
| All Data | 21 (9%) | 18 (8%) | 5 (2%) | 13 (5%) | 41 (17%) | 54 (23%) | 46 (19%) | 4 (2%) | 12 (5%) | 12 (5%) | 14 (6%) | 16.34 | 240 |



There are many types of information which may help you to assess the safety of a pipeline. Please rate each of the following informational categories in terms of how helpful it is to you in understanding a pipeline's safety.

| | Extremely Helpful | Very Helpful | Somewhat Helpful | Not Very Helpful | Not at all helpful | Don't Know | Standard Deviation | Responses | Weighted Average |
|---|-------------------|--------------|------------------|------------------|--------------------|------------|--------------------|-----------|------------------|
| Number of pipeline failures per year | 157 (67%) | 56 (24%) | 18 (8%) | 3 (1%) | 0 (0%) | 2 (1%) | 56.03 | 236 | 1.47 / 6 |
| Quantity of fuels spilled or unintentionally released per year | 148 (62%) | 64 (27%) | 17 (7%) | 6 (3%) | 0 (0%) | 2 (1%) | 53.18 | 237 | 1.53 / 6 |
| How many people are injured or killed per year | 153 (64%) | 56 (24%) | 23 (10%) | 4 (2%) | 2 (1%) | 0 (0%) | 54.24 | 238 | 1.51 / 6 |
| Age of a pipeline/s | 136 (57%) | 65 (27%) | 34 (14%) | 2 (1%) | 0 (0%) | 0 (0%) | 49.19 | 237 | 1.59 / 6 |
| Property damage caused per year | 133 (56%) | 68 (29%) | 27 (11%) | 6 (3%) | 2 (1%) | 0 (0%) | 47.96 | 236 | 1.63 / 6 |
| Financial costs to clean up spills or respond to pipeline emergencies per year | 135 (56%) | 52 (22%) | 42 (18%) | 7 (3%) | 2 (1%) | 1 (0%) | 46.95 | 239 | 1.71 / 6 |
| Number and type of enforcement actions taken by regulators against pipeline companies | 150 (63%) | 52 (22%) | 28 (12%) | 5 (2%) | 2 (1%) | 0 (0%) | 52.69 | 237 | 1.55 / 6 |
| How a company's safety record compares to national averages | 128 (54%) | 72 (30%) | 26 (11%) | 8 (3%) | 3 (1%) | 0 (0%) | 46.47 | 237 | 1.68 / 6 |
| How much a company is spending on pipeline testing, maintenance and repairs | 102 (43%) | 63 (27%) | 57 (24%) | 12 (5%) | 2 (1%) | 1 (0%) | 37.44 | 237 | 1.95 / 6 |
| Causes of pipeline failures | 191 (80%) | 37 (15%) | 10 (4%) | 0 (0%) | 1 (0%) | 0 (0%) | 68.84 | 239 | 1.26 / 6 |
| Quantity of fuel moved nationally and by individual companies | 71 (30%) | 58 (25%) | 78 (33%) | 24 (10%) | 5 (2%) | 0 (0%) | 31.11 | 236 | 2.3 / 6 |
| Maps of where pipelines are in your community | 168 (70%) | 43 (18%) | 19 (8%) | 9 (4%) | 1 (0%) | 0 (0%) | 59.04 | 240 | 1.47 / 6 |
| | | | | | | | | | 1.64 / 6 |



- Number of pipeline failures per year
- Quantity of fuels spilled or unintentionally released per year
- How many people are injured or killed per year
- Age of a pipeline/s
- Property damage caused per year
- Financial costs to clean up spills or respond to pipeline emergencies per year
- Number and type of enforcement actions taken by regulators against pipeline companies
- How a company's safety record compares to national averages
- How much a company is spending on pipeline testing, maintenance and repairs
- Causes of pipeline failures
- Quantity of fuel moved nationally and by individual companies
- Maps of where pipelines are in your community

Are there other types of safety information that you think are helpful in understanding the safety of pipelines? If so please describe:

Text Responses

| | |
|--------------------|--|
| Other info desired | Gas Leaks |
| Other info desired | Pipeline diameter, capacity etc. Larger pipelines create greater safety risks than smaller pipelines |
| Other info desired | How, how often and by whom inspections are done. |
| Other info desired | How quickly problems are addressed. |
| Other info desired | How does one report a problem. |
| Other info desired | as a target for terrorism |
| Other info desired | how small or long can a leak exist before detectable |
| Other info desired | size of easement / access necessary to maintain the pipeline |
| Other info desired | how much gas is and will be obtained from fracking |
| Other info desired | long and short term impact of fracking on climate, groundwater, etc |
| Other info desired | the lifespan of fossil fuels, that is, based on what is left in the earth, what is the lifespan of gas energy. |
| Other info desired | Peak emissions rather than "average", especially important for intermittent sources such as gas compressor stations and other sources of "blowdowns" |
| Other info desired | Whether the permits include provisions for monitoring emissions in real-time, and for public access to this information |
| Other info desired | LNG Facilities |
| Other info desired | Root causes of failures |
| Other info desired | Best Maintenance and Safety practices |
| Other info desired | implications of HCAs |
| Other info desired | lack of regs re # of pipelines in ROWs |
| Other info desired | regs re allowable proximity to residential / schools |
| Other info desired | Posting estimated blast radius of a pipeline |
| Other info desired | Do they perform all the Maintenance they are required? |
| Other info desired | Do they participate in Damage Prevention Program for ALL of their Pipeline |
| Other info desired | Do they join in supporting Pipeline Safety Awareness & ER Training all along their Pipelines |
| Other info desired | Peer Review studies health side effects |
| Other info desired | Fracked gas chemicals no gag orders |
| Other info desired | Health assessment environment 24/7 |
| Other info desired | What methods an owner takes to ensure their facility is locatable and how they cooperate with engineers designing projects that may affect the pipeline. |
| Other info desired | above information by individual company |
| Other info desired | above information per pipeline mile |
| Other info desired | What is my risk compared to other modes of transportation |
| Other info desired | Context regarding how safe is safe - how likely am I to be killed or injured by a pipeline vs other activities driving, flying, crossing street in major cities, hitting the lottery |
| Other info desired | Operating pressure |
| Other info desired | MAOP |
| Other info desired | Worst case spill volume for locations in my community |
| Other info desired | See Number 16 below. |
| Other info desired | Statcal studies rating pipeline failures to preventable maintenance money spent |
| Other info desired | Identified threats in Integrity Programs |
| Other info desired | Preventive and mitigative measures in Integrity Programs |
| Other info desired | Degree to which Operator has adopted API RP 1173 - Pipeline Safety Management Systems |
| Other info desired | Types of liquids transported compared to corrosion rates of metals |
| Other info desired | Maintenance schedules for specific types of pipeline materials compared to materials transported |
| Other info desired | PUC oversight info |
| Other info desired | Your focus seems to be on oil, will you ever consider a separate project for natural gas? |
| Other info desired | Natural Gas Compressor Stations |
| Other info desired | FLIR Cameras - constant monitoring of natural gas facilities in high population areas |
| Other info desired | How industry calculates what they spend on normal operations v what they call testing, mtce, repairs |
| Other info desired | How much money annually is spent by local, state, and federal governments on pipeline safety and response to incidents? |
| Other info desired | damage/hazard to local water sources |
| Other info desired | damage/hazard to agriculture |
| Other info desired | Environmental impacts |
| Other info desired | Economic impacts |
| Other info desired | All testing data for local lines including when, how performed, results, calendar of past and future testing |
| Other info desired | product and pressure in the lines |
| Other info desired | Locaon of nearest shutoffs both auto and manual |
| Other info desired | Specific information on safety measures, automatic shut off valves |
| Other info desired | Pipeline testing methods |
| Other info desired | Pipeline testing results made public |
| Other info desired | NOV's and mitagations made public |
| Other info desired | who responds to accidents, how are they reported and how long does clean up take and who pays for it |
| Other info desired | who is liable for the damages resulting from spills & accidents |
| Other info desired | Dangers to the environment |
| Other info desired | Potential to accelerate global warming from deforestation and methane emissions. |
| Other info desired | atmospheric chemical release hazards |
| Other info desired | liquid chemical release hazards |
| Other info desired | information on long term lower level exposures |
| Other info desired | Legal actions and court rulings |
| Other info desired | Detailed emission calculations |
| Other info desired | HCA and risk analysis |
| Other info desired | Demographics of communities near pipelines or proposed pipelines |
| Other info desired | # of land seizures by companv or in area |

