



Four-Year Effectiveness Evaluation

A comprehensive review of the public awareness outreach for UGI Utilities, Inc.

Provided by Paradigm October 8th, 2020

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OBJECTIVES AND METHODOLOGY

Study Objectives

The four-year effectiveness evaluation is performed to measure the effectiveness of the Public Awareness Program (PAP) implemented by UGI Utilities, Inc. from 2016 - 2019. The study was developed and performed in order for UGI Utilities, Inc. to comply with 49 CFR Part 192.616 and API RP 1162, and thus increase the safety of the stakeholders along, or in proximity of their pipeline systems and facilities.

The objectives of the study are as follows:

1. Measure program outreach and percentage of stakeholders actually reached
2. Measure stakeholder's understandability of the public awareness messages
3. Measure stakeholders' behavior alignment with public awareness messages
4. Measure UGI Utilities, Inc.'s bottom line results
5. Compare results of study against UGI Utilities, Inc.'s PAP objectives
6. Understand key findings
7. Identify program improvement considerations

UGI Utilities, Inc. PAP Objectives

1. To educate non-customers who live, work, and recreate near the UGI Utilities, Inc. natural gas pipeline how to recognize the odor of natural gas. Also to educate them how to respond if they detect possible natural gas odors. Early recognition of gas odor and proper response can save lives and prevent damage to property and the pipeline.
2. To raise awareness of the stakeholder audiences as identified in API RP 1162, First Edition, of the presence of the buried UGI Utilities, Inc. natural gas pipeline. A more informed public will also understand that they have a significant role in helping prevent third-party damage accidents to the pipeline.
3. To help excavators understand the steps that they can take to prevent third-party damage and how to respond properly if they cause damage to our pipeline.
4. To help emergency response agencies that may assist UGI Utilities, Inc. in an emergency understand the proper actions to take in response to a natural gas release or third-party damage incident.

API RP 1162 Four Measures (§ 8.4)

- | | |
|-------------------------|----------------------------------|
| 1. Outreach | 2. Understandability of Messages |
| 3. Stakeholder Behavior | 4. Bottom Line Results |

Study Methodology

An all-audience survey was designed by Paradigm in conjunction with UGI Utilities, Inc. to apply specific measures to each API RP 1162 audience category. UGI Utilities, Inc. utilized Paradigm to field a phone survey using a statistically valid portion of the stakeholder audience group. Stakeholders were randomly selected from the most recent public awareness program stakeholder analysis. Appropriate questions included the use of the pipeline operator name to measure specific outreach and effectiveness efforts of UGI Utilities, Inc.. Between 26 and 28 questions, depending on stakeholder audience, were asked with each survey taking between 15-20 minutes. A series of demographic questions were asked to identify key metrics that may drive public awareness messaging in future Programs. Multiple attempts were made to each record in order to achieve a statistical sample size to apply the results to the entirety of UGI Utilities, Inc.'s stakeholder population.

Identification of Stakeholders

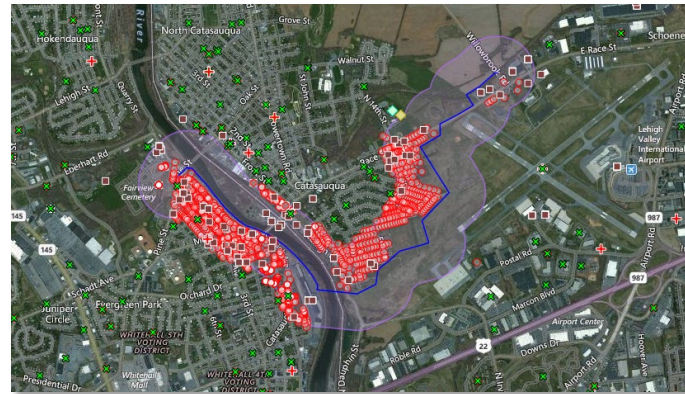
UGI Utilities, Inc. provided parcel data to Paradigm for GIS analysis. Paradigm generated a Coverage Map and Asset County Index for UGI Utilities, Inc. to approve. The records were key-coded with the appropriate system and stakeholder audience for versioning for survey implementation.

Stakeholder Audience Buffer Specifications:

Utilizing Geographic Information System (GIS) technology, Paradigm identified the stakeholder audiences applicable to the company centerline data as follows:

- Affected Public – 1,320 feet total, 660 feet ESOP*
- Emergency Officials – Asset County plus 10 miles either side
- Excavators – Asset County
- Farmers – 1,320 feet total, 660 feet ESOP
- Public Officials – Asset County
- Schools – 2,000 feet total, 1,000 feet ESOP

*ESOP—Either Side of Pipeline



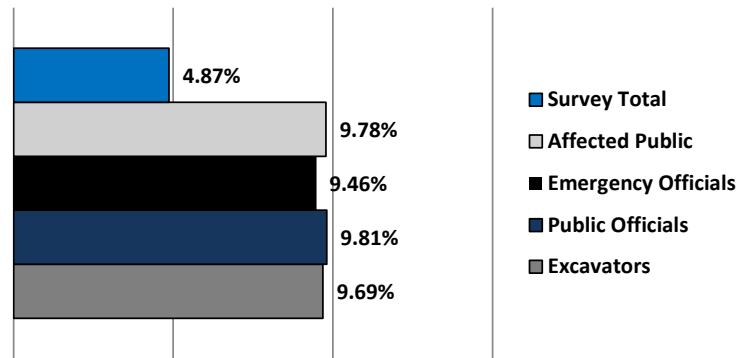
Example: Catasauqua, PA asset in Lehigh County

Statistical Sample Size and Margin of Error

A targeted margin of error of less than 10% was used for calculating the statistical sample size of UGI Utilities, Inc.'s population. The target statistical sample size was calculated using an online calculator (americanresearchgroup.com). The targeted sample size was 384.

Statistical Sample Size and Margin of Error – By Audience

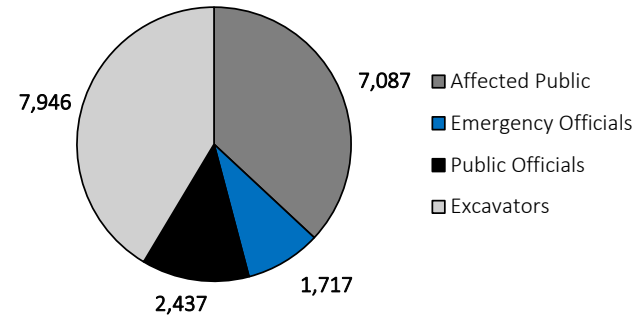
When reviewing the statistical sample size by audience group using the same targeted margin of error of less than 10%, the margin of error for each audience group is as follows:



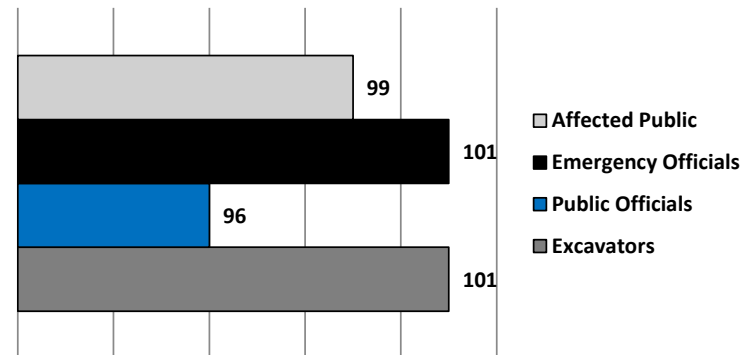
Total Resulting Margin of Error

The most current stakeholder population of 19,187 was used with the total completed surveys of 397, which brings the actual margin of error to **4.87%** with a 95% confidence factor and 50% proportion.

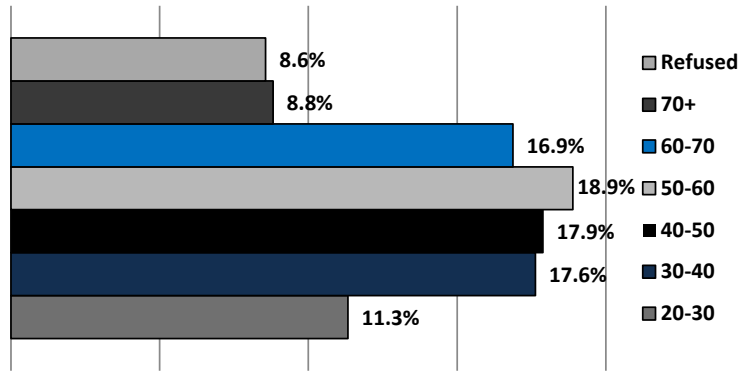
Stakeholder Audience Population 2020



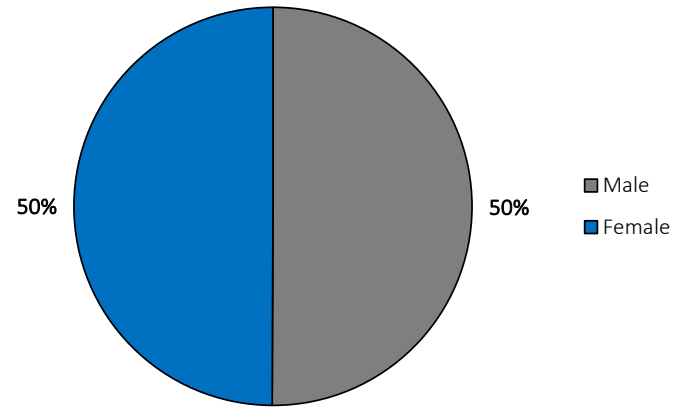
Stakeholder Group Completed Surveys- By Audiences



