Public Awareness Programs for Pipeline Operators

API Recommended Practice 1162
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FOREWORD

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Public Awareness Programs for Pipeline Operators

1 Scope

This document addresses the development, implementation, evaluation and documentation of pipeline safety public awareness programs associated with active pipeline systems and associated facilities in the United States (including those crossing U.S. borders), including transmission pipelines, local distribution systems and gathering lines.

Communications related to new pipeline construction, offshore operations, abnormal operations and emergencies are not covered by this recommended practice (RP), nor is it intended to provide guidance to operators for communications about operator-specific performance measures that are addressed through other means of regulatory reporting. This RP is written as a leading practice for public awareness programs. Operators with operations in Mexico, Canada or other countries should also reference country-specific requirements.

Furthermore, this RP recognizes there are differences in pipeline conditions, release consequences, populations, increased development and excavation activities and other factors associated with individual pipeline systems. Some areas with pipelines have a low population, low turnover in residents, and little development or excavation activity; whereas other areas have very high population, high turnover, and extensive development and excavation activity.

Finally this RP provides the operator with the elements of a recommended baseline public awareness program and considerations to determine when and how to enhance the program to provide the appropriate level of public awareness outreach. Enhancements may affect messages, delivery frequency and methods, geographic coverage areas, program evaluation and other elements. This RP addresses certain operational changes that may affect pipeline safety public awareness messages.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda or errata) applies.

3 Terms, Definitions, Acronyms, and Abbreviations

3.1 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
8-1-1 (call 811 or 811)
National Call Before You Dig telephone number federally mandated to eliminate the need of having to remember a state “One Call Center” toll-free telephone number.

3.1.2
baseline public awareness program
Relevant components of an operator’s public awareness program for delivery frequency, message content, and delivery methods.

3.1.3
behavioral intent
The extent to which a target audience intends to execute a behavior; usually expressed as a percentage.

3.1.4
census sampling

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A process of drawing a sample of a stakeholder population by attempting to collect quantitative data from every member of the stakeholder population.

3.1.5
confidence level
An approach used to help measure uncertainty by indicating the probability that the value of a result falls within a specified range of values.

3.1.6
encroachment
Unauthorized advancement onto or within the operator's ROW.

3.1.7
enhanced public awareness program
Components of a public awareness program that exceed baseline program provisions.

NOTE Enhancements are also known as supplemental requirements under Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations (49 *CFR* Part 192.616 and 49 *CFR* Part 195.440).

3.1.8
high consequence area
HCA
Location defined in pipeline safety regulations as an area where pipeline releases could have greater consequences to health and safety or the environment.

3.1.9
liaison
A form of communication for establishing and maintaining mutual understanding and cooperation.

3.1.10
margin of error
The margin of error is a statistic expressing the amount of random sampling error in a survey's results.

3.1.11
one call center
Centralized notification system that establishes a communication link between those who dig underground and those who operate underground facilities.

NOTE The role of the One Call Center is to receive notifications of proposed excavations, identify possible conflicts with nearby facilities, process the information, and notify affected facility owners/operators.

3.1.12
operator
Organization that operates a pipeline.

3.1.13
pipeline
That which includes physical facilities through which hazardous liquids or gas moves in pipeline transportation, including pipe, valves, fittings, flanges (including bolting and gaskets), regulators, pressure vessels, pulsation dampeners, relief equipment, and other appurtenances attached to pipe, pumps and compressor units, metering stations, regulator stations, and fabricated assemblies.

3.1.14
qualitative research
A data collection approach in which non-numerical data/information is collected and meaning is interpreted from this data/information.

3.1.15
quantitative research

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A data collection approach in which data/information is collected numerically such that the results and findings may be expressed and manipulated statistically and mathematically.

3.1.16
random sampling
A process of drawing a sample of a stakeholder population strictly by chance, yielding no discernible pattern beyond chance. Random sample selection is to ensure that samples will exhibit a distribution comparable to that of the stakeholder population from which the sample is drawn. Surveys using random sampling can attempt to collect data until a predetermined target number of completed survey is reached.

3.1.17
right-of-way
ROW
Defined land on which an operator has the rights to construct, operate, and/or maintain a pipeline.

NOTE A ROW may be owned outright by the operator or an easement may be acquired for its specific use.

3.1.18
sour gas
Natural gas or any other gas containing amounts of hydrogen sulfide (H_2S) as defined by regulatory agencies.

3.1.19
third-party damage
Outside force damage to pipelines and other underground facilities that may occur due to excavation activities not performed by the operator or at the request of the operator.

3.2 Acronyms and Abbreviations

For the purposes of this document, the following acronyms and abbreviations apply.

AGA	American Gas Association
API	American Petroleum Institute
CFR	Code of Federal Regulations
CGA	Common Ground Alliance
DIRT	Damage Information Reporting Tool
H_2S	hydrogen sulfide
HCA	high consequence area
IMP	integrity management program
INGAA	Interstate Natural Gas Association of America
LDC	local distribution company
NAICS	North American Industry Classification System
NPMS	National Pipeline Mapping System
PHMSA	Pipeline and Hazardous Materials Safety Administration
PSA	public service announcement
ROW	right-of-way
RP	recommended practice
SIC	Standard Industrial Classification

4 Program Establishment

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4.1 Objectives

The following three objectives shall serve as the foundation for a pipeline public awareness program.

4.1.1 Awareness

Public awareness programs should raise or enhance Stakeholder audience awareness of the presence of pipelines in their communities and the hazards that pipelines may pose.

4.1.2 Prevention

Public awareness programs should assist or help Stakeholder audiences understand how to prevent pipeline emergencies.

4.1.3 Response

Public awareness programs should assist or help Stakeholder audiences understand how to respond to potential pipeline damage and/or a pipeline emergency.

4.2 Program Variation

Public awareness programs may vary because of differences in pipeline systems, Stakeholder audiences, and potential hazards.

Figure 1 describes the process establishing, implementing, measuring, and adjusting a public awareness program.

Figure 1 – Public Awareness Programs

4.3 Establish Program Administration

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The written public awareness program should include a description of how the program will be administered company-wide, including a description of the roles and responsibilities of personnel administering the program;

4.4 Identify Pipeline Assets

Operators should identify all regulated assets covered by their public awareness program. The overall program may be a single public awareness program for all pipeline assets or may be divided into individual, asset-specific programs for one or more specific pipeline systems, one or more pipeline segments, one or more facilities, or one or more geographic areas. An administrator should be named for each program.

4.5 Identify Audience Groups

Operators should identify the stakeholder audiences that receive program messages, which differ based on the audience and their information needs. Stakeholder audiences are comprised of four categories: the affected public, emergency officials, public officials, and excavators. Operators may hire outside consultants to assist them in identifying stakeholder audiences. Operators should keep a record of how the stakeholder audience lists were compiled and what system was employed, such as the Standard Industrial Classification (SIC) and/or the North American Industry Classification System (NAICS).

Table 1 through Table 4 identify the general stakeholder audiences impacted by this document.

4.5.1 Addresses for Mailings

An operator should determine specific affected public addresses near the pipeline within a specified minimum coverage area. Examples of how an operator may identify affected public addresses are through a nine-digit zip code address database or geo-spatial address databases. These databases generally provide only the addresses and not the names of the persons residing there. For apartments, individual apartment unit addresses should be used, not just the address of the apartment building or complex.

Operators may maintain “line lists,” which provide current information on names and addresses of people who own property on which the pipeline is located. Tenants may live on the property and should also be contacted.

4.5.2 Affected Public

The Affected Public stakeholder audience is described in Table 1.

Where the local distribution system operator has a customer base, it may be used for identifying affected public addresses.

For stakeholder audiences identified in Table 1, including “Residents located adjacent to the transmission pipeline ROW” and “Places of congregation,” transmission pipeline operators should stipulate the minimum coverage in their program. An operator may choose to define the minimum coverage area in a variety of ways.

Table 1—Stakeholder audiences—Affected Public

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Stakeholder audiences	Audience Definition	Examples may include
1. Residents	People who live or work adjacent to: — transmission pipeline ROW — major facility such as a tank farm, storage field, and pump/compressor station, or — gathering lines	— Residents — Farmers — Landowners — Tenants
2. Residents along local distribution systems	People who live or work within the service area of a gas distribution system	— Customers — Non-customers
3. Places of congregation	Identified places where people congregate or work on a regular basis—on or along a transmission pipeline ROW, gathering lines, and local distribution systems	— Businesses — Schools and childcare facilities — Places of worship — Medical facilities — Parks and recreational areas — Military installations — Correctional facilities

4.5.3 Emergency Officials

The Emergency Officials stakeholder audience is described in Table 2.

Table 2—Stakeholder audience—Emergency Officials

Stakeholder audience	Audience Definition	Examples
Emergency officials	Local, city, municipality, county, state, or regional officials, agencies and organizations with the role and responsibility of emergency response in the area of the pipeline.	— Fire departments — Police/sheriff departments — Local Emergency Planning Committees (LEPCs) — County and, if applicable, state emergency management agencies — 911 centers and/or emergency dispatch

4.5.4 Public Officials

The public officials stakeholder audience is described in Table 3.

Table 3—Stakeholder audience—Public Officials

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Stakeholder Audiences	Audience Definition	Examples
Public officials	Local, city, municipality, county, state, or other regulators with the role and responsibility of planning, land use, or street management, in the area of the pipeline	— Planning & zoning boards — Licensing, planning & permitting departments — Building code enforcement departments — City and county managers — Public utility boards — Local governing councils — Military installations

4.5.5 Excavators

The excavators stakeholder audience is described in Table 4.

Table 4—Stakeholder Audiences—Excavators

Stakeholder Audiences	Audience Definition	Examples
Excavators	Companies and local/state government agencies who are normally engaged in earth moving, ground disturbing, or digging activities.	— Construction companies — Excavation equipment rental companies — Public works departments — Public street, road, and highway departments (maintenance and construction) — Timber companies — Fence installers — Drain tiling companies — Landscapers — Well drillers — Land developers — Home builders — Plumbers

4.6 Identify Process to Determine Languages other than English

Identify process to determine languages other than English that are commonly understood by a significant number and concentration of the non-English speaking population in the operator's area. The program should include the operator's determination of significant number and concentration and provide data source(s) used in identifying appropriate languages.

5 Messages

Messages are information that operators provide to stakeholder audiences to improve awareness of pipelines and pipeline safety, prevent damage to pipelines and the response to an emergency.

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Message content has been divided by stakeholder audience into two main categories: baseline and enhanced messages. Baseline messages are core safety messages and vary depending on stakeholder audience and type of pipeline. Operators should provide baseline messages to each stakeholder audience. An operator has the flexibility to determine when and if enhanced messages are necessary (see Section 7).

Each of the following sections includes a table of message topics for each stakeholder audience and type of pipeline. This RP provides a general description of the messages. Operators should develop the wording for each message based on this guidance and what is appropriate for their pipeline assets. Messages should be focused and concise.

5.1 General Pipeline Awareness

Table 5 sets forth baseline and enhanced general pipeline awareness message topics for each stakeholder audience, type of pipeline, and whether the messages are baseline or enhanced.

Table 5 – General Pipeline Awareness Message Topics

Message Topic	Stakeholder audience	Operators to Deliver	Baseline or Enhanced
5.1.1 Obtaining Additional Information	AP, EX, PO, EO	T, D, G	Baseline
5.1.2 Products Transported and Potential Hazards	AP, EX, PO, EO	T, D, G	Baseline
5.1.3 Pipeline Purpose and Reliability	AP, EX, PO, EO	T, D, G	Enhanced
5.1.4 Sharing Pipeline Safety Information	AP, EX, PO, EO	T, D, G	Enhanced
5.1.5 ROW Encroachment and Purpose	AP, EX, PO, EO	T, D, G	Enhanced

The information below provides guidance for the general pipeline awareness topics for operators.