| | |
|--------------------|---|
| Other info desired | How pipeline construction affects the environment |
| Other info desired | How new pipeline infrastructure affects what is carried by other means of transportation (train, barge, etc.) |
| Other info desired | Necessity of the pipeline |
| Other info desired | Environment impact |
| Other info desired | Quantity of internationally exported gas |
| Other info desired | Effects on local water supplies during construction |
| Other info desired | Effects on the public's health from pipeline leaks |
| Other info desired | Which transmission and high pressure pipelines are incapable of ILI inspection |
| Other info desired | Differentiation of safety data between local distribution companies and transmission companies. |
| Other info desired | Drinking water contamination data - private wells |
| Other info desired | Earthquake frequency increase due to fracking |
| Other info desired | How different types of fuels react in the environment when a pipeline fails |
| Other info desired | The effectiveness of response techniques following a spill |
| Other info desired | The insurance and/or bonding requirements for pipeline owners/operators to demonstrate ability to adequately respond to a spill |
| Other info desired | Lobbying info on pipeline companies |
| Other info desired | watersheds, is it safe for our drinking water |
| Other info desired | Company SOPs during a spill/leak/failure |
| Other info desired | Integration of state and local resources in emergency management |
| Other info desired | Impact on rural areas, state and national parks / forests |
| Other info desired | Safe guards to wells which rural areas depend on for water |
| Other info desired | What other sites they cross that could cause a reaction if there were a leak |
| Other info desired | population density.. |
| Other info desired | potential impacts to habitat and wildlife |
| Other info desired | Pig inspection failures |
| Other info desired | green power source price comparisons |
| Other info desired | power transmission line safety |
| Other info desired | Maintaining schedules |
| Other info desired | How pipeline is maintained |
| Other info desired | effects on local water supply, cost to repair, length of time water unfit to drink |
| Other info desired | schedule for inspection of a specific pipeline |
| Other info desired | Frequency and type of pigging |
| Other info desired | Frequency of valve checks |
| Other info desired | Type, frequency, and reliability of mile-by-mile line monitoring. |
| Other info desired | explosions from gas lines |
| Other info desired | evacuation instructions for gas lines |
| Other info desired | blast zone/impact |
| Other info desired | Information re reporting observed maintenance and construction issues. |
| Other info desired | Better information relating to how landowners can impact siting. |
| Other info desired | How are pipelines inspected, do they use PIGs? |
| Other info desired | How often are pipelines inspected? |
| Other info desired | What should I do if I suspect and/or discover a leak? |
| Other info desired | Names of companies and the people responsible for pipeline safety. |
| Other info desired | Names of regulators and phone numbers. |
| Other info desired | Cost of losses to homeowners affected by spills and explosions. |
| Other info desired | Age, rate PSI, actual PSI, flow rate, shut down valves. |
| Other info desired | Max Amount of leak possible. With the safety procedures, response time, etc. |
| Other info desired | Procedures used when there is an accident or leakage |
| Other info desired | End the lies told by pipeline companies |
| Other info desired | end eminent domain for private profit |
| Other info desired | pipelines have no place in a sustainable energy future |
| Other info desired | The physical place where pipeline monitoring exists, and its distance from the first responders and company employees who would respond to an incident. |
| Other info desired | The type of steel used in the pipeline (LF-ERW steel, for instance), failure mode (seam vs corrosion failure, for instance), and progress in insuring welds are patent (some episodic reports of careless work) |
| Other info desired | details on corrosion/erosion modes and their remediation. |
| Other info desired | regulations on pipeline set backs from residences and schools |
| Other info desired | a list of transmission line explosions/failures |
| Other info desired | longevity of safe pipelines |
| Other info desired | public costs of any clean up or emergency response |
| Other info desired | the health effects of people who were harmed |
| Other info desired | if people were displaced during spill |
| Other info desired | Source of oil in pipelines |
| Other info desired | Intended Use (US or Export) |
| Other info desired | Time to respond to a leak |
| Other info desired | Minimum wall thickness of class one interstate pipeline |
| Other info desired | Better siting requirements for class one pipelines. Ex: PIR |
| Other info desired | Notification to area residents when blowdown occurs |
| Other info desired | amount of gases [total and per company] that leak from ROUTINE pipeline operations |
| Other info desired | pollutants from pipeline compressor stations [diesel emissions and routine gas leaks] |
| Other info desired | amount of gases [total and per company] that leak from breaks in pipelines |
| Other info desired | quality of materials used to build pipelines |
| Other info desired | Thoroughness of 3rd party inspections of pipeline construction |
| Other info desired | reports of all events that result in leaks/spills of more than 50 gals or equivalent (for gas) |
| Other info desired | Public health impact of pipes on those living in proximity to pipes |

Other info desired Greenhouse gas emissions of pipes, compressor stations, etc.

Other info desired Currently cost effective alternatives to more fossil fuel infrastructure and fossil fuel use

Other info desired Type of fuel or/and chemicals moved through pipeline

Other info desired What type/material of pipeline will be transversing area

Other info desired Are there sufficient emergency response teams in area to respond to pipeline disaster?

Other info desired Where pipe is manufactured.

Other info desired Wall thickness

Other info desired is cathodic protection used ?

Other info desired Soil taxonomy of soils in pipeline path

Other info desired Soil properties

Other info desired LIDAR of pipeline route, Right-of-Way and ROW plus 1500 feet either side of ROW

Other info desired underground storage facilities [nat.gas]

Other info desired Who owns the pipeline... all the way up the chain

Other info desired who's getting paid off so the pipeline can go through

Other info desired How many of the pipelines were/are being built under eminent domain

Other info desired see comment at the end

Other info desired What do tests say about Operators' pipelines

Other info desired In very busy locations with high volume of excavation, Operator list most shallow depth of pipeline at certain intervals.

Other info desired Promulgate regs to require any owner of buried utility to report # of damages annually and costs.

Other info desired All of this is really moot. If you're talking about explosions or major leaks, they are perhaps what "concerns" the public most, but in truth those of us who have studied pipelines and other aspects of fossil fuel exploration, mining, transportation, and distribution already know there is no such thing as a "safe" pipeline (or train or truck or any vehicle via which volatile and toxic fuels are transported).

Other info desired Whistleblowers from within the pipeline corporations. You need to identify people who are current or former members of the pipeline (and related) industry and would be willing to speak up about what these companies do and how they skirt regulations where there are any regulations, and when they are cited for violations, simply given a tiny slap-on-the-wrist, cost-of-doing-business fine and sent back to continue their destructive and poisonous actions.

Other info desired partition data to show gas transmission pipeline data

Other info desired in sity major river crossings gas transmission

Other info desired best practices

Other info desired When spills occur, quantitative assessment of impact on water, air, and soil

Other info desired Full listing of chemicals/ ingredients in Pipeline flow

Other info desired Quantity of flow

Other info desired Safety stops and measures- locations and procedures

Other info desired Cost of and availability/training of emergenc services in impacted counties

Other info desired Negative economic impact to communities, including real estate values

Other info desired How the minimum standards compare to the actual need related to safety related designs

Other info desired You covered all of the concerns.

Other info desired How many old pipelines have been abandoned?

Other info desired Who is responsible for abandoned pipelines?

Other info desired If our 150 year old spring stops running or becomes contaminated because of pipeline construction, what are they going to do to fix it?

Other info desired safety rating by company

Other info desired chemical components of tracked gas (so we can have our wells pre-tested accurately)

Other info desired How do you sue after a pipeline failure when the venture is protected by 3 layers of LLC's?

Other info desired cost equivalents of habitat disrupted by construction and, maintenance and accidents/leaks/spills... per company and per pipeline.

Other info desired Environmental and community costs of the extraction of the fuels being transported by the pipeline.

Other info desired Ratio of costs to the host land and community to the profits generated by the company. Also , accurate record of concerns from the public presented in clear, accessible ways.

Other info desired Environmental Impacts

Other info desired Role in increasing fossil fuel consumption and climate change

Other info desired The economic impacts on communities and the concentration of corporate wealth due to pipeline monopolies

Other info desired local public awareness

Other info desired local government awareness of pipelines

Other info desired contact by pipeline operators to landowners

Other info desired building on pipelines, houses , roads , schools, etc,etc.