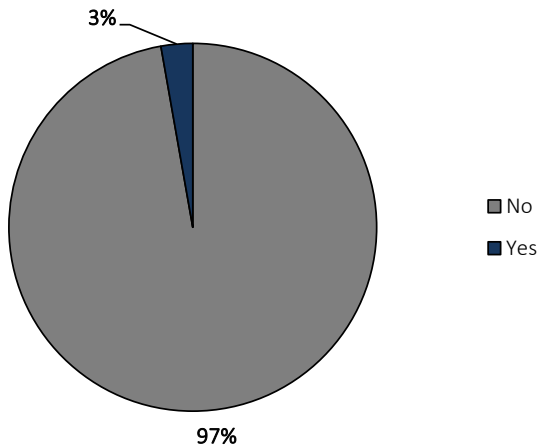
Survey Demographics (Age)



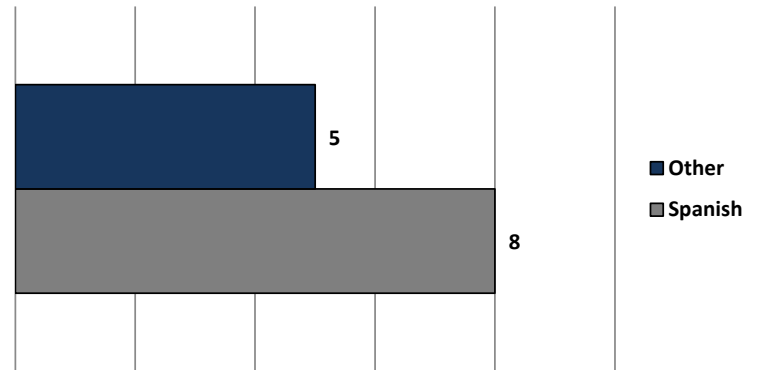
Survey Demographics (Gender)



Language other than English regularly spoken in home



Count of Non-English Stakeholders



MEASURE 1: OUTREACH

Outreach and Awareness Measurement Methodology

This is a basic measurement indicating whether the operator's public awareness messages are getting to the intended stakeholders. A baseline evaluation program should establish a methodology to track the number of individuals or entities reached within an intended audience. Additionally, this measure should estimate the percentage of the stakeholders actually reached within the target geographic region along the pipeline.

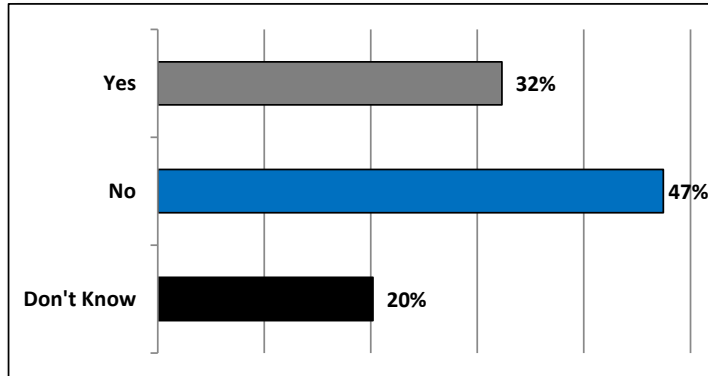
Baseline Measure

Stakeholder awareness and recall is measured by asking a few key questions through survey efforts. The following questions are intended to target recall of messages provided by UGI Utilities, Inc. and 811 / State One Call Centers:

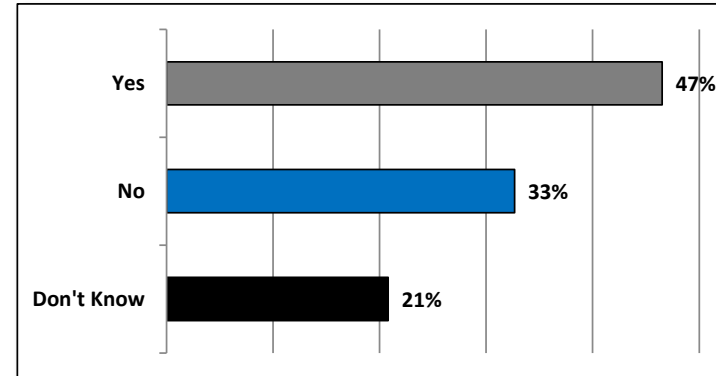
- Within the past year, do you recall receiving any public awareness and pipeline safety information from UGI Utilities, Inc.?
- Where did you read, see, or hear about local pipelines and their locations — that is, was it in a printed brochure or newsletter in the mail, radio, and or television messages, on the Internet or someplace else? (multiple choice)
- Have you ever read, seen, or heard any communications from 811 / State One Call Centers about safety related to digging and excavations?

Within the past year, do you recall receiving any public awareness and pipeline safety information from UGI Utilities, Inc.?

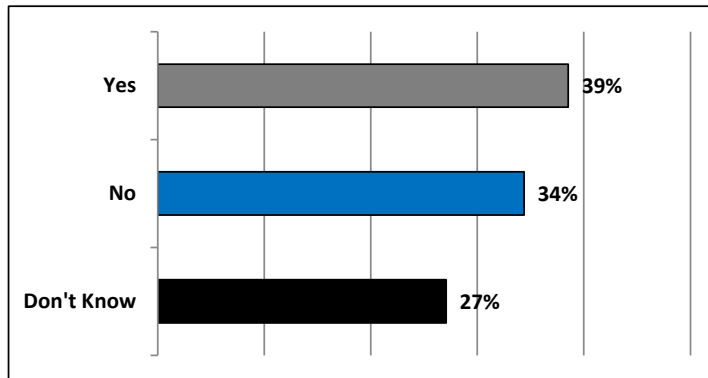
Affected Public



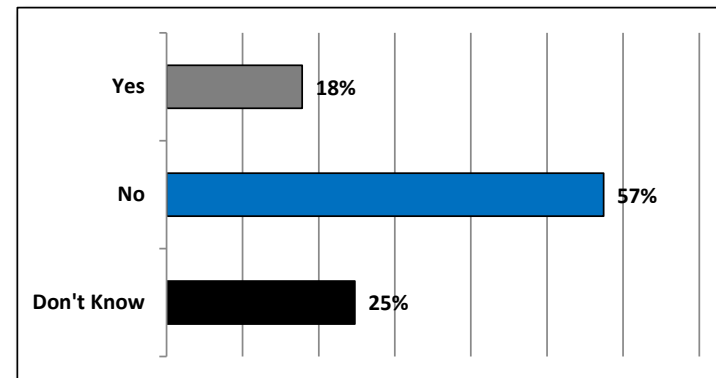
Emergency Responders



Public Officials

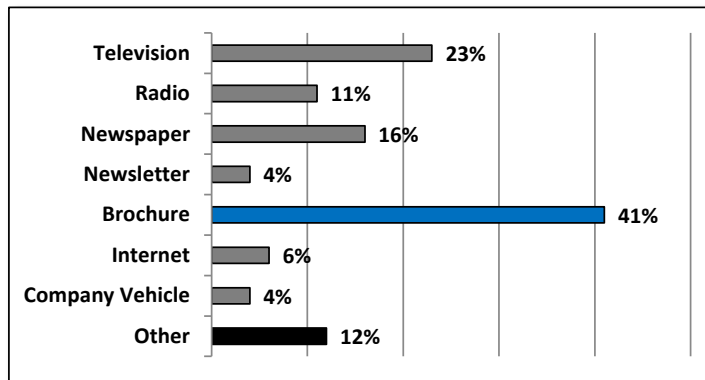
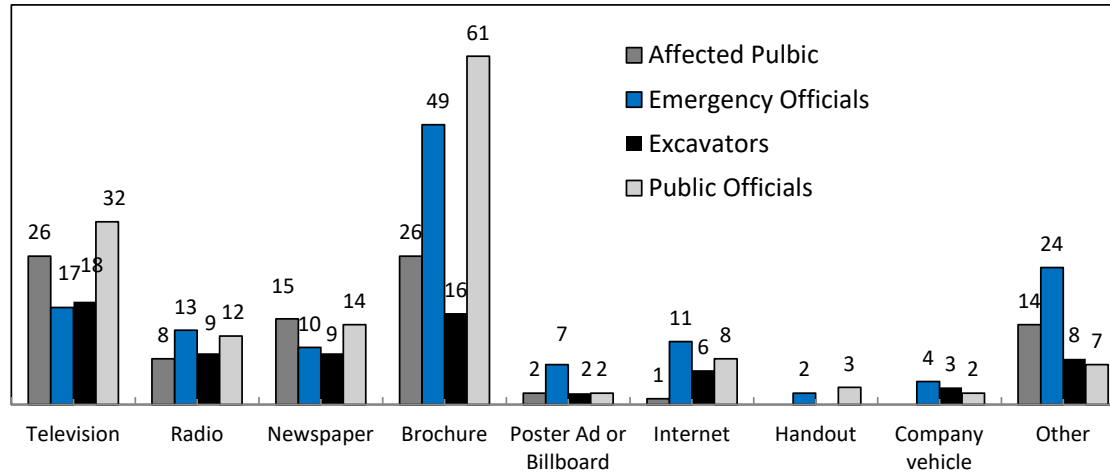