5.1.1 Obtaining Additional Information

Operators should inform stakeholder audiences about how to get additional pipeline-related information. Examples of operator-specific information can include:

- website address;
- non-emergency telephone number;
- email address; or
- organizational contacts.

5.1.2 Products Transported and Potential Hazards

Operators should provide an overview of products transported and the potential hazards that could result from an accidental release of hazardous liquids or gases from the pipeline or distribution system.

5.1.3 Pipeline Purpose and Reliability

Operators may provide general information about pipeline transportation. Messages may include:

- the role, purpose, and function of pipelines and/or associated facilities in energy supply;
- pipelines as part of the energy infrastructure;
- efficiency and reliability of pipelines;

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- the industry's safety record;
- the individual operator's pipeline safety actions and environmental record;
- the benefits of the pipeline to the community;
- state and federal regulations about pipeline design, construction, operation, and maintenance;
- operational activities that promote pipeline integrity, safety, and reliability (testing practices, inspections, patrolling, monitoring, etc.).

5.1.4 Sharing Pipeline Safety Information

Operators may emphasize to recipients the importance of sharing the pipeline safety information to all appropriate individuals.

5.1.5 Encroachment Messages

Operators may communicate with stakeholders regarding land use requirements or restrictions that protect pipeline ROWs. Some examples of messages to stakeholders include:

- encroachments inhibit the operator's ability to perform critical activities, including:
    - Conducting surveillance, routine maintenance and inspections
    - Accessing during emergencies
- the ROW area must be clear of trees, shrubs, buildings, fences, structures, or any other encroachments
- encroachments can contribute to increased damage to pipelines
- how community land use decisions impact pipeline safety;
- notification to the pipeline operator for construction activities that impact the pipeline's safe operation.

5.2 Damage Prevention

Table 6 sets forth baseline and enhanced damage prevention message topics for each stakeholder audience, type of pipeline, delivery method.

See Table 9 for delivery frequencies.

Table 6 – Damage Prevention Message Topics

Message Topics	Operators to Deliver	Baseline or Enhanced	Stakeholder audience
5.2.1 Damage Prevention Importance	T, D, G	Baseline Enhanced	AP, EX, PO EO
5.2.2 Damage Prevention Steps	T, D, G	Baseline Enhanced	AP, EX, PO EO
5.2.3 Threats or Suspected Damage to a Pipeline	T, D, G	Baseline	AP, EX, PO, EO

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The information below provides guidance for the damage prevention topics for operators.

5.2.1 Damage Prevention Importance

Operators should convey to stakeholder audiences the importance of damage prevention, noting that even relatively minor excavation activities (e.g. installing mailboxes, privacy fences and flag poles, performing landscaping, constructing storage buildings, placing signs, etc.) may cause damage to a pipeline or its protective coating or to other buried utilities.

5.2.2 Damage Prevention Steps

Operators should provide damage prevention message content consistent with the following messages:

- always call 811 or contact the One Call Center before digging,
- wait for the site to be marked,
- respect the marks,
- dig with care.

Operators should inform stakeholders that it is their responsibility to understand state laws or local ordinances where they excavate.

5.2.3 Threats or Suspected Damage to a Pipeline

Operators should encourage stakeholders to report damage to the pipeline system, observed threats, and suspicious activity on or near a pipeline system. Examples can include:

- Unauthorized or unmarked (e.g., lack of flags, marks, paint, etc.) excavation activity.
- Observed conditions that could threaten the integrity of the pipeline system (e.g., damage or exposed pipe, subsidence, sink holes, dead vegetation, or unstable soil).
- Observed suspicious activity on or near pipeline infrastructure, i.e., cutting locks or fences, turning valves, vandalism, or trespassing.
- Suspected damage to a pipeline from excavation activities.

Audiences should be directed to call 911 if a leak occurs and the pipeline operator if suspected damage occurs.

5.3 Emergency Preparedness

Table 7 sets forth baseline and enhanced emergency preparedness message topics for each stakeholder audience, type of pipeline, delivery method. These messages can be used to demonstrate that the operator has an ongoing relationship with emergency response officials, including 911 emergency call and dispatch centers and a program designed to prepare for and respond to an emergency.

See Table 9 for delivery frequencies.

Table 7 – Emergency Preparedness Message Topics

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Message Guidance	Operators to Deliver	Baseline or Enhanced	Stakeholder audience
5.3.1 Priority to Protect Life	T, D, G	Baseline	AP, EO, EX, PO
5.3.2 Emergency Response Plans	T, D, G	Baseline	EO
5.3.3 Emergency Drills and Exercises	T, D, G	Enhanced	AP, PO, EO
5.3.4 Leak Recognition and Response	T, D, G	Baseline	AP, EO, EX, PO
5.3.5 Special Emergency Response	T, D, G	Baseline	AP, EO

5.3.1 Priority to Protect Life

Operators should emphasize the priority to protect life, public safety, the environment, and property in any pipeline emergency response to stakeholder audiences

5.3.2 Emergency Response Plans

Operators should communicate the availability of emergency response plans to local emergency responders in order to increase awareness of pipelines and response to emergencies.

5.3.3 Emergency Drills and Exercises

Operators may communicate to emergency responders that drills and exercises are routinely conducted as part of their emergency preparedness. Operators may also communicate the opportunity for emergency responders to participate in emergency drills and exercises.

5.3.4 Leak Recognition and Response

Operators should provide information on how to recognize and respond to a suspected pipeline leak or a release.

Messages about recognizing the physical indications of pipeline leak should include the following:

- sights
- sounds
- smells

Messages about responding to a suspected pipeline leak should include the following:

- what to do if a leak is suspected
- what not to do if a leak is suspected
- to contact 911 and the operator in an emergency.

5.3.5 Special Emergency Response

Operators should include specific information on detection and response if the pipeline contains product that, when released, could be immediately hazardous to health (e.g., high concentration of H_2S, anhydrous ammonia, benzene, etc.). This can include product information, steps to take in an emergency, how to contact the facility operator, and where to find other relevant information.

State regulations may have different communication requirements. Operators may want to provide notification and/or evacuation information to affected stakeholder stakeholder audiences.

5.4 Pipeline Location

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Table 8 sets forth baseline and enhanced pipeline location message topics for each stakeholder audience, type of pipeline, delivery method. Operators should provide information about the location of the pipeline to stakeholder audiences to aid in the general awareness of pipelines, damage prevention and emergency response actions.

See Table 9 for delivery frequencies.

Table 8 – Pipeline Location Message Topics

Message Topic	Operators to Deliver	Baseline or Enhanced	Stakeholder audience
5.4.1 Pipeline Maps	T, G, D	Enhanced	AP, PO, EO, EX
5.4.2 Pipeline markers provide the general location of pipelines.	T, G D	Baseline Enhanced	AP, PO, EO, EX

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5.4.1 Pipeline Maps

Pipeline maps provide useful information to stakeholders. The level of detail in the map depends on the stakeholder's requirements, taking security of the energy infrastructure into consideration.

5.4.1.1 System Maps

System maps provide general depiction of a pipeline shown on a state, regional, or national scale. This type of map generally is not at a scale that poses security concerns and is often used by operators in publications available to the industry and general public. These maps provide a high-level overview of the pipeline route.

5.4.1.2 Local Maps

Maps that depict assets in a local area typically do not show the entire pipeline system.

5.4.1.3 National Pipeline Mapping System (NPMS)

In the United States, information including maps of communities that depict the natural gas and liquid transmission pipeline systems in the area is available from PHMSA.

Members of the general public and Stakeholder audiences may obtain pipeline location, mapping information, general products transported, and operator contact details at www.npms.phmsa.dot.gov. Distribution and gathering lines are not included in NPMS.

5.4.2 Pipeline Markers

Operators should convey information on pipeline markers, including how they identify the approximate location of a pipeline. Operators should communicate that pipeline markers:

- Indicate the approximate location of a pipeline
- Identify the product(s) transported
- Provide the name of the pipeline operator
- Provide the operator's telephone number, available 24-hours a day 7-days a week

Gathering lines and distribution lines may not use pipeline markers, but Stakeholder audiences may be made aware that these types of underground pipeline facilities may be nearby.

Public awareness materials should include examples or illustrations of pipeline markers.

6 Delivery Frequencies and Methods

Delivery frequencies and methods refer to how often and in what ways public awareness information is presented to stakeholder audiences. While this RP does not mandate a specific baseline delivery method, it does identify baseline delivery frequencies.

6.1 Delivery Frequencies

Table 9 establishes the baseline delivery frequencies by which operators should communicate with stakeholders. Delivery frequencies may vary based on factors such as delivery method, stakeholder audience, program effectiveness evaluation outcomes, pipeline type, or the unique characteristics of a pipeline system. An increased delivery frequency constitutes an enhancement to the program. Refer to section 8 for enhancements to pipeline awareness programs.

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Stakeholder	Type of Pipeline	Frequency
Affected public	T, G	2 years
Affected public	D	Annual (residents with operating service area)
LDC Customers	D	Twice Annually
Emergency Officials	T, G, D	Annual
Public Officials	T, G, D	2 years
Excavators	T, G, D	Annual

Table 9 – Delivery Frequencies

6.2 Delivery Methods

An operator's program should identify message delivery methods. Message delivery methods may vary based on factors such as the audience targeted, program effectiveness evaluation outcomes, pipeline type or a pipeline system's unique characteristics. Examples of delivery methods include, but are not limited to:

6.2.1 Mass Media Communications

Mass media is any means of communication that can reach a broad audience. Examples can include:

- Public Service Announcements (PSAs)
- News Media Coverage
- Community and Neighborhood Newsletters or apps
- Advertising
- Editorials and/or submitted articles
- Social media

6.2.2 Personal Contact

Personal contact can provide the opportunity for engagement with stakeholder audiences and can be a highly effective communication method. This may be done on an individual basis or in a group setting. Examples can include:

- Face-to-face interaction
- Door-to-door
- Meetings
- Open House events
- Facility tours
- Public meetings
- Emergency drills and exercises
- Telephone Calls
- Community Events

6.2.3 Liaison with Emergency Officials

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Information communicated to emergency responders may be more detailed, providing an opportunity for two-way feedback and mutual support. Operators shall offer to liaise with emergency officials.

Liaison activities can include:

- Learning the responsibility and resources of each government organization that may respond to a pipeline emergency
- Acquainting the officials with the operator's ability in responding to a pipeline emergency
- Identifying the types of pipeline emergencies of which the operator notifies the officials
- Planning how the operator and officials can engage in mutual assistance to minimize hazards to life or property

Additional information which can be provided includes:

- Availability of Emergency Response Plan(s)
- High Consequence Area Maps
- Asset location(s) within jurisdiction
- Product types and its associated Safety Data Sheet(s), if requested
- Contact information, such as local operator personnel contacts and/or operator emergency response team(s)
- Response strategy and capabilities

6.2.3.1 Emergency Drills and Exercises

An enhanced means of two-way communication about emergency preparedness is to establish liaison with emergency officials through operator or joint emergency response drills, exercises and routine trainings. Participating in scenario-based drills, deployment trainings or other emergency response exercises offers a platform to communicate messages, share information, gauge capabilities, test emergency response plans, align response procedures, and understand roles and responsibilities.

6.2.4 Excavation Notification or Response

Operators may choose to deliver messages through excavation notification systems. Positive response notification or One Call systems provide a platform for operators to deliver messages to stakeholders.

6.2.5 Community Investments and Charitable Donations

Operators may consider appropriate community or charitable opportunities where public awareness messages can be conveyed, including:

- sponsorship of emergency responders to attend training,
- contributions to local emergency responders,
- donation of funds to acquire or improve nature preserves or green space, etc.
- sponsorship of community events,
- support of scholarships.