Other info desired Money contributed to congress to defund regulations

Other info desired Public notice of all the health consequences from pipeline leaks

Other info desired Fines reported of all pipeline company violations

Other info desired Annual \$ spent on constructing new gas pipeline

Other info desired Annual amount of transported gas exported

Other info desired ID of pipelines that supply most gas for export

Other info desired info regarding new pipelines

Other info desired ability to comment/influence placement of new lines

Other info desired ability to comment/influence necessity of new lines

Other info desired Inspection results, especially prior to pipeline being placed in service.

Other info desired History of the companies installing & maintaining these pipelines.

Other info desired size of pipelines and number put in same easement or ditch

Other info desired where manufactured and the integrity of that pipe and the manufacturer

Other info desired what is going through that pipe can it be changed years later and does it contain dangerous products (i.e. H2S in the crude oil)

Other info desired Comprehensive Health Impact Assessment to protect communities and residents near NG compressor stations

Other info desired Tell people health risks are more related to spikes than long-term exposure.

Other info desired Risk of exposure from blowdowns and venting even during regular maintenance of compressor stations, valve and pigging facilities

Other info desired Cancer and other illnesses caused by chemicals,fracking and leakage of methane eakage

Other info desired how lines are maintained

Other info desired Who is responsible for the years of cleanup costs...especially the land owners.

Other info desired testimonies of land owners who have pipelines running through their land and how the spills and leaks are handled

Other info desired affect on the environment and wildlife...

Other info desired effects on the environment

Other info desired How would a pipeline leak be cleaned up

Other info desired what diluents are used to make bitumen flow

Other info desired Pipelines are not safe

Other info desired Compressor station safety/explosion controls

Other info desired testing of effect of heavy farm equipment run on dirt roads with an underground pipeline under those roads.

Other info desired proximity to natural water sources and underground aquifers to develop regulations

Other info desired testing in area of previous spills to evaluate levels of remaining toxins

Other info desired exactly what is being transported- there is currently conflicting information about what exactly is leaking out of the pipeline in South Dakota

Other info desired the cost of US landowners defending their land and the environment when fighting TransCanada and others

Other info desired eminent domain- please explain how a foreign country, or our government has the right to claim our land

Other info desired List of pipeline safety consultants

Other info desired Amount of gas that enters the pipeline compared to the amount that comes out the other end- unaccounted for gas

Other info desired we have proposed pipelines to go under our lake that is our main source drinking water. Putting our aquatic life in direct impact, we need aquatic life to stay balance with the earth's ecosystem, biosphere

Other info desired NEPA requirement and Environmental Impact Statement must be completed. All spills should be reported. Here we have a spill everyday. A Bakken oil field worker who longer works in oil field verified for us on March 28, spills she witnessed in are Mandaree

Other info desired There is no public comment period given to the people on Fort Berthold

Other info desired Compliance record of companies

Other info desired Material being transported

Other info desired USGS Soils Information

Other info desired NDPEs Environmental Information

Other info desired How localities all along a pipeline route test water, how often, and for what 'products'/chemicals/etc. Plus having that testing done at the pipeline owner/contractor's expense by an independent entity responsible to the public and its betterment. Also, having baseline testing done independently BEFORE any construction would begin and at the expense of the pipeline owner/contractor.

Other info desired Who used eminent domain and what % of the landowners were served eminent domain papers (not just % who ended up in court)

Other info desired transparency in distribution integrity management programs, how the companies are making decisions for replacements.

Other info desired More specific info on types of pipe that need replacement and locations or areas of concern.

Other info desired How quickly identified problems are repaired or remediated.

Other info desired permitting process for each state

Other info desired BMPs are the most critical - for every aspect of installation and operation

Other info desired Integration of emergency information between pipelines and Emergency Responders

Other info desired Impact radius of pipeline product around potential failure

Other info desired Response resources shared by operators and emergency responders

Other info desired Build requirements and certifications. I spoke with a couple of guys on my property one weekend who were installing a CBM pipeline. One was a nephew of someone in the gas company and the other guy didn't speak English. I was struck by how utterly unqualified they seemed to be installing a gas pipeline.

Other info desired Inspection type and frequency. Is this information publicly available. My sense is that these companies install them and then ignore them until something goes wrong.

Other info desired Types of pipelines and the materials they are made out of

Other info desired purpose of pipeline (main or feeder line, etc)

Other info desired include info on transfer stations, blowouts, etc.

Other info desired How many company damage Prevention people work for the pipeline company. How many educational sessions do they conduct. who was educated.

Other info desired audits of federal and/or state regulatory agencies and their performance of implementing regulations

Other info desired Honest information on life span on pipes, not phrases "like brand new" used to describe a 63 y/o line.

Other info desired Oil spill clean up in arctic conditions, with ice 5-12 inches thick and a span of water 5 miles wide with the pipeline at 200 feet of depth.

Other info desired lack of transparency about the pipeline

Other info desired inspection schedules and results

Other info desired who is involved in the decision making process. laymen or corporations.

Other info desired Accurate as-built maps with relevant info, pipe #, xray tech, etc.

Other info desired who's paying off our regulatory agencies

Other info desired which groups are destroying state regulations and rewriting pipeline safety law

Other info desired how get EPA to insist on EIS for every pipeline.

Other info desired historical context, why were they built to do what.

Other info desired what is in the pipeline

Other info desired how spills would impact soil and water

Other info desired frequency of monitoring and testing of pipeline

Other info desired Training for 1st responders to deal with pipeline failures, paid for by company.

Other info desired psi pipeline operating pressure

Other info desired pipeline operator budgets for integrity management

Other info desired age of pipe materials

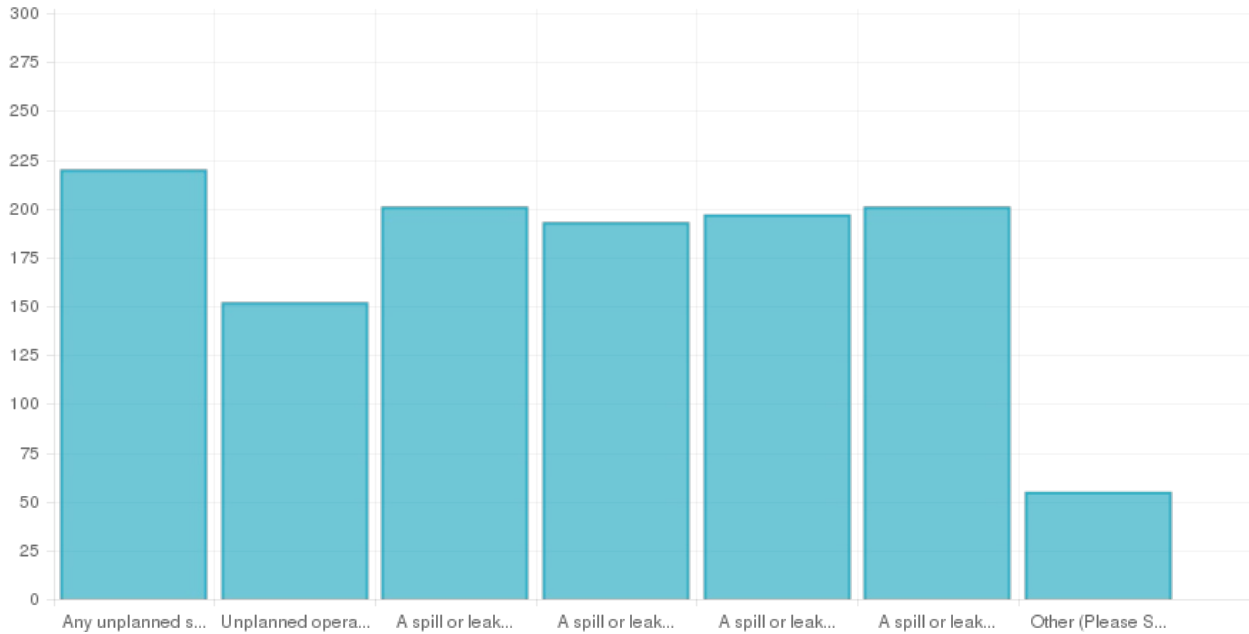
Other info desired frequency of inspections and results of inspections

Other info desired Spill response plans

Different regulatory agencies use different definitions of what constitutes a pipeline "failure."