Excavators



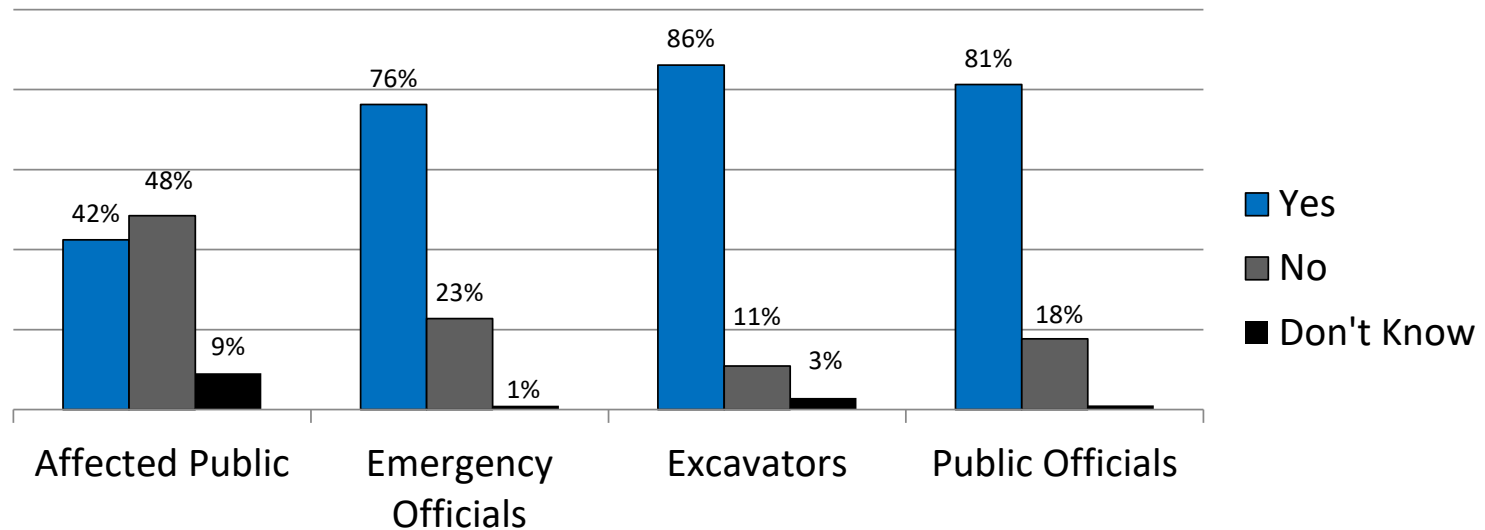
Only 18% of Excavators recall receiving information from UGI Utilities, Inc., which was the lowest recall rate among all stakeholder groups. Emergency Responders recalled receiving information at the highest rate (47%). Affected Public and Public Officials had recall rates of 32% and 39% respectively. The aggregate stakeholder recall rate was 34% (134 of 397).

Where did you read, see, or hear about local pipelines and their locations? (more than one response may be given)



A brochure was the most common source of information all stakeholder audiences recalled receiving (41%).

Have you ever read, seen, or heard any communications from 811 / State One Call Centers about safety related to digging and excavations?



Less than half (42%) of Affected Public stakeholders surveyed recall having read, seen, or heard communications from 811/State One Call about safety related to digging and excavation. The majority of Emergency Officials (76%), Excavators (86%), and Public Officials (81%) recall communications from 811/State One Call Centers regarding safety related to digging and excavation.

KEY FINDINGS - OUTREACH

1. Only 18% of Excavators recall receiving information from UGI Utilities, Inc., which was the lowest recall rate among all stakeholder groups. Emergency Responders recalled receiving information at the highest rate (47%). Affected Public and Public Officials had recall rates of 32% and 39% respectively. The aggregate stakeholder recall rate was 34% (134 of 397).
2. A brochure was the most common source of information all stakeholder audiences recalled receiving (41%).
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MEASURE 2: UNDERSTANDABILITY OF MESSAGES

Understandability Evaluation Methodology

Message understandability assesses the percentage of the intended stakeholder audience that understood and retained the key information in the message received. This measure helps to evaluate the effectiveness of the delivery media and the message style and content. This measure also helps to assess the effectiveness of the delivery methods used.

To measure understandability, UGI Utilities, Inc. utilizes both qualitative and quantitative analysis techniques to evaluate the message clarity, format, media and the stakeholder's understanding of the messages.

Stakeholder's understandability of messages is measured by asking key questions through survey efforts.

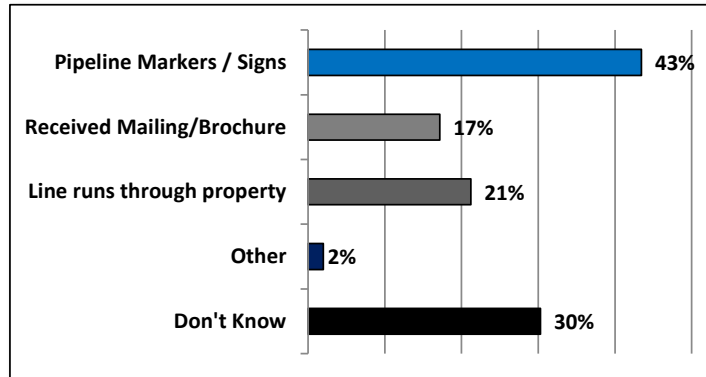
The questions for this measure included in the evaluation questionnaire are as follows:

- How would you know if there is a UGI UTILITIES, INC pipeline near you? (multiple choice)
- Are you aware of the prevention measures UGI UTILITIES, INC's takes to maintain safe pipeline operations?
- Would you be able to recognize a leak from a Natural Gas pipeline?
- As far as you know, what would be the danger associated with an unintended release of natural gas? (multiple choice)
- As far as you know, what are some of the basic safety rules with regard to Natural Gas pipelines? (multiple choice)

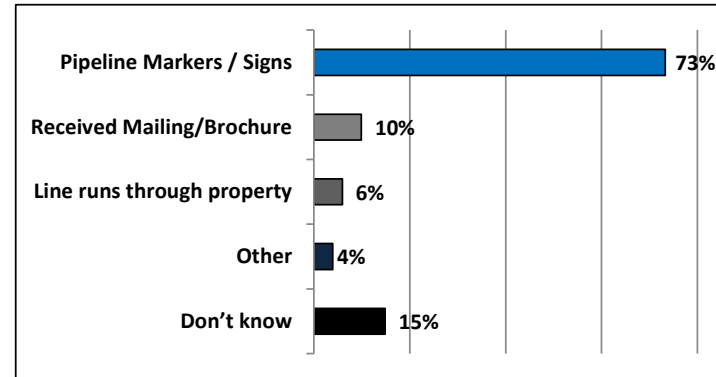
How would you know if there is a UGI Utilities, Inc. pipeline near you?

(more than one response may be given)

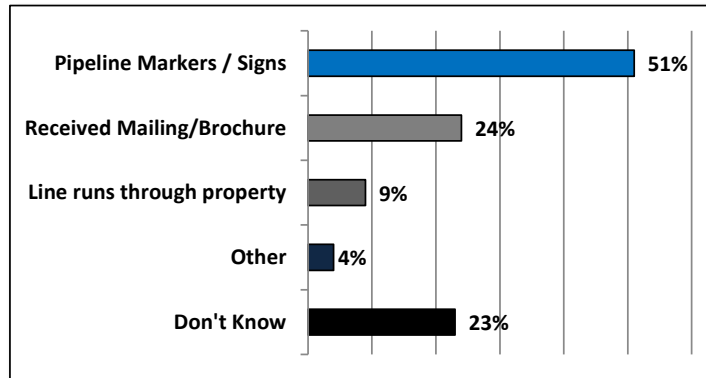
Affected Public



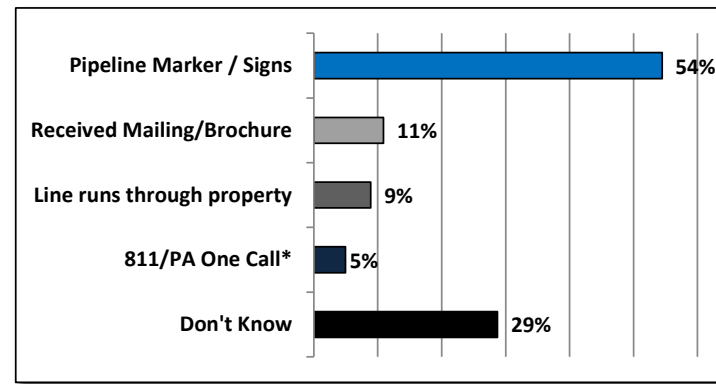
Emergency Responders



Public Officials



Excavators

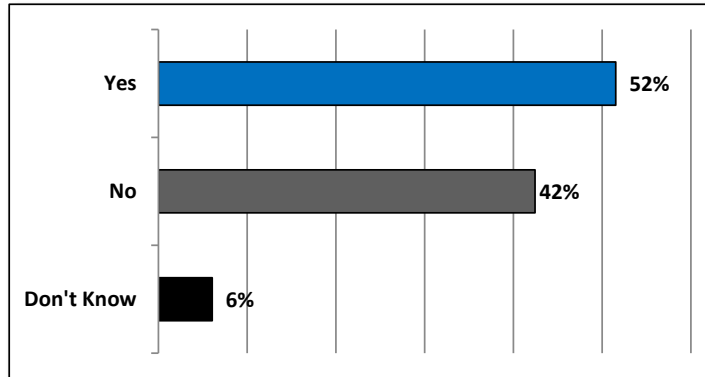


Pipeline Markers/Signs are how the majority of stakeholders in all groups identify if there are pipelines near them (56%). The Affected Public was the least likely stakeholder group to know how to identify if a pipeline is near, with 30% answering “Don’t Know”. Please see attached spreadsheet titled “UGI Utilities, Inc. Phone Survey Data” for specific “Other” responses.