6.2.6 Employee Advocates

An operator may include in the public awareness program provisions and training for familiarizing employees with public awareness information and materials. Trained employees may play an important role in promoting pipeline awareness and safety.

6.2.7 Printed Materials

Pipeline safety information may be communicated using printed materials.

Examples can include:

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- Brochures, bill stuffers, flyers, booklets or pamphlets;
- letters;
- door hangers;
- maps;
- postcards;
- promotional items;
- emergency responder training materials.

6.2.8 Digital Platforms

Targeted communication to stakeholder audiences may be conducted using digital content (e.g., text, audio, video or graphics) that is shared via internet, web applications, or personal communication devices. Operators may consider the use of other emerging technologies.

Examples of digital delivery can include:

- text messaging
- social media
- apps
- videos/ recorded content
- email
- online training

Operator websites may also serve as a potential channel to provide pipeline safety information to Stakeholder audiences.

6.3 Collaborative Programs

Collaborative programs can offer multiple pipeline operators an effective means of coordinating communication of common messages to common Audience Groups in a local, regional or national setting. Collaborative programs can provide consistency in messaging, collectively raising the overall awareness level of pipeline safety information among Audience Groups.

This approach may increase effectiveness, avoid conflicting messages, or reduce meeting fatigue. Operators utilizing collaborative programs for baseline communication should confirm the messages, frequencies, and delivery methods satisfy the objectives of their public awareness program. Collaborative programs may also be used in an enhanced effort to target common messages.

Examples of collaborative programs can include:

- Drills and exercises
- Liaison with public and emergency officials
- Training programs
- Education programs
- Industry and trade organizations
- One-call center outreach programs
- Mailings
- Multi-media efforts
- Other pipeline stakeholder initiatives

6.3.1 Collaborative Messages

Operators using common messages may consider collaborative messaging opportunities because of the broad-based applicability to Audience Groups.

Examples can include:

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- Damage prevention
- 811 and safe digging protocols
- Pipeline or product type
- Other common messages

6.3.1.1 Operator-specific Messages for Collaborative Programs

Operators electing to participate in a collaborative program can include information specific to their pipeline system. This is not intended to include batching or normal operation variances.

Elements that may be communicated in a collaborative program can include:

- Products transported and potential hazards (e.g., multi-line ROW with different products and different response actions, change in physical state if a release occurs)
- Pipeline systems and associated facilities, local distribution systems, gathering lines
- Other operator-specific information (e.g., operator/emergency contact information, asset changes)

6.4 Pipeline Markers

Operators should use pipeline markers to mark the approximate location of a pipeline, inform stakeholder audiences about the presence of a pipeline or pipelines, provide operator contact information and facilitate aerial or ground surveillance of the pipeline right-of-way.

For more information on pipeline markers, see 49 CFR Parts 192.707 and 195.410 and API 1109.

7 Program Implementation and Enhancements

Program implementation refers to actions that an operator takes to plan, conduct, review, and improve a public awareness program. At any time during program implementation, an operator may enhance a baseline program. An operator should develop a specific process for considering whether enhancements are warranted to achieve awareness objectives.

Figure 2 below describes the implementation of a public awareness program.

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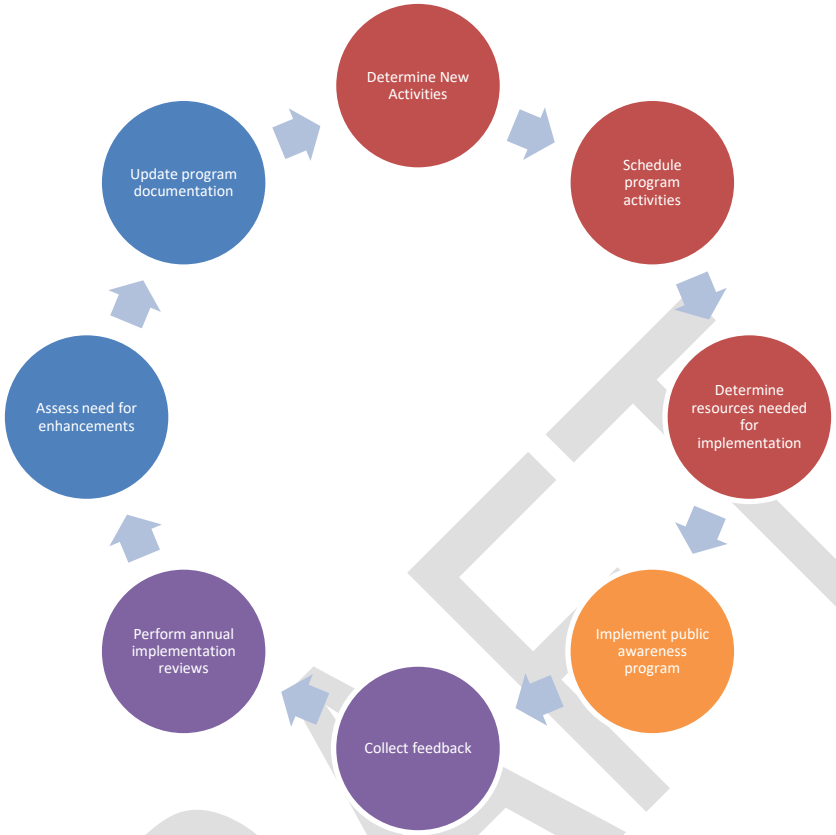
Figure 2 - Public Awareness Program Implementation



7.1 Program Implementation

To implement the program, an operator should:

- develop a schedule for conducting the program activities;
- develop resource support;
- identify, assign, and task participating company employees needed to implement the program;
- identify external resources or consultants needed;
- conduct program activities;
- periodically update the program with newly identified activities;
- identify and update the program due to asset changes that may affect public safety;
- collect feedback from internal and external sources;
- document the above.

See Annex E for a sample checklist that may aid an operator in implementing its public awareness program.

7.2 Program Enhancements

Each operator should establish a written process to determine if enhanced public awareness communication is warranted beyond the baseline program.

Examples of factors an operator can review when considering enhancing a program are:

- changes in potential hazards due to characteristics of product transported;
- asset changes;

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- high consequence areas (HCAs) (e.g. potential impact is greater for a specific area);
- population density (e.g. pipeline traverses densely populated urban area);
- land development activity (e.g. developers perform frequent excavations near pipeline);
- agricultural activity (e.g. pipeline route traverses active farming areas);
- third-party damage incidents (e.g. operator data show damages or near misses have increased);
- environmental considerations (e.g. pipeline route traverses environmentally sensitive area);
- pipeline history in an area (e.g. frequent number of incidents in a particular area);
- specific local situations (e.g. heightened public concern about pipeline safety);
- regulatory actions (e.g. advisory bulletin, findings from inspection);
- results from previous public awareness program evaluations (e.g. survey results indicate low stakeholder awareness).

7.2.1 Enhanced Communication due to Asset Changes

Asset, status, or product changes may require directly affected (AP, EO) stakeholders to recognize and respond differently to a hazard. This is not intended to include batching or normal operation variances. Operators conducting an enhanced public awareness program due to asset changes should communicate prior to the change but no later than 90 days after the change occurs or as soon as practicable.

Examples of when a communication is recommended:

- Initial operation of a new pipeline which introduces a new hazard (e.g., installing a second pipeline within the ROW transporting a different product which introduces new hazards that have not previously been communicated)
- Conversion to service (e.g., liquids to gas, gas to liquids, abandoned to in-service)
- Change in operator's emergency contact information (e.g., change to 24-hour emergency number)

Examples of when a communication is not expected:

- Batching (e.g., recognition/response generally the same across products)
- Variances in normal operations (e.g., operating pressure, bi-directional flow)

7.2.2 Program Enhancements Options

Public awareness enhancements may include:

- *Increased Frequency*—Providing communications to specific stakeholder audiences on a more frequent basis (shorter intervals) than the baseline public awareness program provisions.
- *Additional Message Content*—Providing re-phrased, different, or additional messages to specific stakeholder audiences beyond the baseline messages, and/or tailoring messages to address specific audience needs.
- *Alternative Delivery Method(s)*—Using different delivery methods (e.g. neighborhood meetings, door hangers, personal contact, etc.) to reach the target stakeholder audience.
- *Increased Coverage Area*—Broadening or widening the stakeholder audience coverage area (e.g. widening the buffer distance for reaching the stakeholder audience).

8 Public Awareness Program Evaluation

An operator should evaluate whether their Public Awareness Program is meeting the program's overall goal, accomplishing established objectives and achieving results in order to determine whether program changes are be warranted.

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To answer these questions, a public awareness program evaluation shall be performed and include, at a minimum, an annual implementation review and a core effectiveness evaluation.

An Operator may include additional evaluation activities.

8.1 Annual Implementation Review

The Annual Implementation Review should assess an operator's Public Awareness Program as implemented during the specified program year. This review is part of the "Check" phase of an iterative four-step approach (Plan, Do, Check, Adjust) used to manage processes and programs.

The primary purpose of the Annual Implementation Review is to determine and document that Public Awareness program activities outlined in the "Planning" phase were executed according to plan and any related procedures, guidance documents or vendor proposals. The Annual Implementation Review can be conducted by Company personnel or a third party. It should be noted that regulatory inspection documentation cannot be used as evidence of a Public Awareness Program Implementation review being completed.

The review shall, at a minimum, incorporate the elements included in the "Annual Public Awareness Program Implementation Assessment Form" in Annex I. Results of the review should be summarized in a written form or report.

An Operator may choose to address the following questions in their Annual Implementation review:

— **Assessment of Stakeholder Audience Identification** – Was the method used to identify audiences successful in identifying the audience types defined during the Planning Phase? Were any intended audiences missed? Were stakeholder contact lists accurate and complete based on criteria utilized for identification? If not, was a process created to validate accuracy and completeness?

— **Assessment of Communication Material** – Was the material appropriate for the audience? Was pre-testing feedback collected to substantiate message comprehension and understanding for the communication materials distributed?

— **Assessment of Delivery Method** – Was the delivery method appropriate for the Audience and consistent with the plan? Will this method be continued in future program years or will a new delivery method be selected?

— **Assessment of Delivery Interval** – Was delivery accomplished within the program's prescribed intervals?

— **Assessment of Message Distribution & Reach** – Did the audiences within coverage area as determined during the planning phase receive the appropriate material? Will any changes be made based on assessment of reach?

This list is not intended to be mandatory or exhaustive.

8.1.1 Validation of Stakeholder Contact List Accuracy

Operators may develop a process to validate the accuracy and completeness of stakeholder contact lists created during the stakeholder identification process. Validation of contact list accuracy may be performed by the operator or a third-party. The results of contact list validation activities may be reported as part of the Annual Implementation Review report or as part of the operator's assessment of reach for the program's Core Effectiveness Evaluation.

See Annex I for examples of validation activities that may be considered.

8.2 Core Effectiveness Evaluation

At least once every four years an Operator shall conduct a Core Effectiveness Evaluation and summarize the results of the evaluation in a report. An Operator may elect to conduct the evaluation on a more frequent basis.

The purpose of a Core Effectiveness Evaluation of a public awareness program is to periodically:

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- analyze and assess whether the current program is effective in achieving the overall objectives as defined in Section 4.1
- examine whether the program is achieving the results as defined in Section 8.2.1
- determine whether program changes are warranted based on an Operator's determination of program effectiveness

A Core Effectiveness Evaluation is used to monitor the program's progress during a specified period and provides an Operator with feedback to continue successes and/or determine whether program changes are warranted.

A Core Effectiveness Evaluation should follow a systematic method for collecting, analyzing and assessing data to answer questions about outreach effectiveness and stakeholder behavioral intent. An Operator should utilize standardized survey questions for each stakeholder group to collect data. The data collected should be analyzed to establish findings. Using these findings, the Operator should assess whether the program is attaining its overall goal, objectives and results or requires changes.