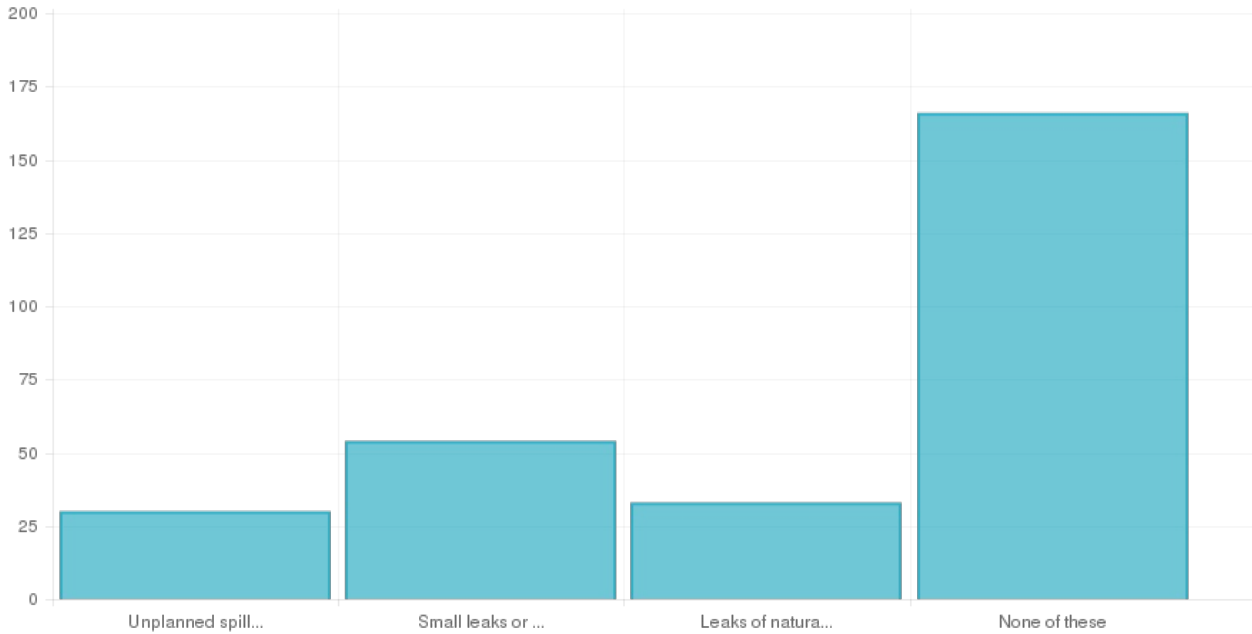
Which of the following do you think should be included in such a definition? Select all that apply.

| | Any unplanned spill or leak of fuel from the pipeline | Unplanned operating factors that require the pipeline to be shut down | A spill or leak from the pipeline that results in a death or serious injury | A spill or leak from the pipeline that results in property damage | A spill or leak from the pipeline that requires an evacuation | A spill or leak from the pipeline that results in a fire or explosion | Other (Please Specify) | Responses |
|----------|---|---|---|---|---|---|------------------------|-----------|
| All Data | 220 (92%) | 152 (63%) | 201 (84%) | 193 (80%) | 197 (82%) | 201 (84%) | 55 (23%) | 240 |



Should the type of fuel or the location and quantity of the spill or leak be considered among criteria for defining a pipeline failure? Which of the following statements do you agree with?

| | Unplanned spills or leaks that are within pipeline company facilities, and are contained so fuel does not leave the site, should not count as a failure. | Small leaks or spills under some defined size limit (like 5 gallons) should not be considered a failure | Leaks of natural gas into the air that are not a cause for evacuation or pipeline shutdown should not be considered a failure. | None of these | Responses |
|----------|--|---|--|---------------|-----------|
| All Data | 30 (13%) | 54 (23%) | 33 (14%) | 166 (71%) | 234 |



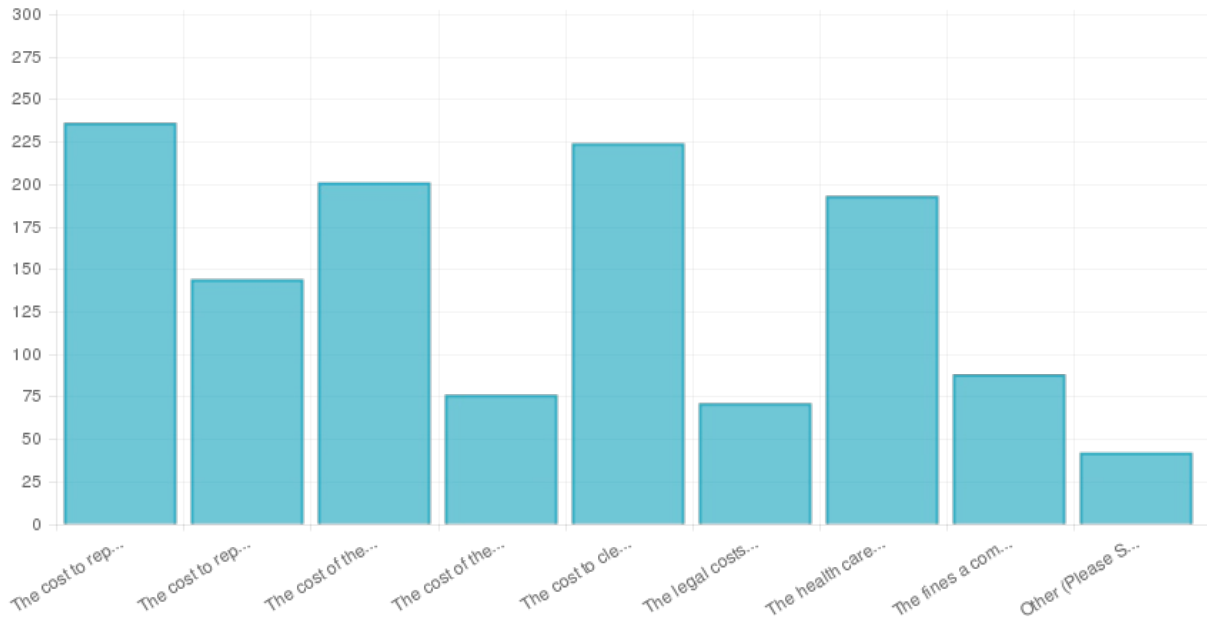
Below are five different potential indicators that you might be interested in. Please put them in the order of how interested you would be in these indicators, by dragging the most important one to the top and the least important at the bottom.

- 1 Indicators regarding a particular pipeline or pipeline company
- 2 Indicators regarding national trends showing whether pipeline safety is improving or declining
- 3 Indicators specific to the safety of the pipelines in your community
- 4 Indicators that allows you to compare particular pipelines or pipeline companies to national averages
- 5 Indicators that show how well regulators are paying attention to the pipeline industry's safety activities

Some regulators measure “property damage” from pipeline failures. When you think of “property damage” which of the following do you think should be included in such a measurement?

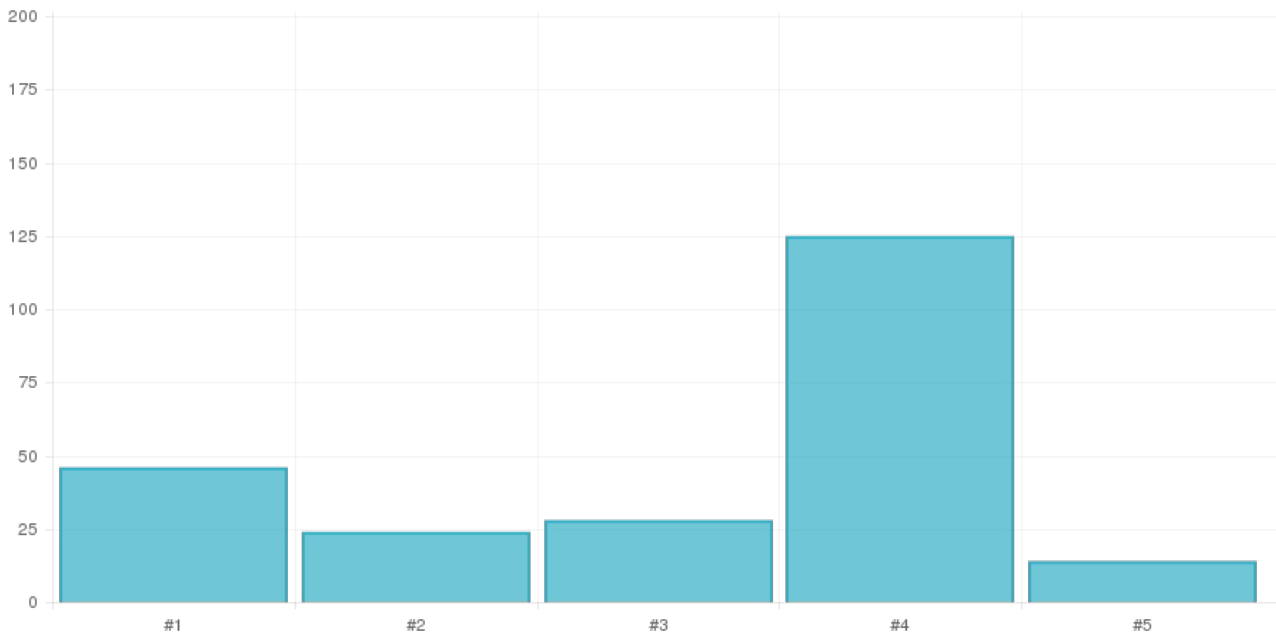
Select all that apply.