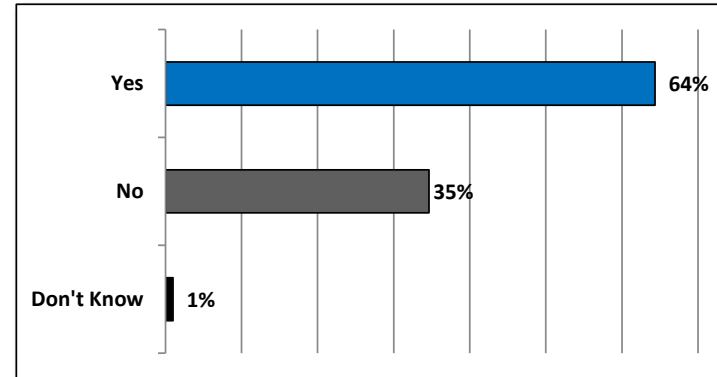
*“Other” responses were all “811/PA Once Call”

Are you aware of the prevention measures UGI Utilities, Inc. takes to maintain safe operations?

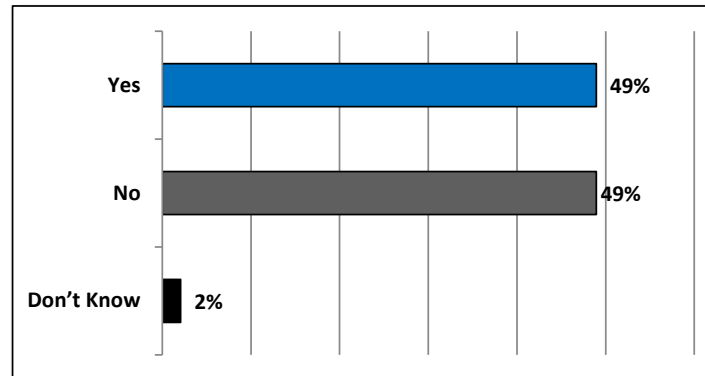
Affected Public



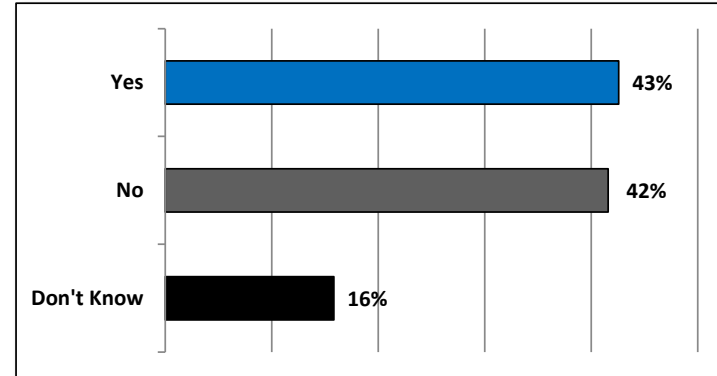
Emergency Responders



Public Officials



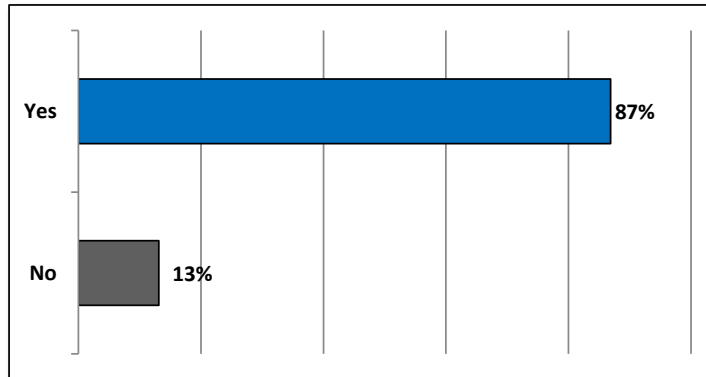
Excavators



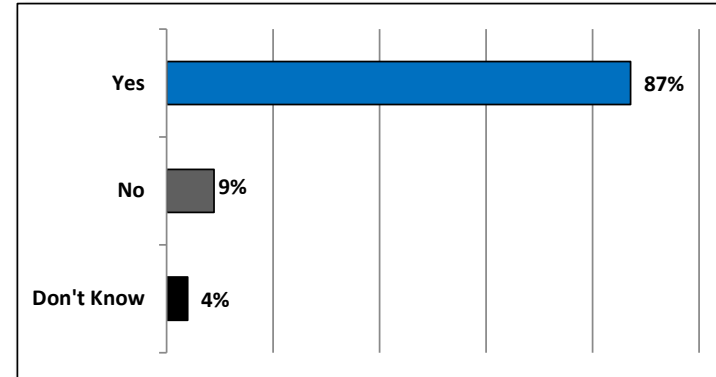
Emergency Responders (64%) and Affected Public (52%) were more aware than the other 2 stakeholder groups of the measures UGI Utilities, Inc. takes to maintain safe operations. Excavators were the least aware stakeholders (43%).

Would you be able to recognize a leak from a Natural Gas pipeline?

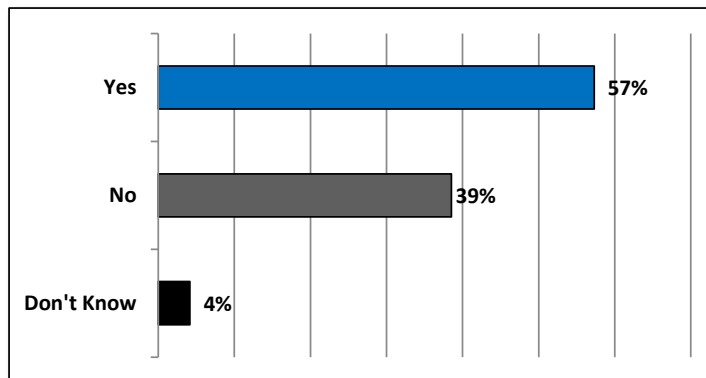
Affected Public



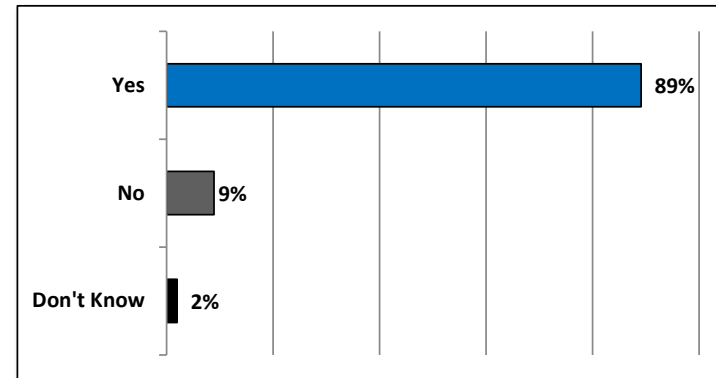
Emergency Responders



Public Officials



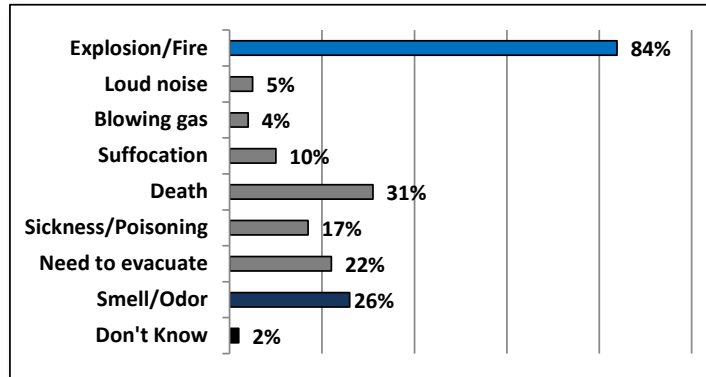
Excavators



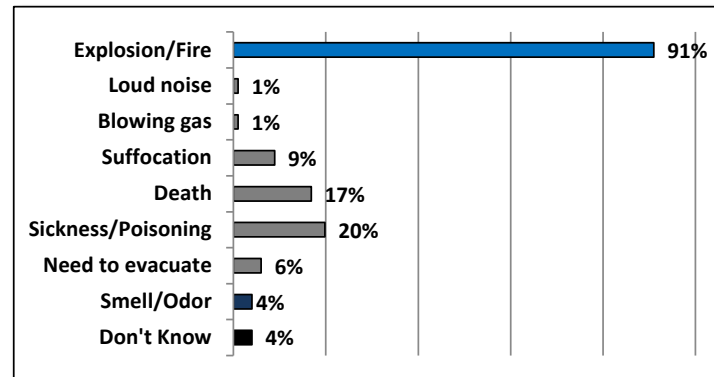
The majority of all stakeholders (80%) reported they knew how to recognize a pipeline leak. Public Official stakeholders were the lowest group (57%), with Excavators being the highest (89%). Affected Public and Emergency Responders also had reported high leak recognition ability (87%).