Data collection is only one of the steps in the Core Effectiveness Evaluation methodology. Data shall be measured, interpreted, and analyzed with the goal of discovering useful information, developing conclusions and supporting an Operator's assessment and determination of the program's effectiveness.

8.2.1 Core Effectiveness Evaluation Metrics

At a minimum, the Core Effectiveness Evaluation shall assess the following metrics for each stakeholder audience:

- reach
- recall
- message understanding
- behavioral intent

The Core Effectiveness Evaluation shall assess the extent to which the program achieved the desired results.

8.2.1.1 Stakeholder Reach

As part of the Core Effectiveness Evaluation, an operator shall determine the estimated percent of each stakeholder group reached with core messages through outreach activities.

The following are examples of methods an Operator may utilize to assess stakeholder reach:

- number of phone inquiries received by an Operator
- total and unique visits to the public awareness portions of an Operator's website
- number of response cards received by an Operator
- number of public officials, emergency officials/agencies who attend emergency response exercises
- other deliverability assessment results for specific outreach method selected (e.g. USPS data, e-campaign soft and hard bounce rates, total/unique impressions, number of subscribers)

To assess message reach, an Operator may want to verify the accuracy and completeness of stakeholder lists utilized for outreach. See Annex I for examples of methods for assessing list accuracy and completeness.

8.2.1.2 Stakeholder Recall

As part of the Core Effectiveness Evaluation, an operator shall determine the estimated percent of stakeholders who recall receiving prevention and response information.

To assess recall, an Operator should, at a minimum, utilize the standardized core questions in Annex G to collect data regarding recall for analysis and reporting.

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8.2.1.3 Stakeholder Message Understanding

As part of the Core Effectiveness Evaluation, an operator shall determine the estimated percent of stakeholders who understand prevention and response information.

To assess message understanding, an Operator should utilize the standardized core questions in Annex G to collect data for analysis and reporting.

8.2.1.4 Stakeholder Behavioral Intent

Assessing behavioral intent involves tracking and attempting to understand the underlying drivers for stakeholder behavior that can be influenced through the program. Assessing behavioral intent is different than assessing behavior change.

As part of the Core Effectiveness Evaluation, an operator shall determine the estimated percent of stakeholders who state they will engage in desired behaviors related to prevention and response.

To assess behavioral intent, an Operator should utilize the standardized core questions in Annex G to collect data for analysis and reporting.

8.2.1.5 Achieving Program Results

As part of the Core Effectiveness Evaluation, an operator shall determine if the program is achieving desired program results related to prevention and response.

"Achieving Results" related to prevention may be measured by the number of:

— third-party excavation incidents

— third-party excavation incidents that resulted in release

— third-party excavation incidents that did not result in release

— third-party excavation incidents per one call notifications or pipeline mileage

— third-party near miss events from excavations with a valid one call notification that did not result in a release

— third-party near miss events from excavations without a valid one call notification that did not result in a release

— number of stakeholder calls to report encroachments, damaged pipeline markers or suspicious activity

"Achieving Results" related to response may be measured by:

— number of reported incidents that required emergency response by local response agencies

— number of stakeholder calls reporting potential leaks or other possible safety issues

— post-incident after action reviews

8.2.2 Core Effectiveness Evaluation Data Collection

Operators should use quantitative research to collect data for each stakeholder audience. Quantitative research methods can include:

— online surveys

— phone surveys

— mail surveys

— business reply card questionnaires

— face-to-face surveys

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An Operator shall collect quantitative data for each stakeholder audience using the standardized core survey questions in Annex G. An Operator shall use the exact question wording and question type as listed in Annex G. Operators may include additional survey questions including, but not limited to, the survey questions listed in Annex H.

Operators shall use best efforts to collect sufficient data from each stakeholder group to maintain the statistical integrity of the data. Refer to Table 10 for guidance regarding data collection targets based on the size of each stakeholder group.

8.2.2.1 Stakeholder Data Collection Targets

The size of an Operator's stakeholder group will determine the recommended survey sampling methodology and data collection targets.

The following guidelines presented in Table 10 are provided to help operators set data collection targets and select appropriate data collection strategies based on the total population size of each stakeholder group and anticipated cooperation and incident rates.

Operators can consult with internal or external market research or survey professionals if they have questions about how to best apply the guidelines below to their program or to validate that a specific data collection approach aligns with these guidelines.

Table 10 – Guidelines for Data Collection

Stakeholder	Total Stakeholder Size / Population [a]	Target # of Survey Completes	Recommended Survey Sampling Approach	Estimated Margin of Error
Affected Public	≥ 11,250 contacts	≥ 225	Random sampling [d]	± 6.0% at 95% confidence level [b]
	< 11,250 contacts	≥ 225 or, if not feasible due to limited size of population, best effort to obtain as many responses as possible	Random sampling (if 225 completes can be captured) or, given limited size of population, census sampling	N/A [c]
Excavator	≥ 8,250 contacts	≥ 150	Random sampling [d]	± 6.2% at 90% confidence level [b]
	< 8,250 contacts	≥ 150 or, if not feasible due to limited size of population, best effort to obtain as many responses as possible	Random sampling (if 150 completes can be captured) or, given limited size of population, census sampling	N/A [c]
Emergency Response Officials	≥ 4,125 contacts	≥ 75	Random sampling [d]	± 8.7% at 90% confidence level [b]
	< 4,125 contacts	≥ 75 or, if not feasible due to limited size of population, best effort to obtain as	Random sampling (if 75 completes can be captured) or, given limited	N/A [c]

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		many responses as possible	size of population, census sampling	
Local Public Officials	≥ 4,125 contacts	≥ 75	Random sampling [d]	± 8.7% at 90% confidence level [b]
	< 4,125 contacts	≥ 75 or, if not feasible due to limited size of population, best effort to obtain as many responses as possible	Random sampling (if 75 completes can be captured) or, given limited size of population, census sampling	N/A [c]

[a] Assumes the following for completion / participation ratios: AP = 50:1 response rate; EX, ER and PO = 55:1

[b] Assumes 30 / 70 split. A 90 % Confidence Level is used to frame the margin of error for Excavators, Emergency Response Officials, and Local Public Officials given the more limited population size of these audiences.

[c] An estimated margin of error cannot be calculated because the number of completed surveys will be based on the operator's total stakeholder population size and will vary from operator to operator.

[d] Alternatively, operators may choose to utilize a census sampling approach if they desire to seek feedback from the full stakeholder population group.

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Operators may also use operational data as part of the Core Effectiveness Evaluation.

8.2.3 Core Effectiveness Evaluation Data Analysis & Reporting

Operators should analyze data collected for each standardized core survey question and create a report summarizing the analysis and findings.

8.2.3.1 Core Effectiveness Evaluation Data Analysis

Operators should analyze and assess data to answer questions outlined in Annex G. Operators may compare data to previous data collected and/or peer data. An Operator shall interpret the data, describe trends and highlight key findings. Applicable limitations to the evaluation should be noted in the report. Operators may choose to analyze their results by demographics or other segmented sub-groups (e.g. location, age, education level) to maximize the insights generated. This investigation may help affirm or refute expected outcomes and may allow an Operator to better utilize data collected to determine program effectiveness.

8.2.3.2 Core Effectiveness Evaluation Report

A Core Evaluation Report should describe data collection, analysis, findings and assessment. At a minimum, the report shall include:

— reference to standardized core questions utilized for each stakeholder audience

— summary of data collected using standardized core questions for each stakeholder audiences

— summary of the analysis performed on the data collected including comparison of program trends to historical evaluation cycles

— listing of the findings (if applicable)

— summary of effectiveness assessment for each program objective including any proposed program changes (if applicable)

8.3 Other Effectiveness Evaluation Activities

An Operator can conduct additional program effectiveness evaluation activities related to operator or coalition specific issues, factors or initiatives. Effectiveness evaluation activities may be utilized to assess program effectiveness in conjunction with the Core Effectiveness Evaluation.

9 Documentation

Each operator should collect and retain documentation of their public awareness program. These records demonstrate that an operator's program conforms with the recommendations of this RP. Documentation allows the program administrator to review the public awareness program and to demonstrate compliance with regulatory requirements.

9.1 Public Awareness Program Documentation

The public awareness program documentation should include the following:

- a description of the roles and responsibilities of personnel administering the program;
- identification of baseline and enhanced methods of communication to be used in the program and rationale for those decisions;
- documentation of the frequency and the basis for selecting that frequency for communicating with each of the targeted audiences;
- the process for identifying program enhancements beyond the baseline program, including the basis for implementing such enhancements;
- the program evaluation process, including the evaluation objectives, methodology to be used to perform the evaluation and analysis of the results, and criteria for program improvement based on the results of the evaluation.

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9.2 Other Documentation Records

Additional examples of documentation records that an operator can provide include:

- communication materials provided to each stakeholder audience (e.g. brochures, mailings, letters, digital communications, etc.);
- lists, records, or other documentation of stakeholder audiences with whom the operator has communicated (e.g. contact mailing rosters);
- implementation dates;
- postage receipts;
- audience contact documentation (e.g. sign-in sheets, invitation lists, etc.);
- program evaluations, including current survey results, follow-up actions and expected results;
- program enhancement(s).

9.3 Record Retention

The record retention period should be a minimum of five years, or as defined in the operator's public awareness program, whichever is longer. Retained records should include:

- lists, records, or other documentation of Stakeholder audiences with whom the operator has communicated;
- copies of all materials provided to each Stakeholder audience;
- all program evaluations, including current results and follow-up actions.

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Annex A
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Annex B
(informative)

Resources

B.1 Trade Associations

The major pipeline industry trade associations take an active role in sponsoring efforts to help operators meet public awareness objectives. The websites of these associations provide a wide range of information to assist operators in developing and managing public awareness programs and developing information to use in implementing them. The trade associations also undertake specific efforts in public outreach, such as the following:

— printing of pipeline safety brochures that may be customized by the operator;

— development and distribution of pipeline safety decals and materials;

— development of videos and brochures to aid in the education of public officials regarding pipeline emergency response;

— development of website information specifically for pipeline public awareness;

— distribution of periodic newsletters that provide additional guidance and information to operators on issues related to public awareness programs;

— development and sponsorship of television and radio PSAs;

— participation in appropriate trade shows to inform excavators, regulators, legislators, and others.

For additional information on these efforts, contact the trade associations below directly.

American Gas Association (AGA)
www.aga.org
400 N. Capitol Street NW
Suite 450
Washington, DC 20001

American Petroleum Institute (API)
www.api.org
200 Massachusetts Avenue NW
Washington, DC 20001

American Public Gas Association (APGA)
www.apga.org
201 Massachusetts Avenue NE
Suite C-4
Washington, DC 20002

Association of Oil Pipe Lines (AOPL)
www.aopl.org
1808 Eye Street NW
Washington, DC 20006

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Interstate Natural Gas Association of America (INGAA)
www.ingaa.org
10 G Street NE
Washington, DC 20002

B.2 Government Agencies

Some state agencies with regulatory authority for pipeline safety provide training and materials for public awareness programs or sponsor or conduct pipeline public awareness efforts. At the federal level, PHMSA is a source of relevant information. Contact information for federal regulators is below.