| | The cost to repair damaged private or public property that does not belong to the pipeline company | The cost to repair damaged property that does belong to the pipeline company (like the pipe itself) | The cost of the emergency response to keep people safe | The cost of the lost fuel | The cost to clean up or remediate areas impacted by a spill or leak | The legal costs the pipeline company spends because of a pipeline failure | The health care costs of people injured | The fines a company may face for the pipeline failure | Other (Please Specify) | Responses |
|----------|--|---|--|---------------------------|---|---|---|---|------------------------|-----------|
| All Data | 236 (98%) | 144 (60%) | 201 (84%) | 76 (32%) | 224 (93%) | 71 (30%) | 193 (80%) | 88 (37%) | 42 (18%) | 240 |



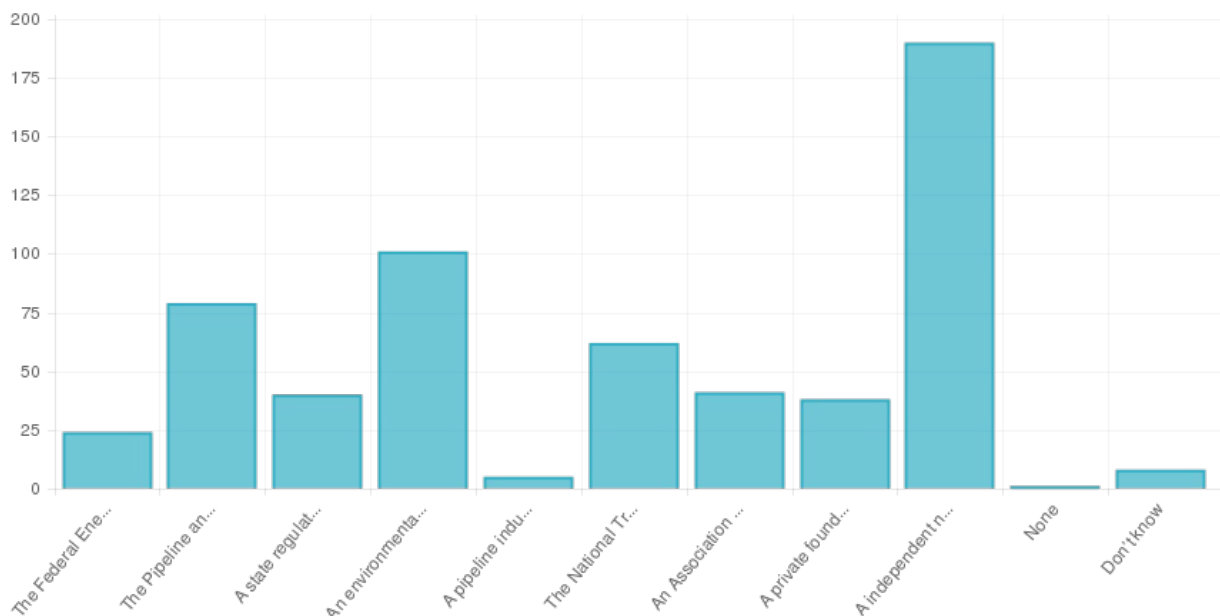
Data can be represented visually in many different ways. Of the 5 graphics above, which do you think does the best job of conveying the message accurately and easily?

| | #1 | #2 | #3 | #4 | #5 | Standard Deviation | Responses |
|----------|-------------|-------------|-------------|--------------|------------|--------------------|-----------|
| All Data | 46 (19%) | 24 (10%) | 28 (12%) | 125 (53%) | 14 (6%) | 40.16 | 237 |



If indicators like we have been discussing were established and used to track pipeline safety over time, who would you most trust to create, update, and publish such indicators? Please check all that apply.

| | The Federal Energy Regulatory Commission (FERC) | The Pipeline and Hazardous Materials Safety Administration (PHMSA) | A state regulator | An environmental organization | A pipeline industry association | The National Transportation Safety Board (NTSB) | An Association of Cities or Counties | A private foundation or think tank | A independent non-profit organization focused on safety | None | Don't know | Responses |
|----------|---|--|-------------------|-------------------------------|---------------------------------|---|--------------------------------------|------------------------------------|---|-----------|------------|-----------|
| All Data | 24 (10%) | 79 (33%) | 40 (17%) | 101 (42%) | 5 (2%) | 62 (26%) | 41 (17%) | 38 (16%) | 190 (80%) | 1 (0%) | 8 (3%) | 238 |



If you have a suggestion for a specific organization that you would trust to publish pipeline safety indicators, please comment

Text Responses

There are no such specific organization at this time.

Pipeline Safety Trust

Pipeline Safety Trust

Sierra Club

perhaps your the pipeline safety trust, but honestly, its hard to know who to trust anymore

Pipeline Safety Trust or EDF

PST

One Call Systems, International / CGA

PSR

Pipeline Safety Trust or the NRDC

PHMSA

Pipeline Safety Trust, NTSB

The established trusted Pipeline Safety Trust.

PS Trust would be an excellent choice for pipeline safety indicators. Important to ensure independent funding.

Pipeline Saftey Trust

You!

PST, PROTEC, NLC :-)

Pipeline Safety Trust

CA Geotracker data base

State & Federal Environmental Organizations (EPA, DEC, etc.)

Appalachian Voices

I fully "trust" the Pipeline Safety Trust

Sierra Club

Anyone concerned with the environment not tied or related to or funded by the gas or oil industry OR the government.

pipeline safety trust

You folks!

Pipeline safety trust

Iberrola/NYSEG

There should be local involvement on a county level which would include hazardous materials handling & cleanup training

PHMSA with environmental/safety organization input

PHMSA

I am not interested in pipeline safety but pipeline elimination - eliminate and protect people and the environment. Do NOT mitigate.

State department of environmental conservation, and the state comptroller

Pipeline safety Trust

local group connected to national group?

PST seems both competent and independent but I have no real knowledge of either factor

Southern Baptist Convention.

Union of Concerned Scientists; Consumer's Union

NOT FERC!!!!

Sierra Club

Earth Justice, or any other group that cares about the earth

EPA

Currently, we have few organisations that are credible or knowledgeable.

Pipeline Safety Trust

n/a

Bold Ne

Mrs.

You'll do fine (as long as you know that renewables could at some point make your work obsolete. Hope you will be happy with that outcome!

PST

No

MHA Nation EPA, Fort Berthold POWER, DRC, WORC

PST (who else does it.!)

PST

pipeline safety trust

None better than Pipeline Safety Trust; but it should be done with input and collaboration by a mixture of those mentioned in Q9, but keep industry associations etc out of it. Unfortunately they can't be trusted.

Pipeline Safety Trust

Any organization not receiving funds from the oil and gas industry!!!!!!!!!!!!!!!!!!!!!!

One with a proven record of successful environment/species protection.

ntsb

Sierra Club

Pipeline and Hazardous Materials Safety Administration

the Sierra Club

It does exist

I WISH PHMSA were more proactive around regulations.