As far as you know, what would be the danger associated with an unintended release of natural gas?
(multiple choice)

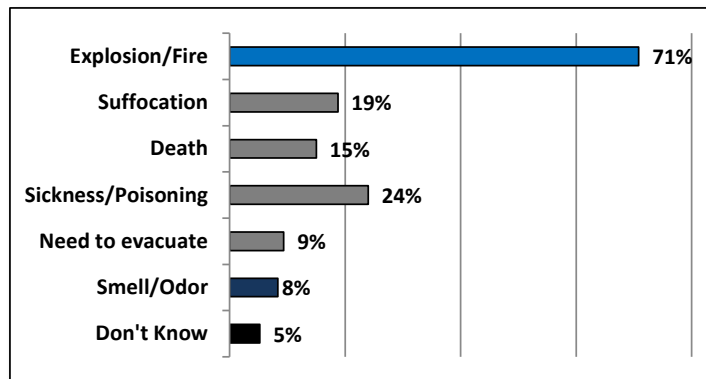
Affected Public



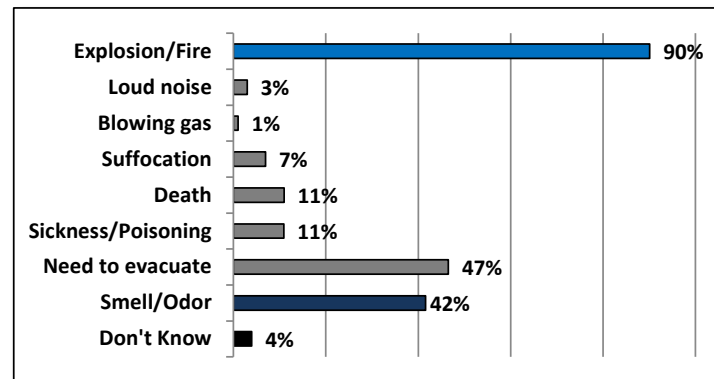
Emergency Responders



Public Officials



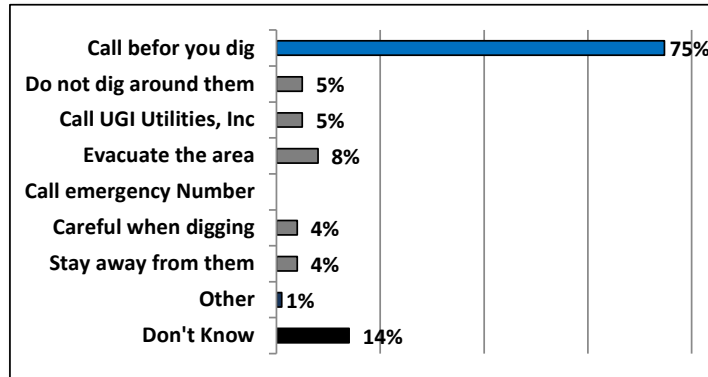
Excavators



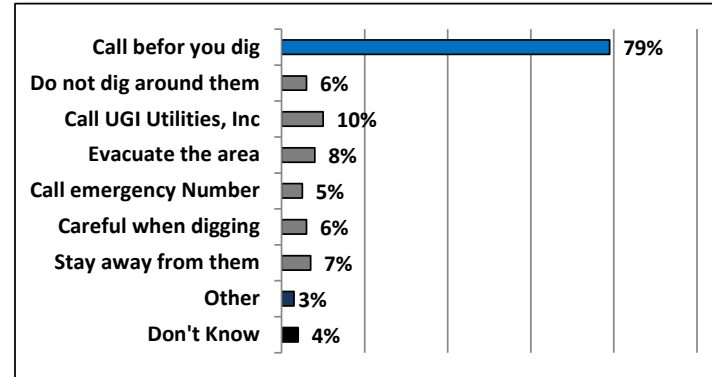
“Explosion/Fire” was the most frequent response reported (84%) when stakeholders were asked what dangers are associated with an unintended release of natural gas.

As far as you know, what are some of the basic safety rules with regard to Natural Gas pipelines?
(multiple choice)

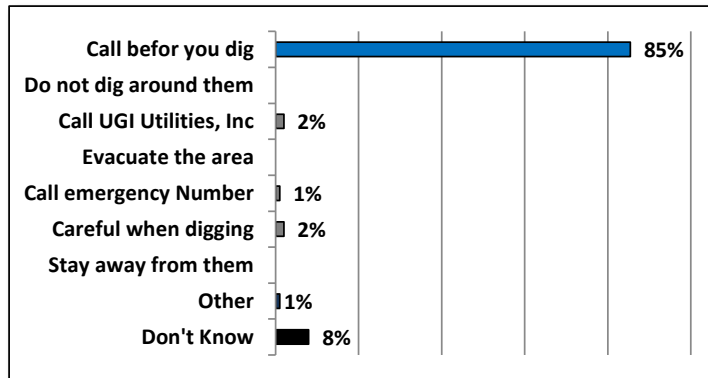
Affected Public



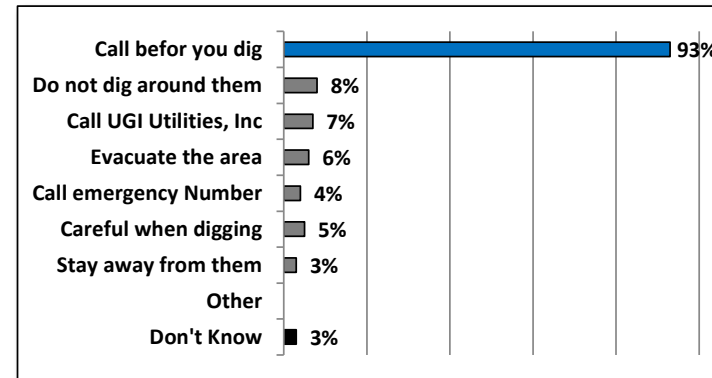
Emergency Responders



Public Officials



Excavators



Excavators reported “Call before you dig” as a basic safety rule with regard to Natural Gas pipelines with the highest frequency (93%). “Call before you dig” was by far the most frequent response reported (83%) amongst all stakeholders.

KEY FINDINGS - UNDERSTANDABILITY

1. Pipeline Markers/Signs are how the majority of stakeholders in all groups identify if there are pipelines near them (56%). The Affected Public was the least likely stakeholder group to know how to identify if a pipeline is near, with 30% answering “Don’t Know”. A brochure was the most common source of information all stakeholder audiences recalled receiving (41%).
2. Emergency Responders (64%) and Affected Public (52%) were more aware than the other 2 stakeholder groups of the measures UGI Utilities, Inc. takes to maintain safe operations. Excavators were the least aware stakeholders (43%).
3. The majority of all stakeholders (80%) reported they knew how to recognize a pipeline leak. Public Official stakeholders were the lowest group (57%), with Excavators being the highest (89%). Affected Public and Emergency Responders also had reported high leak recognition ability (87%).
4. “Explosion/Fire” was the most frequent response reported (84%) when stakeholders were asked what dangers are associated with an unintended release of natural gas.
5. Excavators reported “Call before you dig” as a basic safety rule with regard to Natural Gas pipelines with the highest frequency (93%). “Call before you dig” was by far the most frequent response reported (83%) amongst all stakeholders.

MEASURE 3: STAKEHOLDER BEHAVIOR

Stakeholder Behavior Methodology

This measure is aimed at determining whether appropriate prevention behaviors have been learned and are taking place when needed. It also helps determine if appropriate response or mitigation behaviors would occur and have taken place. This is a measure of learned and, if applicable, actual reported behavior.

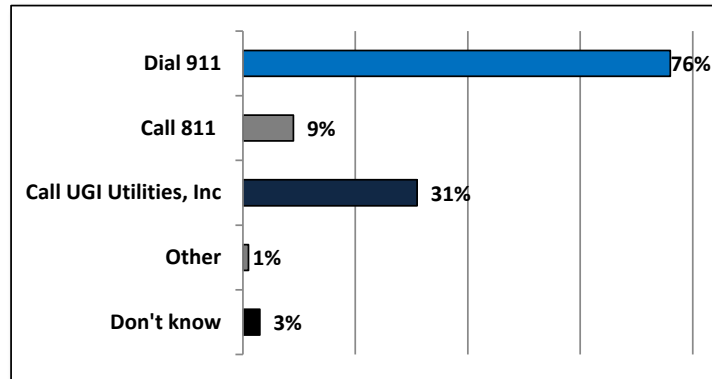
The survey conducted includes a means of assessing behavior by including questions to report on damage prevention activities, leak response behavior, and reporting possible ROW encroachment.

Behavior questions incorporated in the stakeholder survey include:

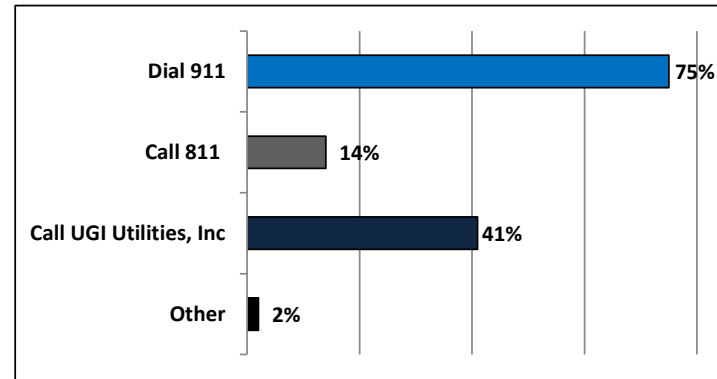
- Who would you call in the event of a Natural Gas emergency? (multiple choice)
- How do you inform others in your organization about procedures related to digging or excavating near a Hazardous Liquids or Natural Gas pipeline? (EO/PO/EX)
- Where would you look to find the UGI UTILITIES, INC emergency number? (multiple choice)
- If you were planning on digging, which of the following actions would you be likely to take? (multiple choice)
- Would you say you read the entire brochure, read some of it, just scanned a little of it to see what it was about, or did not read it?

Who would you call in the event of a Natural Gas emergency?