Pipeline and Hazardous Materials Safety Administration (PHMSA)
www.phmsa.dot.gov
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

The National Pipeline Mapping System (NPMS)
www.npms.phmsa.dot.gov
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Area E24-466
Washington, DC 20590

B.3 Private Organizations and Other Resources

B.3.1 Common Ground Alliance (CGA)

CGA (www.commongroundalliance.com) at 1421 Prince St., Suite 410, Alexandria, Virginia 22314, is a nationally recognized non-profit organization dedicated to shared responsibility in damage prevention. It oversees the “Dig Safely” campaign (www.digsafely.com), promotes 811 (www.call811.com), and has created best practices for protection of underground facilities. CGA sponsorship and membership are open to all stakeholder organizations that want to support the CGA’s damage prevention efforts. For information on the Damage Information Reporting Tool (DIRT), a web-based application for the collection and reporting of underground damage information, please visit www.cga-dirt.com.

B.3.2 Outside Consultants

Many outside consultants are available to support an operators’ public awareness program. Direct-mail vendors may produce and distribute pipeline safety materials. They may help identify residents and other stakeholders, such as excavators along the pipeline route. Public relations firms are also available to assist operators in developing material specifically geared to the intended audience. Their expertise may help heighten the readability of public awareness materials and improve the operator’s overall success in communicating the intended message. Research firms may be used to help operators measure the effectiveness of the programs.

B.3.3 Other Pipeline Companies

Pipeline companies have developed a variety of creative ways to meet public awareness objectives. Cooperative information exchanges or shared public awareness activities between operators may be beneficial and economical.

B.4 Publications

The AGA’s Gas Piping Technology Committee’s (GPTC Guide)—ASC GPTC Z380.1.

Hazards Associated with Striking Underground Gas Lines,
www.osha.gov/dts/shib/shib_05_21_03_sugl.pdf.

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B.5 One Call Centers

One Call Centers promote public safety, protect underground facilities (including pipelines), and minimize service interruptions by processing locate requests and providing damage prevention awareness education. In the United States, all states and the District of Columbia have established One Call Centers (some states may have multiple One Call Centers). Some One Call Centers develop public awareness information materials and gather extensive information about excavation contractors. If available to the pipeline operator, this information may be useful to fulfill regulatory requirements. Many One Call Centers perform their own public awareness outreach through PSAs, community events, advertising, and other methods. Some One Call Centers also sponsor statewide excavation hazard awareness programs.

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Annex C
(informative)

Sample Annual Internal Self-assessment

An internal self-assessment is one methodology to complete an annual evaluation of the program as described in Section 8 to assess program implementation.

Company Name: Click here to enter text.

DATE OF ASSESSMENT: enter date.

CONDUCTED BY: Click here to enter text.

PUBLIC AWARENESS PROGRAM YEAR ASSESSED: Click here to enter text.

A. PROGRAM DEVELOPMENT AND DOCUMENTATION

1. **What is the written Public Awareness Program effective date and revision number that was utilized for the currently assessed program year?**

Public Awareness Program	
Revision Number	**Effective Date**
	Click or tap to enter a date.

2. **Does the written program address the objectives in accordance with API RP 1162, Section 4.1? Provide a summary of how these objectives were achieved during the current assessment's program year.**

Included	Objective	Summary of How Objective was Achieved During Program Year
☐	Raise or enhance Audience Group awareness of the presence of pipelines in their communities and the hazards that pipelines may pose	
☐	Assist or help Audience Groups understand how to prevent pipeline emergencies	

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Included	Objective	Summary of How Objective was Achieved During Program Year
☐	Assist or help Audience Groups understand how to respond to potential pipeline damage and/or a pipeline emergency	

3. **Does the written program address regulatory requirements identified in RP 1162, as well as any state or other regulatory requirements pertaining to public awareness that the operator must comply?**

Yes	No
☐	☐

4. **Does the operator have a plan that includes a schedule for an annual program implementation assessment review?**

Yes	No
☐	☐

5. **During the program year, have any significant organizational changes occurred or changes in personnel with Public Awareness Program responsibilities? If so, provide a summary of changes below.**

Yes	No
☐	☐

Click here to enter text.

6. **Since the last annual implementation review, has the written program been updated to reflect any major pipeline system changes? If so, provide a summary of the major pipeline system changes.**

Yes	No
☐	☐

Click here to enter text.

7. **Does the written program identify and include roles and responsibilities of the program administrator?**

Yes	No
☐	☐

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8. **Are personnel with public awareness program responsibilities aware of the required tasks and management's support (both resources and budget) necessary to implement the program? If so, how is this communicated?**

Yes	No
☐	☐

Click here to enter text.

9. **Does the operator utilize external consultants or third-party vendors to provide support for specific program implementation or overall program support? If so, list the external consultants or third-party vendors and the program components or outreach in which they provided support during the currently assessed program year.**

External Support Company	Type of Support Provided

10. **Has the public awareness program been properly and adequately documented? Describe the process of how documentation is captured and where documentation is located.**

Yes	No
☐	☐

Click here to enter text.

11. **Has the written program been reviewed and/or updated to reflect new processes or newly identified program components?**

Yes	No
☐	☐

B. PROGRAM IMPLEMENTATION ASSESSMENT

Stakeholder Identification

1. **Provide a summary of stakeholder audiences who received baseline or enhanced communication during the current assessment's program year and the identification criteria.**

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Stakeholder Audience	**Communication Buffer/Parameters**	**Identified Criteria** **(SIC codes, job function titles, parcel data, etc.)**	**Internal List Included**	**Type of Internal List Included** **(if applicable)**
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Message Frequency and Methods

TABLE C.1: MESSAGE FREQUENCY

Audience	**Previous Outreach**		**Current Outreach**		**Comments** (Include details regarding specific systems and/or states included during current assessment's program year)
	Planned	**Date**	**Planned**	**Date**	
Affected Public	☐		☐		
Emergency Officials	☐		☐		
Excavators	☐		☐		
Public Officials	☐		☐		
Other Click or tap here to enter text.	☐		☐		

TABLE C.2: COMMUNICATION METHODS

Summarize the communication methods utilized during the current assessment's program year.

Audience	**Examples**	**Methods Used**	**Rationale for Method(s) Utilized**
Affected Public	• Targeted distribution of print materials	•	•
	• Electronic communication		

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Audience	Examples	Methods Used	Rationale for Method(s) Utilized
	• Personal contact • Mass media		
Emergency Officials	• Electronic communication • Personal contact • Targeted distribution of print materials	•	•
Excavators	• Targeted distribution of print materials • Electronic communication • Personal contact	•	•
Public Officials	• Targeted distribution of print materials • Electronic communication • Personal contact • Mass media	•	•

Message Content and Review

TABLE C.3: MESSAGE CONTENT REQUIREMENTS

Confirm the API RP 1162 required program messages that were communicated in accordance with the operator's written plan and schedule during the current assessment's program year. The messages in this table are required for all audience groups unless otherwise noted for a specific audience group or type of pipe operator.

Message Type	Affected Public	Emergency Officials	Excavators	Public Officials
	Completed during current program year	**Completed during current program year**	**Completed during current program year**	**Completed during current program year**
Obtaining Additional Information	☐	☐	☐	☐
Products Transported & Potential Hazards	☐	☐	☐	☐

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Message Type	Affected Public	Emergency Officials	Excavators	Public Officials
	Completed during current program year	**Completed during current program year**	**Completed during current program year**	**Completed during current program year**
Damage Prevention Importance *(AP, EX, PO)*	☐	☐	☐	☐
Damage Prevention Steps *(AP, EX, PO)*	☐	☐	☐	☐
Risks, Threats or Suspected Damage to a Pipeline	☐	☐	☐	☐
Priority to Protect Life	☐	☐	☐	☐
Emergency Response Plans *(EO only)*	☐	☐	☐	☐
Leak Recognition & Response	☐	☐	☐	☐
Pipeline Maps	☐	☐	☐	☐
Pipeline Markers Provide General Location *(required for transmission & gathering only)*	☐	☐	☐	☐

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TABLE C.4: ENHANCED MESSAGE CONTENT

Identify any enhanced message content that was communicated in accordance with the operator's written plan and schedule during the current assessment's program year. Operators have flexibility to determine if and when the enhanced message content in this table is communicated unless otherwise noted for a specific audience group or type of pipe operator.

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Message Type	Affected Public	Emergency Officials	Excavators	Public Officials
	Completed during current program year	**Completed during current program year**	**Completed during current program year**	**Completed during current program year**
Pipeline Purpose & Reliability	☐	☐	☐	☐
Sharing Pipeline Safety Information	☐	☐	☐	☐
ROW Encroachment & Purpose	☐	☐	☐	☐
Damage Prevention Importance *(EO only)*	☐	☐	☐	☐
Emergency Drills & Exercises *(AP, PO, EO)*	☐	☐	☐	☐
Pipeline Markers Provide General Location *(for distribution pipelines only)*	☐	☐	☐	☐

1. **Was pre-testing conducted on any baseline materials for the current program year? If so, provide summary of pre-testing methodology, type of stakeholder materials tested and location of supporting documentation.**

Yes	No
☐	☐

Click here to enter text.

2. **Was a language assessment conducted prior to affected public outreach during this program year? If so, provide a summary of the language assessment results (e.g. areas/zip codes exceeding identified threshold within written program, languages identified, data sources utilized, location of results, etc.).**

Click here to enter text.

C. ASSESS THE NEED FOR PROGRAM ENHANCEMENT

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1. **Was an assessment conducted during the current assessment's program years to determine if the public awareness program for the next program year warrants change or enhancement due to relevant factors along the operator's pipeline systems?**

Yes	No
☐	☐

2. **If an assessment of relevant factors was conducted, provide details regarding any identified triggers that warrants a program change or enhancement and a description of the planned activity or strategy to be implemented during the next program year.**

Relevant Factor Category	**Description of Identified Trigger**	**Planned Program Enhancement or Change** (describe outreach or strategy to be implemented)

D. REACH ASSESSMENT – LIST VALIDATION & DELIVERABILITY

The purpose of this section is to assess whether this year's implemented public awareness program effectively reached the targeted audiences based on the program goals as defined in the operator's written program and its objectives.

1. **LIST VALIDATION**
   To assess whether the public awareness baseline messages are reaching its intended stakeholders, was a list validation/list completeness review conducted in an effort to obtain the most accurate and complete mailing addresses of the program's stakeholders? Was the identification method that was utilized, effective in identifying stakeholders? If a validation process was completed, identify the stakeholder audience and the process utilized.

Stakeholder Audience	**List Validation Conducted**	**Date Conducted**	**Describe Process Utilized**
Affected Public	☐		
Emergency Officials	☐		

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Excavators	☐		
Public Officials	☐		
Other Click or tap here to enter text.	☐		

a. If a list validation/list completeness review was conducted, describe to results or findings of the assessment.

2. DELIVERABILITY

To assess the deliverability of program activities, use the tables below discuss outreach fluctuation and to estimated percent reached.

TABLE C.5: OUTREACH FLUCTUATION

Stakeholder Audience	Previous Year Outreach Total	Current Year Outreach Total	Fluctuation (% Change)	Rationale for Fluctuation

TABLE C.6: DELIVERABILITY ASSESSMENT – ESTIMATED PERCENT REACHED

Deliverability Assessment (Reach)				
Stakeholder Audience	**Deliverability Method**	**Quantity of Stakeholders Reached**	**Quantity of Stakeholders Not Reached**	**Estimated Percent Reach**

E. PROGRAM IMPLEMENTATION EFFECTIVENESS EVALUATION

Were program effectiveness efforts conducted to measure stakeholder message comprehension and knowledge, and behavioral intent during the current assessment's program year? If so, provide a high-level summary of the efforts completed and complete the table below.