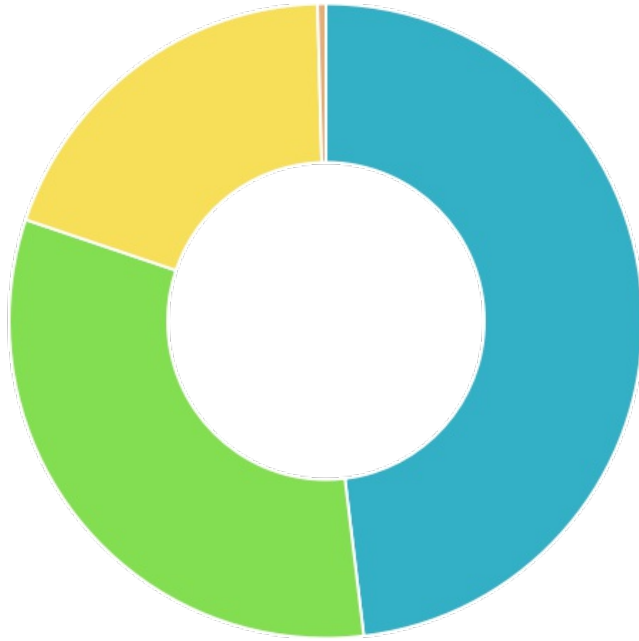
After Flint, who can we trust .

PST, of course!

Pipeline Safety Trust

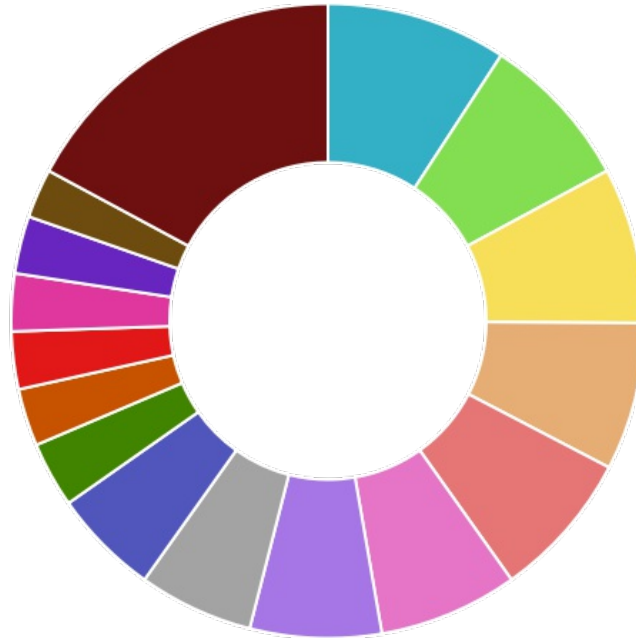
How did you hear about this survey?

| | ● I received an email with the link directly from the Pipeline Safety Trust | ● A friend or colleague forwarded an email to me with the link and information | ● Saw it on Facebook | ● Other (Please Specify) | Standard Deviation | Responses |
|----------|--|---|---|---|--------------------|-----------|
| All Data | 114 (48%) | 76 (32%) | 46 (19%) | 1 (0%) | 41.37 | 237 |



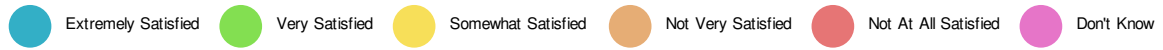
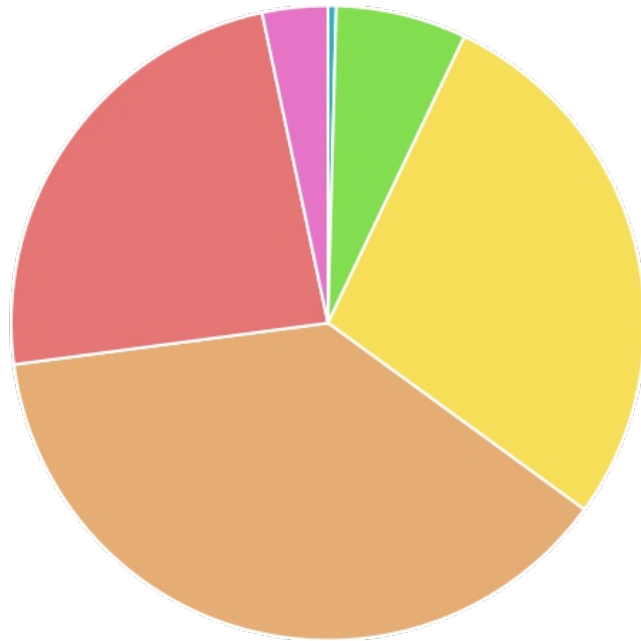
Which state do you live in? Looks like Texas got left off this list - sorry. Please add it under "other".

| | Virginia | New York | West Virginia | Nebraska | Pennsylvania | Michigan | Washington | Other (Please Specify) | New Jersey | Vermont | California | Colorado | Massachusetts | New Hampshire | Maryland | Other |
|----------|----------|----------|---------------|----------|--------------|----------|------------|------------------------|------------|---------|------------|----------|---------------|---------------|----------|--------|
| All Data | 22 (9%) | 19 (8%) | 19 (8%) | 18 (8%) | 18 (8%) | 17 (7%) | 16 (7%) | 14 (6%) | 13 (5%) | 8 (3%) | 7 (3%) | 7 (3%) | 7 (3%) | 7 (3%) | 6 (3%) | 4 (1%) |



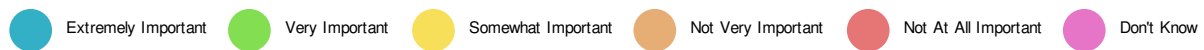
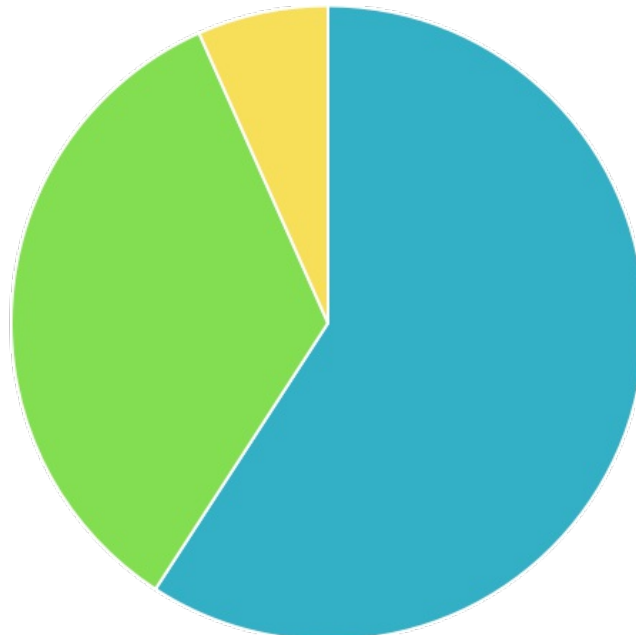
Overall how satisfied are you with the kinds of information you can currently easily access regarding pipeline safety in the United States?

| | Extremely Satisfied | Very Satisfied | Somewhat Satisfied | Not Very Satisfied | Not At All Satisfied | Don't Know | Standard Deviation | Responses |
|----------|---------------------|----------------|--------------------|--------------------|----------------------|------------|--------------------|-----------|
| All Data | 1 (0%) | 16 (7%) | 67 (28%) | 91 (38%) | 57 (24%) | 8 (3%) | 33.52 | 240 |



Overall how important is it to you to have access to information about pipeline safety in the United States?

| | Extremely Important | Very Important | Somewhat Important | Not Very Important | Not At All Important | Don't Know | Standard Deviation | Responses |
|----------|---------------------|----------------|--------------------|--------------------|----------------------|------------|--------------------|-----------|
| All Data | 142 (59%) | 82 (34%) | 16 (7%) | 0 (0%) | 0 (0%) | 0 (0%) | 54.07 | 240 |



Is there anything else you would like to tell us about pipeline safety indicators, greater pipeline safety transparency, or pipeline safety information you are interested in?

Text Responses

Yes. List is very long.

More gas pipeline leak studies are needed in cities and towns in the U.S.

I would like more info about abandoned pipelines, safety issues due to corrosion, cave-ins, etc. This aspect of pipeline is poorly regulated in the US. Every pipeline will someday be abandoned, and most are abandoned "in place" as they say. What will happen as these abandoned pipelines corrode, degrade, collapse, etc? What is the experience to date with abandoned pipelines?