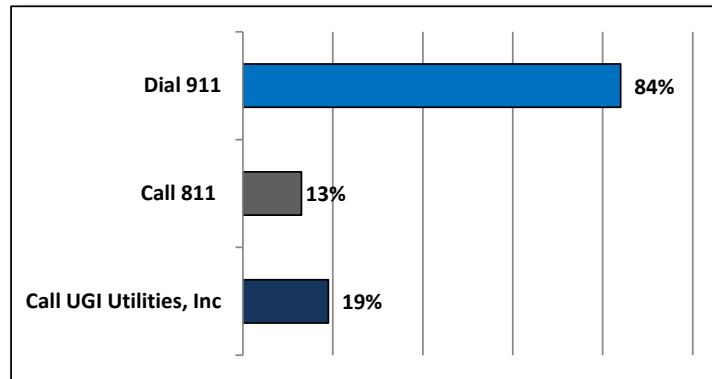
Affected Public



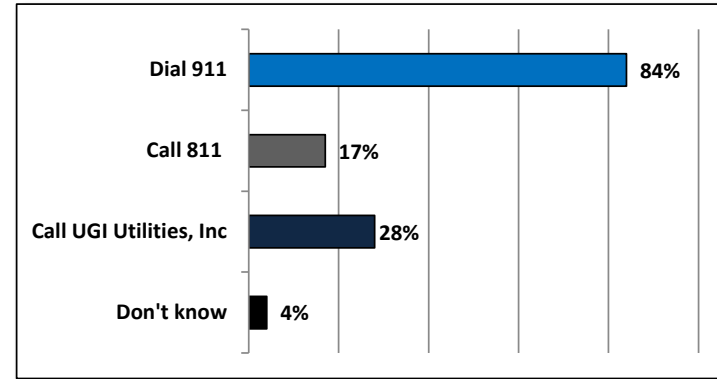
Emergency Responders



Public Officials

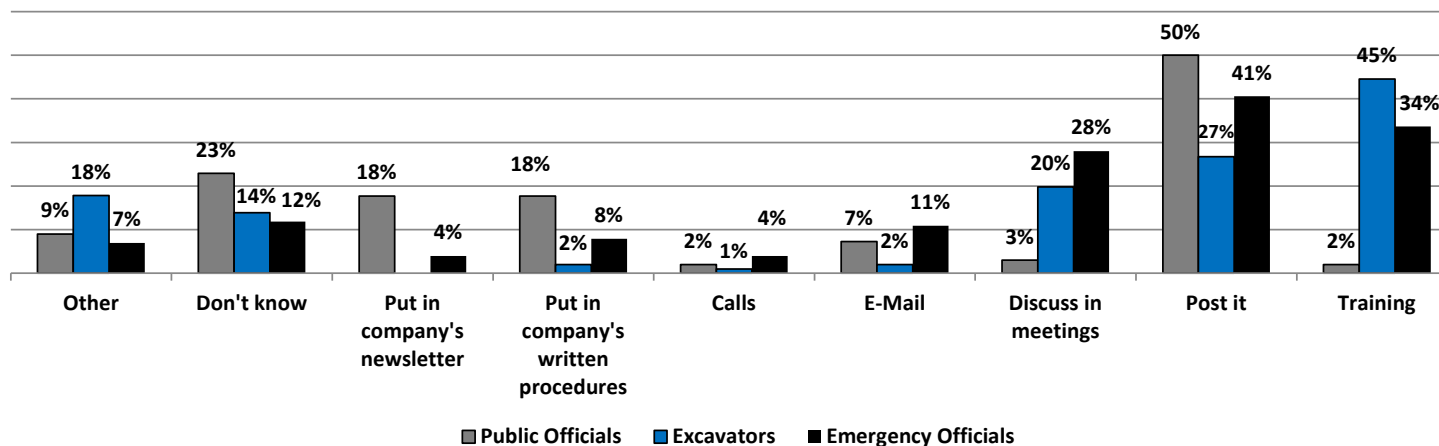


Excavators



All stakeholder groups had response rates between 75% - 84% regarding calling 911 in the event of a natural gas emergency. "Call UGI Utilities" was the second most popular response amongst all stakeholder audiences (30%).

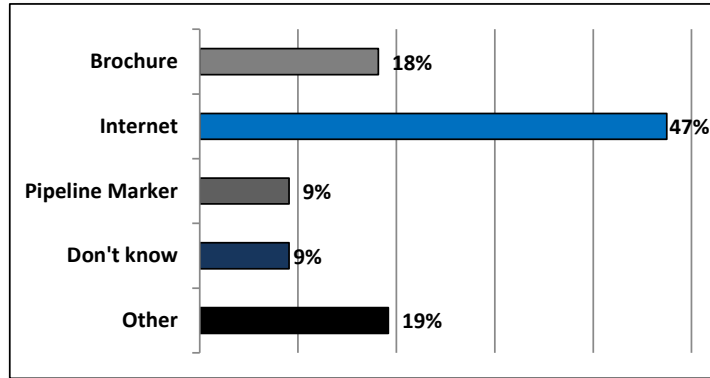
How do you inform others in your organization about procedures related to digging or excavating near a Hazardous Liquids or Natural Gas pipeline? (EO/PO/EX Only; More than one response may be given)



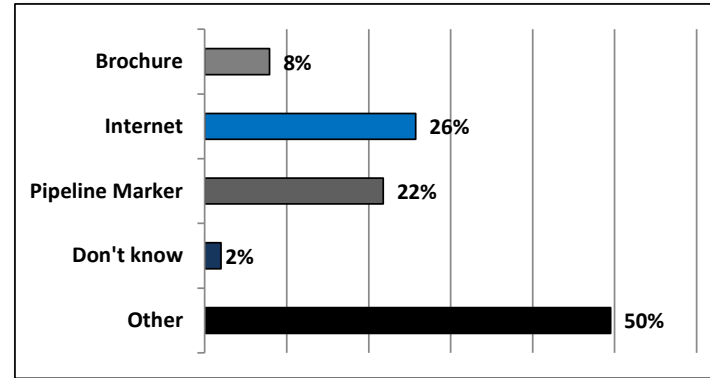
When analyzing the 3 stakeholder groups combined, over a third (35%) of the stakeholders utilize training, meeting discussions, or a combination of both to inform others in their organization about procedures related to digging or excavating near pipelines. Excavators were the most likely stakeholder group to inform others by utilizing training (45%), while Emergency Officials were the most likely to discuss share the information in meetings (28%). Posting information was the most utilized method for Public Officials.

**Where would you look to find the UGI Utilities, Inc. emergency number?
(More than one response may be given)**

Affected Public



Emergency Responders

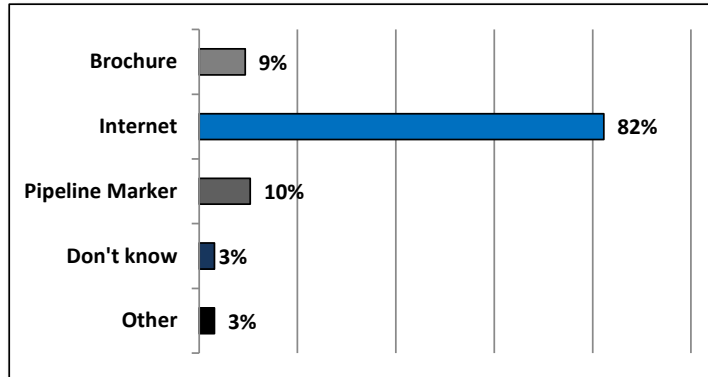


Responses Falling Under "Other"	Frequency
Telephone book	6
911	3
Number on file	3
Bill	2
411	1
MSDS handbook	1
Son works for UGI	1

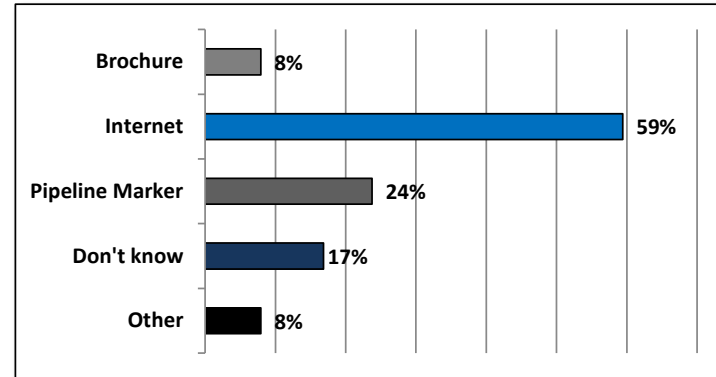
Responses Falling Under "Other"	Frequency
911	19
Number on Hand/file	13
Radio/Cell phone/dispatcher	5
Bill	1
Comp Center	1
Number posted in trucks	1
Cad System	1
Posted in office	1
811	1

Where would you look to find the UGI Utilities, Inc. emergency number? (Continued)

Public Officials



Excavators



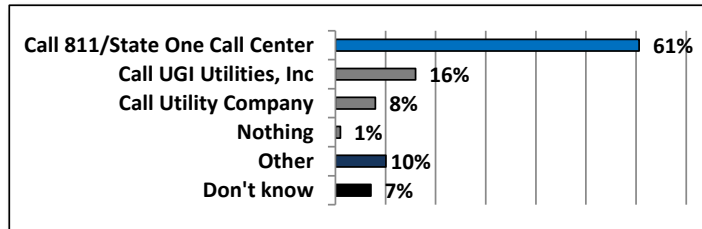
Responses Falling Under "Other"	Frequency
911	1
Number on File	2

Responses Falling Under "Other"	Frequency
Number on hand	5
811	1
Dispatch center	1

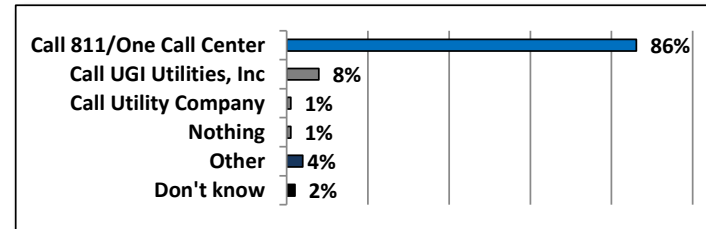
Stakeholders would utilize a wide variety of sources to find the UGI Utilities, Inc. emergency number, however the internet was the most prevalent (Affected Public 47%; Emergency Responders 26%; Public Officials 82%; Excavators 59%). Emergency Responders had a high rate of "other" responses (50%), mostly consisting of either already having the number or being able to access the number through 911 or dispatch.