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Surveys Conducted to Measure Message Comprehension & Knowledge & Desired Behaviors					
Audience	*Mail Survey*	*Phone Survey*	*Date Completed*	*In-House or Industry Survey*	*Location of Documentation*

1. **Did the results of the previous year's program implementation assessment identify the need for program changes? If applicable, provide a summary of the program improvements and/or changes implemented during this program year.**

Description of Program Component/Activity/Process Change	**Program Change**	**Program Enhancement**	**Basis for Implementation**
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	

2. **Have the results of the last public awareness program core effectiveness evaluation been utilized to improve the program or determine supplemental program components for the current assessment's program year? If so, provide a summary of any recommendations or changes that were implemented during this program year in follow up to the last core effectiveness evaluation.**

Description of Program Component/Activity/Process Change	**Program Change**	**Program Enhancement**	**Basis for Implementation**
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	

3. **Provide a summary of any other program or process improvements that were implemented during the current assessment's program year as a means of continuous improvement.**

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Annex D
(normative)

Additional Information on Surveying

D.1 Type of Survey

Surveys may be conducted in person, over the phone, or via mail questionnaires. Mail and telephone surveys are usually more cost-effective. All survey vehicles have advantages and disadvantages.

D.2 Sample Size

Typically, a survey is designed to reach a random number of the targeted Stakeholder audience. A variation on the random sample when conducting surveys in person is a “cluster sample” in which a block may be chosen at random and then a cluster of several households on the block visited at the same time. That is a relatively efficient way to increase sample sizes and not sacrifice much in statistical validity. The telephone numbers for affected residents are typically not readily accessible to the operator, although a random survey in a designated zip code or geographic area may include questions on whether the respondent lives or works along the pipeline (to ensure a sufficient number of the affected public is included in the survey). For conducting a survey in person, the operator may work with a random selection of homes or businesses drawn from aerial maps or simply by selecting segments at random to be visited near the pipeline. Mail surveys can be sent to all in a census tract, all in a zip code, or sub-zip code area. Third-party experts in conducting surveys may readily assist, at least for the first time a survey is attempted.

D.3 Statistical Confidence

There is typically concern about statistical reliability. Often this leads to needlessly expensive surveys when one only needs to know the approximate percentage of the target group that has been reached and is knowledgeable.

In deciding sample size, the following simplification should be considered.

The statistical error associated with a random survey is approximated by $1/\sqrt{n}$ where n is the size of the sample. A sample of 100 gives an accuracy of approximately, $1/\sqrt{100}$ or about 10 %.

There are a number of detailed assumptions behind that approximation, which is more valid the larger the total population to be surveyed. For smaller populations, the sampling error is actually even smaller than that approximation. Modest-size surveys may be used for evaluating pipeline safety for public awareness and still have statistical validity to support broad conclusions that, in turn, drive changes (as necessary) or support continuation (when supported) to the public awareness program.

D.4 Content

Different sets of questions are needed for different audiences. There obviously would be a different set of questions asked of households along a pipeline versus those asked of excavators. The survey questionnaire should be clear, brief, and pre-tested to increase the participation and minimize the cost. Operators should try to keep the questions the same over time so that trends may be evaluated. The questions may be yes/no, multiple choice, or open-ended. It is easier to analyze data from multiple choice or yes/no questions than open-ended questions; the latter require someone to read and interpret them and then complete computer-readable tallies or do a tally by hand. A combination of both open-end and multiple-choice questions may be used. A survey may focus on only one program element or several elements.

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Some thought is needed as to whether it is better to get open-ended responses that do not prompt the respondent, to avoid bias. A short example: One might be tempted to ask, “What number would you call if you saw a release from a pipeline,” but that question already assumes somebody would look up a number, which may be what you are trying to determine. A less biased question would be, “What would you do if you saw a break in a pipeline?”

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Annex E
(informative)

Public Awareness Program Checklist

The following sample checklist is compiled from the written text of API 1162 and can be used by the operator as a guide in implementing its public awareness program. The checklist is simply a tool that can be used at any phase, whether it's initial design or subsequent modification. As an example, if you are designing a new brochure, the checklist can be used to double-check that all required elements have been included. This sample checklist is by no means an all-inclusive list and is not intended to cover all possible public awareness activities.

Public Awareness Elements Checklist	
Define objectives Awareness Prevention Response	☐ ☐ ☐
Obtain management commitment	☐
Establish program administration Description of roles and responsibilities of personnel administering program Identify key personnel and titles	☐ ☐
Identify pipeline assets	☐
Identify Stakeholder audiences Affected public Residents located adjacent to transmission pipeline ROW Residents located along distribution systems Residents near liquid/natural gas storage and other operational facilities Residents located along ROW for gathering lines Places of congregation Emergency officials Local, city, county, state, or regional officials, agencies and organizations with emergency response and/or public safety jurisdiction in the area of the pipeline Public officials Local, city, county, state or regional officials, agencies, and/or their staff having land use and street/road jurisdiction in the area of the pipeline Excavators Companies and local/state government agencies who are involved in any form of excavation activities and/or land development and planning **Determine coverage area**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

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Determine baseline messages	☐
Transmission—Affected public	
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	☐
Right of way encroachment	
Transmission—Emergency officials	☐
Emergency preparedness communications	☐
Priority to protect life	☐
Emergency contacts	☐
Liaison with emergency officials	☐
Emergency response plans	☐
Emergency drills and exercises	☐
Leak/damage recognition and response	☐
National Pipeline Mapping System	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	
Potential hazards	
Transmission—Public officials	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
National Pipeline Mapping System	☐
One Call requirements	☐
Pipeline location information	☐
Potential hazards	☐
Transmission—Excavators	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	
Potential hazards	
Distribution—Affected public	
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐

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One Call requirements	☐
Pipeline location information	☐
Potential hazards	☐
Distribution—Emergency officials	
Emergency preparedness communications	☐
Priority to protect life	☐
Emergency contacts	☐
Liaison with emergency officials	☐
Emergency response plans	☐
Emergency drills and exercises	☐
Leak/damage recognition and response	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	
Distribution—Public officials	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	
Distribution—Excavators	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	
Potential hazards	
Gathering—Affected public	
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	☐
Gathering—Emergency officials	
Emergency preparedness communications	☐
Priority to protect life	☐

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Emergency contacts	☐
Liaison with emergency officials	☐
Emergency response plans	☐
Emergency drills and exercises	☐
Leak/damage recognition and response	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	☐
Gathering—Public officials	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	☐
Potential hazards	
Gathering—Excavators	☐
Damage prevention	☐
Suspicious activity	☐
Suspected damage	☐
Leak/damage recognition and response	☐
One Call requirements	☐
Pipeline location information	☐
Pipeline markers	☐
Pipeline mapping	
Potential hazards	
Determine baseline delivery frequency	
Transmission	
Affected public—2 years	☐
Emergency officials—1 year	☐
Public officials—2 years	☐
Excavators—1 year	☐
Distribution	
Affected public	
Customer—Twice a year	☐
Non-customer—1 years	☐
Emergency officials—1 year	☐
Public officials—2 years	☐
Excavators—1 year	☐
Gathering	
Affected public—2 years	☐
Emergency officials—1 year	☐
Public officials—2 years	☐

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Excavators—1 year	
Determine baseline delivery method for each Stakeholder audience based on required frequency Affected public Electronic communication (videos/CDs or e-mail), or Mass media (PSAs, paid advertising), or Personal contact(door-to-door, telephone, group meetings), or Targeted distribution of print materials Emergency officials Electronic communication (videos/CDs or e-mail), or Personal contact (door-to-door, telephone, group meetings), or Targeted distribution of print materials Public officials Electronic communication (videos/CDs or e-mail), or Personal contact (door-to-door, telephone, group meetings), or Targeted distribution of print materials Excavators Electronic communication (videos/CDs or e-mail), or Mass media (PSAs, paid advertising), or Personal contact (door-to-door, telephone, group meetings), or Targeted distribution of print materials	☐ ☐ ☐
Implement the program Develop a schedule for conducting the program activities Develop resource and monetary budgets Identify, assign and task participating company employees needed to implement the program Identify external resources or consultants needed Conduct program activities Periodically update the program with newly identified activities Collect feedback from internal and external sources and document	☐ ☐ ☐ ☐ ☐ ☐ ☐
Assess need for program enhancements Establish a written process for considering relevant factors	☐
Perform program evaluation Pre-test the effectiveness of materials upon initial design or major redesign Assess program implementation annually Internal self-assessment, or Third-party assessment, or Regulatory inspection Measure program effectiveness every four years Outreach Message comprehension Achieving results	☐ ☐ ☐ ☐ ☐ ☐ ☐
Collect and retain documentation Communication materials provided to each Stakeholder audience	☐ ☐

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Lists, records or other documentation of Stakeholder audiences with whom the operator has communicated	☐
Implementation dates	☐
Postage receipts	☐
Response cards	☐
Audience contact documentation	☐
Program evaluations, including current results, follow-up actions, and expected results	
Program enhancement	

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Annex G

Core Questions

(normative)

Table G.1 – Core Survey Questions: Affected Public

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Pipeline Proximity Awareness (Compreh.)	To the best of your knowledge are there currently [descriptor] pipelines operating in your community that transport [descriptor]?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness) 4.1.3 (Response)
Information Recall (Outreach)	**Within the past [time frame], do you recall reading, seeing or hearing information from a [descriptor] company related to pipelines and pipeline safety?**	• **Yes/No/Don't Know**	**Aided**	**4.1.1 (Awareness)**
Leak Recognition (Compreh.)	From what you've read, seen or heard, what are the kinds of things that might tell you that a [descriptor] pipeline is leaking? Please provide as many responses as come to mind.	• Smell (e.g., strong petroleum odor or rotten eggs) • Dead vegetation, • Noise (e.g., hissing or roaring sound) • Liquid on ground • Dirt being blown in the air • Fire or explosion • Dense white cloud or fog • Sheen on water	Unaided	4.1.1 (Awareness) 4.1.3 (Response)

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		• Other • Don't Know		
Damage Prevention (Behavioral Intent)	**If you were planning on digging [on your property,] which of the following actions would you likely take to avoid damaging a [descriptor] pipeline?**	• **Contact 811/the One-Call System** • **Contact the [descriptor] company** • **Call 911/Emergency operator** • **Other** • **Do Nothing** • **Don't Know** • **Other**	**Aided**	**4.1.1 (Awareness)** **4.1.2 (Prevention)**
Damage Prevention (Behavioral Intent)	If you were going to dig on your property, what number would you call, or website would you visit to have [descriptor] pipelines located and marked?	List with 811/One-Call [or a specific One-Call number] as one of the options	Aiided	4.1.1 (Awareness) 4.1.2 (Prevention)
Damage Prevention (Behavioral Intent)	**How often would you say you contact 811 or the One-Call System to identify whether a [descriptor] pipeline exists before digging? Would you say…**	• **Always** • **Usually** • **Sometimes** • **Rarely** • **Never** • **Don't know** • **N/A[1] – Don't dig on property**	**Aided**	**4.1.2 (Prevention)**

[1] When analyzing the results – the N/A results need to be recoded as missing (so as not to inappropriately impact the results)

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Hazard Awareness (Compreh)	To the best of your knowledge, what are the potential hazards associated with a [descriptor] pipeline leak?	• Sickness/Poisoning • Explosions • Fire/Flames • Injury/Death • Property Damage (e.g., to home, building, the surrounding area) • Water/Air/Environmental Contamination • Other • Don't Know	Unaided	4.1.1 (Awareness)
Leak Response (Behavioral Intent)	**There are several things you could do if you suspected a leak in a [descriptor] pipeline, what is the FIRST thing you would do?** **What else, if anything, would you do?**	• **Call 911/Emergency operator** • **Contact the pipeline company** • **Contact 811/the One-Call System** • **Leave/flee the area immediately** • **Shelter in place** • **Other** • **Do Nothing/Nothing Else** • **Don't Know**	**Unaided**	**4.1.1 (Awareness)** **4.1.3 (Response)**