The FERC needs to be totally revamped. It is WRONG, WRONG for any organization to be funded by the industry they are over-seeing.

Fossil fuels are a non renewable, non sustainable energy source. What is the long term cost benefit ratio to the development of extensive pipeline infrastructure

many of my answers were colored by the fact that I simply feel that gas as a form of energy has had it's day. It is ridiculous, knowing that fossil fuels have a lifespan, that the gas industry is still trying to expand its infrastructure, putting more and more people at risk. Over and over, the agencies we should be able to count on to serve our best interests, side with the big gas companies, allowing them to disregard laws put in place to protect the public--ie. placing huge gas pipes under or within a few feet of a home when we know that if it fails, everything in a 1200 ft radius will be destroyed. We know this impacts home values, and our safety, but no one is protecting us. Finally, looking at the bigger picture, I don't care what a companies safety rating is, or what a gas pipes safety rating is, because, fracking and extending the gas infrastructure should not even be on the table to discuss. its time to put our money into clean and sustainable forms of energy.

The pervasive use of "average emissions" is highly deceptive.

Focus on the "average" encourage state Public Utility Commissions to apply minimum standards of review, yet the peak emissions often contains levels that are well documented to produce health effects.

A 1.3 bcf/d gas compressor station is proposed in our area within 1/2 mile of an elementary school which also serves as emergency shelter...

The "average" air quality of San Quentin's gas chamber is probably acceptable, but the peak emissions reliably kill people...

We were very disappointed by lack of complete and accurate information provided after the 2010 spill in Michigan, and even now from that and other spill sites in Michigan.

There is a great need that all pipeline operators should implement the Pipeline Safety Management System (PSMS) document without wasting time.

Thanks for all you do!

The Level of participation in the Damage Prevention Programs. Saying you have one and PARTICIPATING is not the same. We have a lot of work to do.

The less than helpful OPEN HOUSES hoisted on targeted communities by companies . RICO FERC and companies.. WE have been most sorely treated in MA by Kinder Morgan 2 years harassment, trespassing and ridiculous lack of transparency@Information They targeted the most sensitive environmental sites for immense compressor stations . We in Northfield on a Mtn targeted steep Mtn 3 ways on and off lose access many times a year KM wants to build huge compressor and make an Incineration Zone of the entire Mtn wildlife and people .KM has a safety track record akin to Dante Inferno. Last year WSJ cited KM for their abysmal SAFETY TRACK record by deferring maintenance cost to keep stockholder dividends high .They slashed dividends in Dec by 84%....WHAT exactly is their safety maintenace now > Trans Canada aka Kinder Morgan

Independently compiled incident data, along with contextual information to allow objective assessment of relative significance is a nice wish list item, whether or not that is feasible I cannot say...

For new pipelines, I would like to be able to find out where any location class 3 or 4 segments of the pipelng will be located, what the planned schedule (initial and recurring) is for instrumented scraping, and where the scraper stations will be located. I would like to be able to find out what the pipeline max design pressure is for sections in Class 3 and Class 4 areas. I would like to know if an initial instrumented scraping run is planned. to establish baseline thicknesses and defects. If the pipeline is oing to be carrvino hazardous materials in Class 3 or Class 4 locations. I

think an initial (precommissioning) instrumented (smart pig) scraping run should be required, not merely a caliper scrape. I would like to know about isolation valve locations and automated shutdown systems for the pipeline.

More statistical data that shows whether the Pipeline Companies use pipeline laws more in the grey area or within the spirit of those laws.

I truly believe the adoption of Pipeline Safety Management Systems by pipeline operators will significantly improve the overall safety and reliability of this nation's pipeline systems.

No

The general public is not informed with respect to their opportunity to shape federal government regulations. Calls for public comment need to be better publicized. For example: "Despite the fact that the proposed rule contemplates substantial and costly changes to the pipeline regulatory regime, parties will have only 60 days to comment on the proposed rule once it is published in the Federal Register (FR). - See more at: <http://www.natlawreview.com/article/pipeline-and-hazardous-materials-administration-proposes-rule-expanding-regulation#sthash.96mPISv8.dpuf>

Keep doing a great job on these issues!

Better clarity on pipeline age of assets and life expectancy, reporting of testing and technique, larger fines and penalties for releases and poor record keeping. There are many more topics of concern. Please feel free to email me.

Methane release and climate change
Chemical releases and human health

PHMSA, FERC and state regulators have all failed in properly ensuring the health and safety of citizens while the judicial, executive and legislative branches rubber stamp the expansion of the industry. Independent action and citizen monitoring is the only alternative

politics and greedy business putting people, property, climate at risk. completely unacceptable!

examples of shutting down aging pipelines

na

The Pipeline Safety Trust is the best resource for pipeline safety (even better than PHMSA) but I think with more resources and staff the Trust could churn out more frequent updates and more detailed analysis. There needs to be greater transparency of pipeline operations generally, particularly response planning--in a way that the general public can grasp and understand.

All pipelines are intrinsically unsafe. At this point, we're just talking about mitigating the hazards. That's not satisfactory.

How often are these sites and operations monitored by actual humans and for how long each day, i.e. fracking sites operate unmanned except for two visits per day by a human.

Would also like to have information on the proposed routes, how they determine this and the use of eminent domain

I have friends who are not on Facebook who might be interested in this survey. I will look for a link on the PST site.

I think An independent agency should be established that is SOLELY focused on environment and health risks of pipelines to consult on EVERY aspect of pipelines, from their applications with FERC to their construction and operations and decommissioning. Oil & gas experts are only that & they are driven by money and expanding gas makes just makes them more money, so they don't have any incentive to be honest when it comes to the reality of what this industry is doing to our planet and our future livelihood.

Yes, what are the ecosystem impacts of pipelines. What kind of EIS is required. How is biodiversity and connectivity and migration corridors considered? Is this done as part of a landscape scale approach? Does it involve the use of chemicals and herbicides? How are the pipelines accessed and checked by crews? Are there established, objective, quantifiable standards and checkshets that being used by every one in the industry? How do you protect whistleblowers? That is often a weak link.

I am interested & concerned, but even more than my personal interest, I want widespread, easily accessible, accurate information available to everyone. Thank you!!!

it would be useful to have comparisons to other forms of transportation - barge, rail, truck, etc.

After Sept. 11, 2001, Alyeska Pipeline Service Company became much more guarded about sharing information with our local conservation organization that is concerned about the devastation that could be caused by an oil spill into one of the Copper River tributaries. We felt this was often more of an excuse than a good reason.

the methods NYSEG uses to obtain leases to install pipelines is to deceive by not disclosing these risks and dangers.IT SHOULD BE REQUIRED.

Allow pipeline companies to include safety and technology upgrades in reports

I don't trust the tech behind the PIGs used to inspect pipelines: <http://www.gregpalast.com/the-pig-in-the-xl-pipelineinsider-reveals-concealed-%E2%80%9Cerror%E2%80%9Din-pipeline-safety-equipment-that-could-blow-away-the-gop%E2%80%99s-xl-pipe-dream/>

Important to know which pipelines are regulated (or not) by which authorities.

I would like to see Pipelines that are near Water have extra precautions. I would like to see pipelines that are under water Kama be removed so that spill migration can be minimal and predicted.

Concerned about the misinformation (to be polite) given out by MVP. Also how FERC gives out false information without verifying what they have been given by pipeline companies and drillers. This is not a NIMB situation. Water, our most valuable and necessary resource, is threatened daily.

Pipelines are NOT part of a sustainable energy future. Please stop playing the pipeline mitigation game and acknowledge that our planet cannot sustain further fossil fuel damage.

Most federal regulators and commissions have either been captured, hobbled or mandated to serve the interests of pipeline companies and fossil fuel industry. From state to state, of course, these matters vary. Frankly, I do not believe any governmental organization is fundamentally looking after the interests of its citizens and its electorate.

Appomattox -why was the pipeline that exploded allowed so close to the residence?

Off subject-List of landowners by state going through pipeline eminent domain

Your Spring 2015 graph that shows pipelines built since 2010 have higher failure rates than older pipelines is really concerning. What is being done to discover the causes of this problem?

I could not make your indicators for Question 6 work; so I skipped it.

You should send your publications to the elected officials, planners, and safety officials at all levels in the jurisdictions where new pipelines are being built.