If you were planning on digging, which of the following actions would you be likely to take?

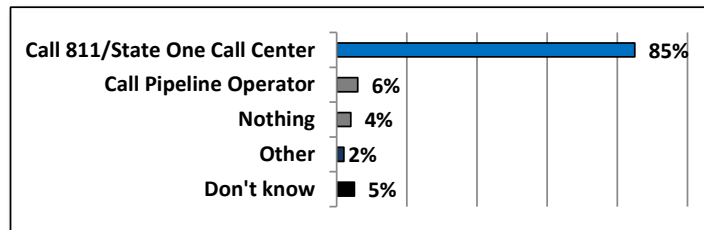
Affected Public



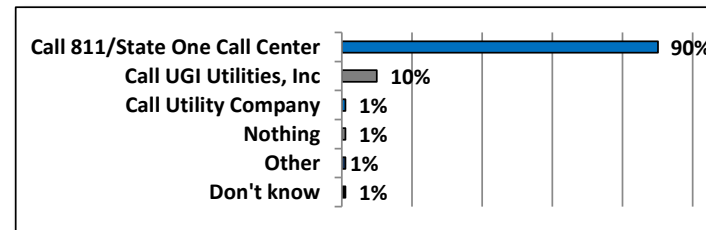
Emergency Responders



Public Officials



Excavators



If “Nothing”, “Other”, or “Don’t know”:
 Have you ever contacted 811 / State ONE CALL or a pipeline company to check if a pipeline exists before digging?*



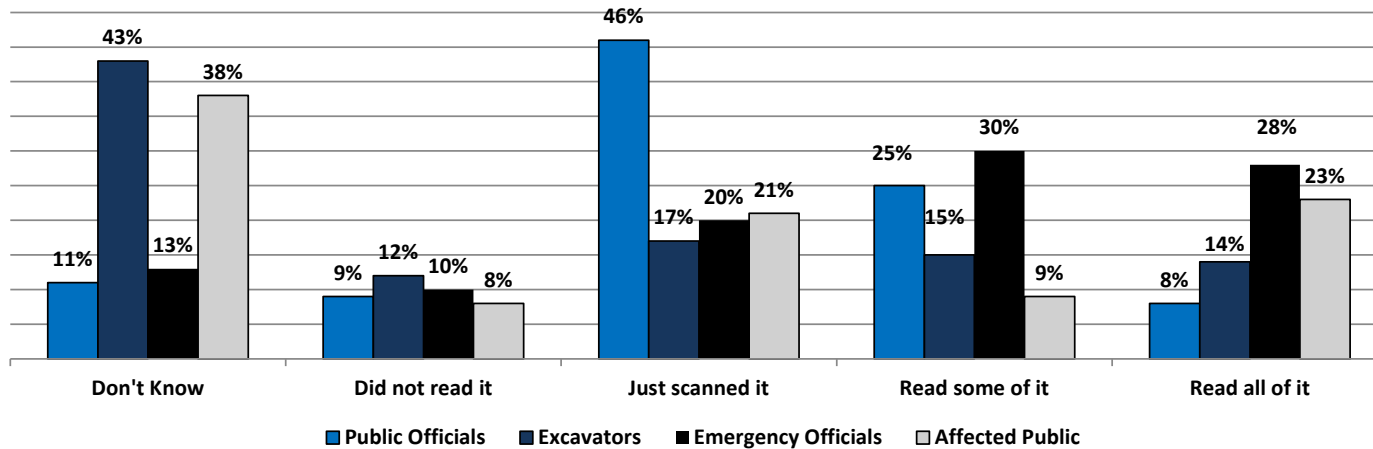
Answers falling under “Other”	Frequency
Does not dig	5
Contractor would make the call/dig	3
911	2
Contact landowner and have them call	1
PA1	1
Follow MSDS protocols	1

If yes, who did you contact?

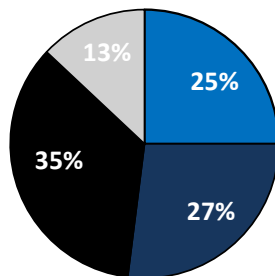
- UGI Utilities, Inc
- Other

The vast majority of all stakeholder groups would call 811/State One Call Center or the pipeline operator before digging (Affected Public 61%; Emergency Responders 86%; Public Officials 85%; Excavators 90%).

Would you say you read the entire brochure, read some of it, just scanned a little of it to see what it was about, or did not read it?



All Stakeholders*



- Read all of it
- Read some of it
- Just scanned it
- Did not read it

Over half (57%) of Emergency Officials read some or all of the brochure, while only 28% of Excavators read some or all of the brochure. When “Don’t know” was removed from the analysis, over half (52%) of stakeholder respondents read some or all of the brochure, with a quarter (25%) having read all of it.

*“Don’t know” responses removed from the analysis

KEY FINDINGS - BEHAVIOR

1. All stakeholder groups had response rates between 75% -84% regarding calling 911 in the event of a natural gas emergency. “Call UGI Utilities” was the second most popular response amongst all stakeholder audiences (30%).
2. When analyzing the 3 stakeholder groups combined, over a third (35%) of the stakeholders utilize training, meeting discussions, or a combination of both to inform others in their organization about procedures related to digging or excavating near pipelines. Excavators were the most likely stakeholder group to inform others by utilizing training (45%), while Emergency Officials were the most likely to discuss share the information in meetings (28%). Posting information was the most utilized method for Public Officials.
3. Stakeholders would utilize a wide variety of sources to find the UGI Utilities, Inc. emergency number, however the internet was the most prevalent (Affected Public 47%; Emergency Responders 26%; Public Officials 82%; Excavators 59%). Emergency Responders had a high rate of “other” responses (50%), mostly consisting of either already having the number or being able to access the number through 911 or dispatch.
4. The vast majority of all stakeholder groups would call 811/State One Call Center or the pipeline operator before digging (Affected Public 61%; Emergency Responders 86%; Public Officials 85%; Excavators 90%).
5. Over half (57%) of Emergency Officials read some or all of the brochure, while only 28% of Excavators read some or all of the brochure. When “Don’t know” was removed from the analysis, over half (52%) of stakeholder respondents read some or all of the brochure, with a quarter (25%) having read all of it.

MEASURE 4: BOTTOM-LINE RESULTS

Bottom Line Results

API RP 1162

One measure of the “bottom-line results” is the damage prevention effectiveness of an operator’s Public Awareness Program and the change in the number and consequences of third-party incidents. As a baseline, the operator should track the number of incidents and consequences caused by third party excavators. This should include reported near misses; reported pipeline damage occurrences that did not result in a release; and third-party excavation damage events that resulted in pipeline failures. The tracking of leaks caused by third-party excavation damage should be compared to statistics of pipelines in the same sector (e.g. gathering, transmission). While third-party excavation damage is a major cause of pipeline incidents, data regarding such incidents should be evaluated over a long period of time to determine any meaningful trends relative to the operator’s Public Awareness Program. This is due to the low frequency of such incidents on a specific pipeline system. The operator should also look for other types of bottom-line measures. One other measure that operators may consider is their stakeholders perception of how well informed they feel they are about pipelines.

Operator Measures

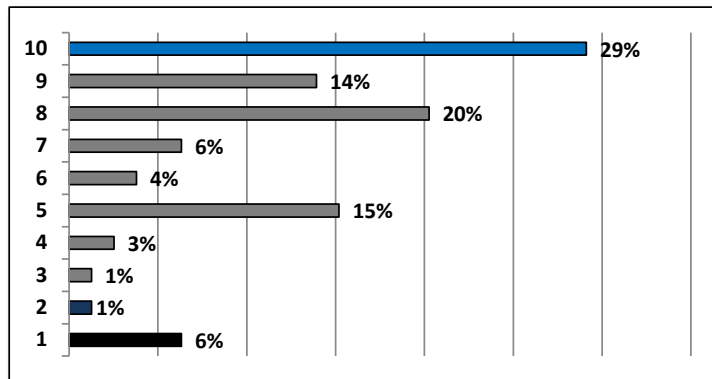
- Findings from reported incident tracking via PHMSA website

Bottom line questions incorporated in the stakeholder survey include:

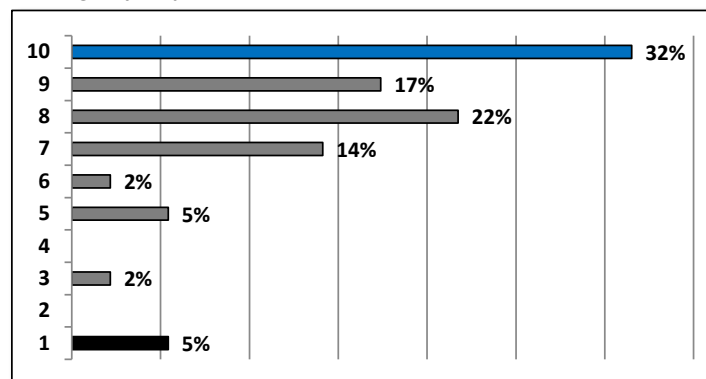
- How would you rate UGI UTILITIES, INC on educating you about Natural Gas and excavation safety information? (Scale of 1 – 10; 1 means performs very poorly, 10 means they perform very well)
- Do you feel prepared if faced with a pipeline emergency?
- Did you keep the brochure?
- Did you consider the information within the brochure useful?*

**How would you rate UGI UTILITIES, INC on educating you about Natural Gas and excavation safety information?
(Scale of 1 – 10; 1 means performs very poorly, 10 means they perform very well*)**