Table G.2 – Core Survey Questions: Emergency Officials

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Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Pipeline Proximity Awareness (Compreh.)	To the best of your knowledge are there currently [descriptor] pipelines operating in your community that transport [descriptor]?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness) 4.1.3 (Response)
Information Recall (Outreach)	**Within the past [timeframe], do you recall reading, seeing or hearing information from a [descriptor] pipeline company related to pipelines and pipeline safety?**	• **Yes/No/Don't Know**	**Aided**	**4.1.1 (Awareness)**
Liason Recall (Outreach)	In the past [timeframe], have you or anyone in your [department/agency] met or communicated with any representative of a [descriptor] pipeline company to discuss pipeline safety and emergency response?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)
Hazard Awareness (Compreh)	**To the best of your knowledge, what are the potential hazards a [descriptor] pipeline leak poses to first responders and the community?**	• **Sickness/Poisoning** • **Explosions** • **Fire/Flames** • **Injury/Death** • **Property Damage (e.g., to home, building, the surrounding area)** • **Water/Air/Environmental Contamination** • **Other** • **Don't Know**	**Unaided**	**4.1.1 (Awareness)** **4.1.3 (Response)**

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Leak Response (Behavioral Intent)	When responding to a suspected leak in a [descriptor] pipeline, there are several things first responders can do. What is the FIRST thing you and your [department/agency] would do when responding to a suspected leak? What other response actions, if any, would you [department/agency] do?	• Call 911/Emergency operator • Identify and contact the pipeline company • Contact 811/the One-Call System • Turn off equipment • Turn off valves and/or meters • Evacuate/secure the area/establish a perimeter • Eliminate ignition source(s) • Shelter in place • Position equipment upwind and uphill of the site of the incident • Avoid driving into or operating mechanical equipment near a plume cloud • Protect people and property from exposure to fire • Provide first aid to injured • Other • Do Nothing/Nothing Else • Don't Know	Unaided	4.1.1 (Awareness) 4.1.3 (Response)
Information Sharing (Behavioral Intent)	**In general, do you share with employees or co-workers the information you receive from [descriptor] pipeline companies regarding pipeline safety, public awareness, and one-call requirements?**	• **Yes/No/Don't Know**	**Aided**	**4.1.1 (Awareness)** **4.1.2 (Prevention)** **4.1.3 (Response)**

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Identifiers	Please describe the organization or agency where you currently have a position	• Fire Service Agency or Fire Department • Law Enforcement Agency • 911 or a Public Safety Access Point (PSAP) • Emergency Management or Planning • Other	Flexibility to Ask Either Aided or Unaided	

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Table G.3 – Core Survey Questions: Excavators

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Information Recall (Outreach)	Within the past [time frame], do you recall reading, seeing or hearing information from a [descriptor] company related to pipelines and pipeline safety?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness)

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Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Leak Recognition (Compreh.)	From what you've read, seen or heard, what are the kinds of things that might tell you that a [descriptor] pipeline is leaking? Please provide as many responses as come to mind.	• Smell (e.g., strong petroleum odor or rotten eggs) • Dead vegetation • Noise (e.g., hissing or roaring sound) • Liquid on ground • Dirt being blown in the air • Fire or explosion • Dense white cloud or fog • Sheen on water • Condition of the pipe (e.g. corrosion, cracks, rust) • Bubbling of water • Other • Don't Know	Unaided	4.1.1 (Awareness) 4.1.3 (Response)
Damage Prevention (Behavioral Intent)	What are all the precautions you or your company take to avoid damaging a [descriptor] pipeline? Please consider precautions that may be taken before, during and after an excavation project.	• Contact 811/the One-Call System • Call 911/Emergency operator • Contact the pipeline company • Hand dig first • Physical inspection • Look for marked pipelines or pipeline markers • Wait for lines to be marked before digging • Pothole/ dig test holes/spot check for lines/use a spotter • Use maps/NPMS • Leave matting over excavation site • Proper backfill • Do Nothing • Other • Don't Know	Unaided	4.1.2 (Prevention)
Damage Prevention	How often would you say your company contacts 811 or the	• Always • Usually	Aided	4.1.2 (Prevention)

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Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
(Behavioral Intent)	One-Call System to identify whether a [descriptor] pipeline exists in a work area before digging? Would you say…	• Sometimes • Rarely • Never • Don't know		
Hazard Awareness (Compreh)	To the best of your knowledge, what are the potential hazards associated with a [descriptor] pipeline leak?	• Sickness/Poisoning • Explosions • Fire/Flames • Injury/Death • Property Damage (e.g., to home, building, the surrounding area) • Water/Air/Environmental Contamination • Other • Don't Know	Unaided	4.1.1 (Awareness) 4.1.3 (Response)
Leak Response (Behavioral Intent)	There are several things you could do if you suspected a leak in a [descriptor] pipeline, what is the FIRST thing you would do? What else, if anything, would you do?	• Call 911/Emergency operator • Contact the pipeline company • Contact 811/the One-Call System • Leave/flee the area immediately • Turn off equipment • Turn off valves and/or meters • Evacuate/secure the area • Eliminate ignition source(s) • Shelter in place • Contact supervisor • Other • Do nothing/Nothing Else • Don't Know	Unaided	4.1.3 (Response)

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Table G.4 – Core Survey Questions: Public Officials

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Pipeline Proximity Awareness (Compreh.)	To the best of your knowledge are there currently [descriptor] pipelines operating in your community that transport [descriptor]?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness) 4.1.3 (Response)
Information Recall (Outreach)	**Within the past [timeframe], do you recall reading, seeing or hearing information from a [descriptor] pipeline company related to pipelines and pipeline safety?**	• **Yes/No/Don't Know**	**Aided**	**4.1.1 (Awareness)**
Information Recall (Compreh.)	If you needed to find out how to contact the companies that are operating [descriptor] pipelines in your community, how would you do that?	• NPMS/PIMMA • Contact emergency management/LEPC • 911/Emergency operator • 811/One-call center • PHMSA/State Regulators • Contact local government (e.g., mayor's office, city administrator, etc.) • Refer to pipeline markers • Internet search • Telephone search (e.g., 411) • I already know this information • Other • Don't Know	Unaided	4.1.1 (Awareness)

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Damage Prevention (Behavioral Intent)	**What are all the precautions your agency or department, or your hired contractors take to avoid damaging a [descriptor] pipeline? Please consider precautions that may be taken before, during and after an excavation project.**	• **Contact 811/the One-Call System** • **Call 911/Emergency operator** • **Contact the pipeline company** • **Hand dig first** • **Physical inspection** • **Look for marked pipelines** • **Wait for lines to be marked before digging** • **Pothole/ dig test holes/spot check for lines/use a spotter** • **Use maps/NPMS** • **Leave matting over excavation site** • **Proper backfill** • **Do Nothing** • **Other** • **Don't Know**	**Unaided**	**4.1.2 (Prevention)**
Hazard Awareness (Compreh.)	To the best of your knowledge, what are the potential hazards a [descriptor] pipeline leak poses to the community?	• Sickness/Poisoning • Explosions • Fire/Flames • Injury/Death • Property Damage (e.g., to home, building, the surrounding area) • Water/Air/Environmental Contamination • Traffic disruption • Other • Don't Know	Flexibility to Ask Either Aided or Unaided	4.1.1 (Awareness)

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Information Sharing (Behavioral Intent)	**In general, do you share with employees or co-workers the information you receive from [descriptor] pipeline companies regarding pipeline safety, public awareness and one-call requirements?**	• **Yes/No/Don't Know**	**Aided**	**4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)**
Identifiers	Please describe your primary role at the organization or agency where you currently have a position	• City Manager/Council Member • County Clerk, Commissioner, Or Supervisor • Judge or Judge Advocate • Mayor • Legislator • Permitting or Planning Official • Public Works or Road & Highway Maintenance Official • Other	Flexibility to Ask Either Aided or Unaided	

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Annex H

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Supplemental Questions

(normative)

Table H.1 – Supplemental Survey Questions: Affected Public

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Information Recall	Specifically, how did you receive this safety information from the [descriptor] company, or companies [, about pipelines and pipeline safety]? Note: Asked only to those who recall receiving safety information	• Written material (e.g., mailing, brochure, flyer, door hanger, etc.) • Face-to-face meeting with a company representative (e.g., in-person meeting, open house, etc.) • Telephone call • Email • The Internet • Social media (e.g., Facebook, Twitter, etc.) • Text message • Radio • TV • Newspaper ad or article • Posted signs or other information near a pipeline • Word of mouth • Other • Don't Know	Flexibility to Ask Either Aided or Unaided	4.1.1 (Awareness)
Information Recall	**If a [descriptor] company were to communicate with you in the future about [descriptor] pipeline safety, what method(s) would you prefer they use?**	• **Same list as Supplemental item about existing communication methods**	**Flexibility to Ask Either Aided or Unaided**	**4.1.1 (Awareness)**

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Information Recall	On a Scale of 1 – 5 where 1 is Very Informed and 5 is Not at all Informed, how informed or uninformed would you say you are regarding [descriptor] pipelines in your neighborhood or surrounding area?	1) Very Informed 2) 3) 4) 5) Not at All Informed	Aided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)
Damage Prevention	**Why don't you always contact 811 or the One-Call System to see if a [descriptor] pipeline exists, and where it is located, prior to digging? [Please provide as many responses as come to mind.]** **Note: Only asked to Affected Public who DO NOT ALWAYS contact 811/One-Call before digging**	• **Didn't know where to get the information** • **It wasn't necessary** • **Not a legal requirement in your state** • **Didn't think about it** • **Takes too much time** • **You can tell where the pipeline is on your own** • **Done previously – don't need to do it again** • **It's your property – you can decide when to check** • **Other (please specify)** • **Don't Know**	**Flexibility to Ask Either Aided or Unaided**	**4.1.2 (Prevention)**
Leak Response	On a scale from 1 to 5 where 1 is Extremely Confident and 5 is Not at All Confident, how confident are you that you will take measures to ensure your safety in the event of a [decriptor] leak?	• 1 = Extremely Confident • 2 • 3 = Neither Confident nor Not at All Confident • 4 • 5 = Not at All Confident	Aided	4.1.3 (Response)

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Trust	**How strongly do you agree with each of the following statements?** **I feel very confident about [descriptor] ability to keep me safe.** **AND/OR** **[Descriptor] has the ability to accomplish what it says it will do regarding pipeline public safety.** **AND/OR** **Sound principles seem to guide [descriptor] behavior regarding pipeline public safety.** **AND/OR** **Whenever [descriptor] make important decisions about pipeline safety I know they will be concerned about people like me.**	• **Strongly Agree** • **Somewhat Agree** • **Neither Agree nor Disagree** • **Somewhat Disagree** • **Strongly Disagree** • **Don't Know**	**Aided**	

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Table H.2 – Supplemental Survey Questions: Emergency Officials

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Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Information Recall	If you needed to find information on the product(s) that are transported through pipelines in your area, how would you do that?	• NPMS/PIMMA • Contact the pipeline operators • Contact emergency management/LEPC • PHMSA/State Regulators • 911/Emergency operator • Refer to pipeline markers • N/A – I already know this information • Other • Don't Know	Unaided	4.1.1 (Awareness)
Information Recall	**What product(s) are transported through pipelines in your area?**	• **Natural gas** • **Crude oil** • **Refined products (e.g. gasoline, jet fuel, fuel oil)** • **Highly volatile liquids (e.g. propane)** • **CO_2** • **Chemicals** • **Other** • **Don't Know**	**Unaided**	**4.1.1 (Awareness)** **4.1.2 (Prevention)** **4.1.3 (Response)**
Information Recall	How informed or uninformed would you say you are regarding [descriptor] pipelines in your community?	• Very Informed • Somewhat Informed • Not Too Informed • Not at All Informed • Don't Know	Aided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)
Leak Recognition	**From what you've read, seen or heard, what are the kinds of things that might tell you that a [descriptor] pipeline is leaking? Please provide as many responses as come to mind.**	• **Smell (e.g., strong petroleum odor or rotten eggs)** • **Dead vegetation,** • **Noise (e.g., hissing or roaring sound)** • **Liquid on ground** • **Dirt being blown in the air**	**Unaided**	**4.1.1 (Awareness)** **4.1.3 (Response)**