In general, most I read about pipeline safety is geared toward pipeline leaks and explosions but for those of us who live upon karst terrain, and whose precious water supply runs intricately through miles of karst caves, water contamination and the possibility of loss of water supply from cave collapse or obstruction is of utmost concern. Water is Life. Besides area residents becoming ill with multiple health issues 3-15 years (too late) down the road after pipeline construction, how will this issue possibly be exposed and monitored? Will government agencies and officials who were warned about pipelines through karst be held accountable? Water IS Life; bad water=bad health or imminent death. Loss of water means loss of residential property.

Root Cause Failure Analysis definitively verifies that failure of pressure vessels are directly proportional to the regularity, and quality of routine maintenance. Failures of this type are constantly noted in the state of West Virginia. Unless due REQUIRED COMPULSORY Maintenance inspection and certification procedures are developed and implemented NO pipeline should be allowed.

Why has the pipeline safety included "not having a pipeline"?

Why is protection of land from the threat of a pipeline or other utility not safe once protection is established?

Pipeline companies have zero credibility and their behaviors both locally and in bullying regulatory agencies have shown there is good reason to not trust them. If they want to improve our perception of pipeline safety they should a) self police themselves to develop and enforce best safety practices so we don't see a continuing stream of articles about pipeline leaks and problems. If there were no leaks to report we would start to believe that pipelines have improved safety. b) stop preventing PHMSA from doing its job and start helping them set much more effective rules, add many more inspectors and push for meaningful enforcement of the laws. Just giving us more detail about the current sad state of affairs regarding pipeline safety is not going to make us feel safer. You are looking in the wrong direction. We want real safety improvements not just better reporting of problems.

separate liquid and gas indicators

separate transmission and distribution pipelines

Stop the secrecy

There seems to be secrecy about the location of some pipelines due to Homeland Security issues. That is a serious problem.

In WV we are colonized by the extractive fossil fuel industry.

We have the highest suicide rate, highest drug overdose rate, lowest college graduate rate, in the US and for 7 years running: WV rates last in terms of the Gallop Poll well-being index in all 5 areas (physical, job satisfaction, community, purpose, financial). Being under the thumb of the coal, oil and gas industries leaves a hopeless population overall. There is inherent in this a MASSIVE concern for the physical, emotional and psychological health and safety of the WV citizens.

SOLASTALGIA is a verifiable entity and we are awash in it.

We are currently dealing with a planned 20" or greater oil pipeline being built across BOTH of our watersheds. We would like to know what the REAL design criteria should be in the area where it crosses our watershed, IF we are not successful at getting the pipeline to move.

Yes. we have two pipelines going thru Pelham, NH now. I don't know how old they are, who owns them, etc., but I was wondering if they are being monitored by the companies that installed them? Thank you for all you do. There has to be a better way for safe energy. I do not understand how a pipeline can be approved if the town or state does not benefit and this gas is exported to other countries. Seems so very unfair. Thank you for all you do.

Our county has found that the companies involved in building the proposed pipeline in our area will make up false data just to give us a positive answer. Unfortunately, the government agencies seem to believe the companies rather than the more reliable data that our scientists have been able to find. Who can we not to rely upon government agencies to verify their report

seem to believe the companies rather than the proven scientific data that us as citizens have been able to dig up. Why can we get to run herd over government agencies to make them accept factual data with real science behind it? No some made up "facts" from gas companies..

In a mountainous terrain where we may have safe havens in emergencies in lower areas, are there gases, etc, that would sink to lower levels thus endangering the safe haven occupants?

Local and state government need to have a much bigger role in basic pipeline safety.

Pipeline operators need to have a verified relationship at the local level with law enforcement and fire departments.

Shit them all down. Take away there subsidies. Tar sand pipeline ARE oil and need to pay into leak liability fund. They are all fascist that take our land pay off our legislators local and federal and do not play by any rules except there own. They are killing our planet and it may already be to late to stop the damage

YES. The public and policy makers must know:

1. All contents (chemistry) in product shipped.
2. The origin and main endpoints of shipment.
3. All chemicals used in hydraulic fracking

air emissions

I have been dealing with a proposed fracked gas pipeline, so my comments are based on my experience with that type of infrastructure. One important factor on which critical study seems missing concerns the long-term health effects on residents and communities adjacent to compressor stations. The potential health impact is not part of the approval process. One physician, using emission info supplied by the company as part of the approval process, calculated exposure rates, and could then provide estimates of health effects. He stated we could anticipate an INCREASE in health care costs of \$2 million per year. Some people would require long-term care; some would die.

no

Someone onsite to monitor daily progress and compliance of procedures.

My sincere thanks for your efforts; we elected officials "own" local community safety issues and the data you give us is essential to retaining some modicum of public accountability. Stop the hiding!

Seems that it is nearly impossible to know what toxins are in the crude being transported. This is important info for the safety of our drinking water. Peoples' right to know what maybe in their water should trump the right of companies to keep this information secret.

I don't believe pipelines are safe for our citizens, their property or our environment. I guess I'm more interested in the transparency-from what I can see the industry tries everything they can do to keep us in the dark -

I think it is highly problematic that PHMSA does not seem to have independent capability to verify safety calculations made by pipeline companies.

I hope your organization goes out of existence soon and all pipelines become history.

No one can guarantee us there will be no spills or leaks putting the environment and future generations in danger. It is our human right to clean water, clean air, and clean land.

age of pipes - line repair/incidents etc.

A part of pipeline safety MUST be proactivity in eliminating hazards found by pipeline safety indicators.

Where possible, pipeline improvement/replacement projects specifically related to removing hazards (for example, addressing pre-1970 steel pipe/low frequency ERW pipe, questionable plastic pipe) should be documented, along with the reasons for the program.

I expect that this will allow the public to review programs from other pipeline companies/public utilities and provide additional background to question other companies with similar materials or procedures.

Availability of testing/monitoring for water-related issues via regular testing by more local agencies. For instance, our water dept provides an annual or biannual analysis to customers. There is a different schedule, it seems, for testing of benzene, etc. and we often hear nothing until a regular report is out about if, when or how often water is tested and the results if there is an incident. To wit: cpl of yrs ago there was a citizen-reported spill in the Yellowstone River. It flows into the Platte in NE. Pollution and potential carcinogens were tracked to about mid-state and reported every so often...and then we heard nothing more. The water did not simply stop flowing to the east. Why no further reports. The agency in the E part of the state in my town seemed to know nothing. Often, if we call for info, we must wait for a return call which never comes. In instances such as this there should be mandatory reporting as consumers question...via a webpage, etc, at least, until there is clean, safe water once again, however long that takes. We have learned too much and had too many lessons to disregard or ignore these issues.

I'm looking for a way to assess each pipeline company's safety record, particularly in terms of environmental damage.

Pipeline blowdowns should not be regulated by best practices. Not every operator is honest, we have pipelines venting in ND for days at a time.

An essential part of the analysis of pipeline safety is the transparency of the project. NEPA provides this transparency for interstate pipeline projects requiring such review. A similar process should be encouraged at the individual state level as a means to convey critical information to the stakeholder community. By doing so, transparency will be improved, risks can be anticipated and mitigated, and public trust can improve.

Two years ago (PHMSA) was way behind in enacting new regulations on pipeline safety etc and the oversight of congressional committees was terrible. I would like an easy to read assessment and update on the progress being made to complete and enact these regulations and how good they are or are not in terms of public safety, etc.

What rail safety measures are in place per state in the event of a spill/disaster.

All the participants in hazardous material pipeline transportation could improve their transparency. Especially PHMSA.

Why are transmission lines not odorized.

Why is there not a safety setbacks in place for transmission lines. It seems like there is more concern for endangered animals than human life.

When I access the The Pipeline and Hazardous Materials Safety Administration (PHMSA) some times it is not operational. Plus it is difficult to access sections.

Thank you for this survey.

I am retired and can help in any way I can.

Get the pipelines out of the Great Lakes!

SHUT DOWN LINE 5 IMMEDIATELY!

I think pipeline maps should be open-source GIS maps that anyone is able to access. If particular lines/facilities are sensitive or overly susceptible to terrorist activity, the company should be responsible to protect them adequately.

States and pipeline companies should be required to reveal the locations of their pipelines, what materials the lines carry and the quantity per day.

The more the above parties attempt to hide this information, the more suspicious the public becomes. Thanks.

Clearer terms about pipeline safety regulations