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		• **Fire or explosion** • **Dense white cloud or fog** • **Sheen on water** • **Other** • **Don't Know**		
Leak Response	On a scale from 1 to 5 where 1 is Extremely Confident and 5 is Not at All Confident, if a [descriptor] pipeline emergency occurred in your community, how confident do you feel about your [department/ agency's] ability to respond successfully?	• 1 = Extremely Confident • 2 • 3 = Neither Confident nor Not at All Confident • 4 • 5 = Not at All Confident	Aided	4.1.3 (Response)
Leak Response	**What information that [descriptor] pipeline companies are not currently providing; do you feel your [department/agency] needs that would help in the event of a pipeline emergency? [Would you say you need…]**	• **Maps** • **Emergency Response Plans** • **Emergency Procedures** • **Training** • **Excavation Procedures** • **Encroachment Guidelines** • **Response Capabilities** • **Contact Information** • **Location of Pipeline** • **Depth of Pipeline** • **Product Information** • **Nothing else needed** • **Don't Know**	**Flexibility to Ask Either Aided or Unaided**	**4.1.3 (Response)**
Leak Response	Does your [department/ agency] have an emergency response plan or standard operating procedure for responding to a [descriptor] pipeline emergency?	• Yes/No/Don't Know	Aided	4.1.3 (Response)
Leak Response	**Has someone in your [department/agency] conducted and/or participated in any pipeline emergency-related training, such as drills or exercises?**	• **Yes/No/Don't Know**	**Aided**	**4.1.3 (Response)**

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Engagement	In which of the following ways do [descriptor] pipeline companies in your jurisdiction engage with your [department/agency]? [Descriptor] pipeline companies…	• Keep us informed regarding pipelines in our community and joint emergency response. • Provide an opportunity for our agency to share information, concerns, ideas and feedback regarding pipelines in our community and joint emergency response. • Provide an opportunity for our agency to influence joint emergency response. • Provide an opportunity for our agency to work collaboratively to develop plans for joint emergency response.		

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Table H.3 – Supplemental Survey Questions: Excavators

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Near Miss & Incidents (Behavioral Intent)	In the past year, how many times, if any, has your company been involved in a pipeline incident that resulted in damage to a [descriptor] pipeline?	Accept any whole number starting with 0 (and have ability to code Don't Know)	Unaided	4.1.2 (Prevention)
Pipeline Proximity Awareness	To the best of your knowledge are there currently [descriptor] pipelines operating in your community that transport [descriptor]?	• Yes/No/Don't Know	Aided	4.1.1 (Awareness)
Information Recall	Specifically, how did you receive this safety information from the [descriptor] company, or companies [about pipelines and pipeline safety]?	• Written material (e.g., mailing, brochure, flyer, door hanger, etc.) • Face-to-face meeting with a company representative (e.g., in-person meeting, open house, etc.) • Telephone call • Email • The Internet • Social media (e.g., Facebook, Twitter, etc.) • Text message • Radio • TV • Newspaper ad or article • Posted signs or other information near a pipeline • Word of mouth • Other • Don't Know	Flexibility to Ask Either Aided or Unaided	4.1.1 (Awareness)
Information Recall	If a [descriptor] company were to communicate with you in the future about [descriptor] pipeline safety, what method(s) would you prefer they use?	• Same list as Supplemental item about existing communication methods	Flexibility to Ask Either Aided or Unaided	4.1.1 (Awareness)

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Damage Prevention	Why doesn't your company always contact 811 or the One-Call System to see if a [descriptor] pipeline exists, and where it is located, before digging? Note: Only asked to Excavators who DO NOT ALWAYS contact 811/One-Call before digging	• Didn't know where to get the information • Not necessary • Not a legal requirement in my state • Didn't think about it • Takes too much time • We can tell where pipeline is on our own • Done previously – don't need to do it again • No pipeline in the area • We don't do any digging • Other • Don't know	Aided	4.1.2 (Prevention)
Damage Prevention	On a scale from 1 to 5 where 1 is Extremely Confident and 5 is Not at All Confident, how confident are you in your organization's ability to read and dig safely near temporary markings for underground [descriptor] lines?	• 1 = Extremely Confident • 2 • 3 = Neither Confident nor Not at All Confident • 4 • 5 = Not at All Confident	Aided	4.1.1 (Awareness 4.1.2 (Prevention)
Information Sharing	In general, do you share with employees or co-workers the information you receive from [descriptor] pipeline companies regarding pipeline safety, public awareness and One-Call requirements?	• Yes/No/Don't Know	Unaided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)

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Near Miss & Incidents	For the purpose of this question, a near miss is defined as "discovering the [descriptor] pipeline while doing excavation work without actually touching it or causing damage". In the past year, how many times has your company experienced a near miss with a pipeline while digging?	Accept any whole number starting with 0 (and have ability to code Don't Know)	Unaided	4.1.2 (Prevention)
Near Miss & Incidents (Behavioral Intent)	In the past year, how many times, if any, has your company been involved in a pipeline incident that resulted in damage to a [descriptor] pipeline?	Accept any whole number starting with 0 (and have ability to code Don't Know)	Unaided	4.1.2 (Prevention)
Identifiers	Approximately how many people are currently employed at your company?	Accept any whole number starting with 0 (and have ability to code Don't Know)	Unaided	
Identifiers	How would you best describe your business or line of work?	• Excavator • General Contractor • Specialized Contractor • Builder/ Developer • Other • Don't Know	Unaided	
Identifiers	What is your job title?		Unaided	

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Table H.4 – Supplemental Survey Questions: Public Officials

Topic (Meas. Factor)	Question Stem	Response Categories	Unaided/ Aided Flag	Section 4 Objectives
Information Recall (Behavioral Intent)	In the past [timeframe], have you or anyone in your [department/agency] met or communicated with any representative of a [descriptor] pipeline company to discuss pipeline safety and emergency response?	**Yes/No/Don't Know**	Aided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)
Information Recall	**How informed or uninformed would you say you are regarding [descriptor] pipelines in your community?**	• **Very Informed** • **Informed** • **Somewhat Informed/Somewhat Not Informed** • **Not Too Informed** • **Not at All Informed** • **Don't Know**	**Aided**	**4.1.1 (Awareness)** **4.1.2 (Prevention)** **4.1.3 (Response)**
Information Recall	What product(s) are transported through pipelines in your area?	• Natural gas • Crude oil • Refined products (e.g. gasoline, jet fuel, fuel oil) • Highly volatile liquids (e.g. propane) • CO2 • Chemicals • Other • Don't Know	Unaided	4.1.1 (Awareness) 4.1.2 (Prevention) 4.1.3 (Response)
Damage Prevention	**How familiar are you with either the 811 number, that is the toll-free national "Call before you dig" telephone number, or the One-Call System in your area? Would you say…**	• **Very familiar** • **Somewhat Familiar** • **Somewhat Unfamiliar** • **Very Unfamiliar** • **Never Heard of Either 811/One-Call System** • **Don't Know**	**Aided**	**4.1.2 (Prevention)**

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Damage Prevention	Are you aware of any preventive measures that [descriptor] pipeline companies take in order to maintain safe operations? If so, which ones?	• Aerial and ground patrols • Pipeline corrosion prevention measures • Pipeline emergency response exercises • Pipeline inspections and maintenance • Pipeline monitoring • Pressure testing • Public awareness programs • Other • Not aware of any prevention measures • Don't know	Unaided	4.1.2 (Prevention)
Leak Recognition	**From what you've read, seen or heard, what are the kinds of things that might tell you that a [descriptor] pipeline is leaking? Please provide as many responses as come to mind.**	• **Smell (e.g., strong petroleum odor or rotten eggs)** • **Dead vegetation,** • **Noise (e.g., hissing or roaring sound)** • **Liquid on ground** • **Dirt being blown in the air** • **Fire or explosion** • **Dense white cloud or fog** • **Sheen on water** • **Other** • **Don't Know**	**Unaided**	**4.1.1 (Awareness)** **4.1.3 (Response)**
Leak Response	On a scale from 1 to 5 where 1 is Extremely Confident and 5 is Not at All Confident, if a [descriptor] pipeline emergency occurred in your community, how confident do you feel about your department agency's ability to respond successfully?	• 1 = Extremely Confident • 2 • 3 = Neither Confident nor Not at All Confident • 4 • 5 = Not at All Confident	Aided	4.1.3 (Response)

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Leak Response	**There are several things you and your organization could do if you suspected a leak in a [descriptor] pipeline, what is the FIRST thing you would do?** **What else, if anything, would you do?**	• **Call 911/Emergency operator** • **Contact the pipeline company** • **Contact 811/the One-Call System** • **Leave the area immediately** • **Turn off equipment** • **Turn off valves and/or meters** • **Evacuate/secure the area** • **Eliminate ignition source(s)** • **Shelter in place** • **Other** • **Do nothing/Nothing Else** • **Don't Know**	**Unaided**	**4.1.3 (Response)**
Leak Response	What information that [descriptor] pipeline companies are not currently providing; do you feel your [department/agency] needs that would help in the event of a pipeline emergency? [Would you say you need…]	• Maps • Emergency Response Plans • Emergency Procedures • Training • Excavation Procedures • Encroachment Guidelines • Response Capabilities • Contact Information • Location of Pipeline • Depth of Pipeline • Product Information • Nothing else needed • Don't Know	Unaided	4.1.3 (Response)

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Trust	**How strongly do you agree with each of the following statements** **I feel very confident about [descriptor] ability to keep me safe.** **AND/OR** **[Descriptor] has the ability to accomplish what it says it will do regarding pipeline public safety.** **AND/OR** **Sound principles seem to guide [descriptor] behavior regarding pipeline public safety.** **AND/OR** **Whenever [descriptor] make important decisions about pipeline safety I know they will be concerned about people like me.**	• **Strongly Agree** • **Somewhat Agree** • **Neither Agree nor Disagree** • **Somewhat Disagree** • **Somewhat Disagree** • **Don't Know**	**Aided**	
Identifiers	How long have you been in your current role?	• Allow for years in whole numbers with an option for Don't Know	Unaided	

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Screener	**To make sure I am speaking with the right person let me first ask this: Are you or is anyone in your office or department involved in reviewing plans, providing input, approving or overseeing any of the following?** **a. The siting or location of new hazardous liquid or natural gas pipelines** **b. Residential, commercial or commercial developments** **c. Reviewing, approving or maintaining any street, road or highways in your area** **d. Identifying or inspecting hazardous liquids or natural gas pipeline or related facilities**	• **Yes/No/Don't Know**	**Unaided**	

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Annex I

Examples of List Validation Activities

(informative)

The following examples are not intended to be inclusive of all options for stakeholder contact list validation activities:

- Consultation with individuals who have knowledge regarding stakeholders in their community or jurisdiction (i.e. County Emergency Management personnel, internal Subject Matter Experts)
- Comparison of multiple lists created using different sources or methodology
- Rooftop count analysis using GIS data and software
- Comparison to contact lists included within operator's Emergency Response Plans or managed by operator's dispatch function
- Walking or driving within randomly selected areas to physically collect addresses for validation
- Internet research, web sites, phone calls to all or a random sample of contacts
- Comparison to directory list provided by stakeholder representatives (i.e. Homeowners Associations, State Fire Agency organizations, Association of Mayors, American Association of Planners, National Emergency Number Association, Federal Communications Commission)
- Tile or role-based review for selected communities or titles

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