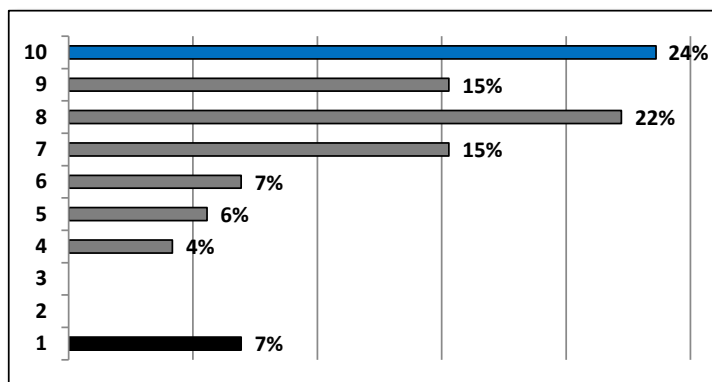
Affected Public



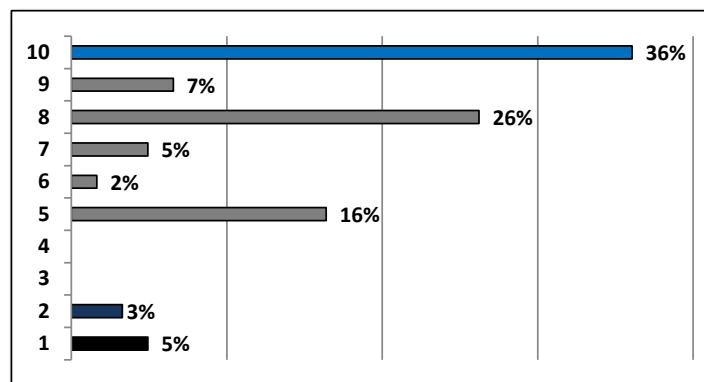
Emergency Responders



Public Officials



Excavators

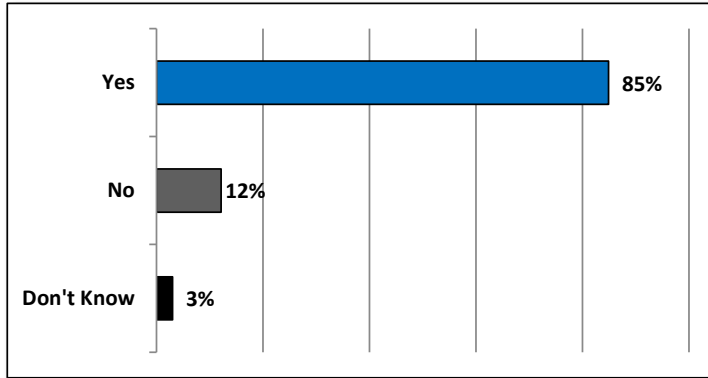


Almost two thirds (63%) of the Affected Public who rated UGI Utilities gave a rating of 8 or above, with the most frequent rating being a 10 (29%) . Over two thirds (68%) of Excavators rated UGI Utilities at 8 or above, with the most frequent rating being a 10 (36%); the highest amongst all stakeholders. 71% of Emergency Responders gave a rating of 8 or above, with the most frequent response being a 10 (32%). Only 10% of all stakeholders gave UGI Utilities a score of 4 or lower.

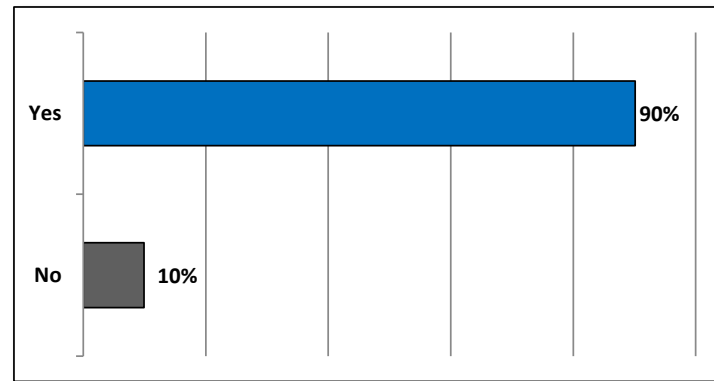
*"Don't know" responses were removed from the analysis

Do you feel prepared if faced with a pipeline emergency?

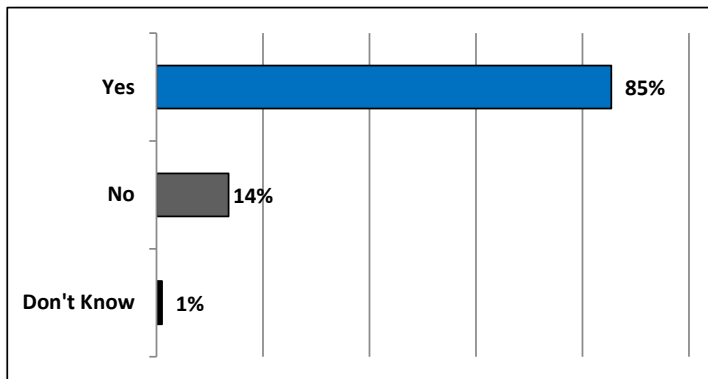
Affected Public



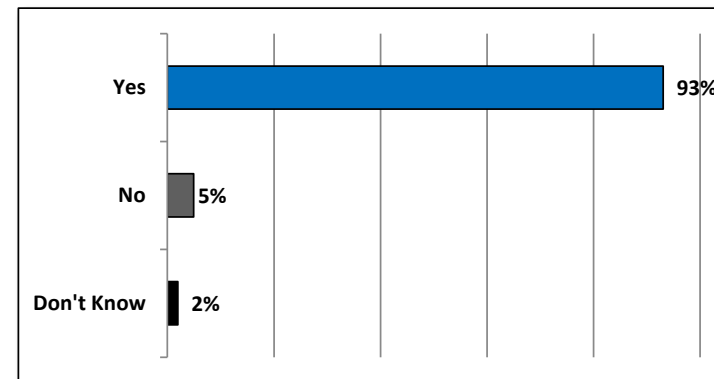
Emergency Responders



Public Officials



Excavators



A significant majority of all stakeholders surveyed (88%) feel prepared if faced with a pipeline emergency.

If No, what would make you feel more prepared?

Emergency Responders

Response	Frequency
Don't know/unsure	4
More training	3
Learning more about pipelines	1
More man power and more funding for the training	1
Response information	1

Public Officials

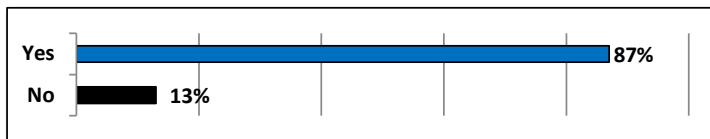
Response	Frequency
Information	10
Do not know/unsure	2
Does not live around pipeline	1

Excavators

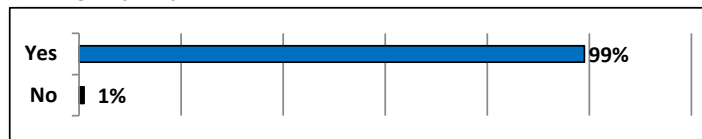
Response	Frequency
Training	2
Dont know, doesn't concern his self with it	1
If Donald Trump wasn't the President	1
Information	1

Did you consider the information within the brochure useful?*

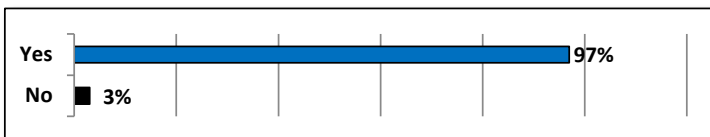
Affected Public



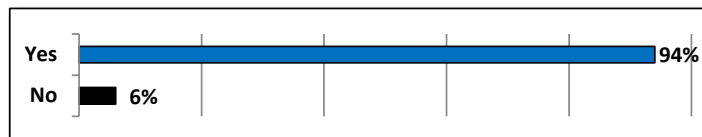
Emergency Responders



Public Officials



Excavators



What would make the brochure better?

Response - Recommendations

"Please mention carbon monoxide poisoning also in the brochures and safe generator usage. And the sign of a red face for carbon monoxide poisoning for safety sake."
 "Would like it by email."

Response – Other Comments

"No underground utilities in the area, so don't consider is useful"
 "Not a fan of pipelines"
 "Police department has nothing to do with digging, not of interest."
 "Would have read it all if received depending on content"

Response – No Recommendation	Frequency	Relevant Example
Did not recall receiving a brochure	48	
Did not read it	9	"does not have gas at home, so does not read brochure"
Don't know	4	
Does not receive/see the mail	4	"does not read the mail, sends on to proper departments"
Nothing	2	

Would you like UGI UTILITIES, INC to contact you?

20 "Yes" responses—Please see UGI Utilities Contact Requests Spreadsheet for details

A significant majority of all stakeholders surveyed (95%) consider the information within the brochure useful.*

* "Don't know" responses were removed from the analysis - 36% (130 of 397 responses)

Reported Incidents (2006 – 2017)

Incidents/Accidents - Gas Distribution

ODES - Data as of 10/4/2020 7:03:44 PM

SMART - Data as of 10/4/2020 6:20:43 PM

ODES 2.0 - Data as of 10/4/2020 9:30:48 PM

Region: (All Column Values)

Operator ID: 20010 **Operator Name:** UGI UTILITIES, INC

Calendar Year	Incident Date	Incident City	Incident County	Incident State	Explosion Flag	Evacuation Flag	Significant Incident Flag	Material	Incident Cause Type	Incident Cause Sub Type	# of Fatalities	# of Injuries	Total Property Damage
2019	4/4/2019	DERRY	DAUPHIN	PENNSYLVANIA	No	Yes	No	PLASTIC	EXCAVATION DAMAGE	THIRD PARTY EXCAVATION DAMAGE	0	0	\$61,000
2017	7/2/2017	MILLERSVILLE	LANCASTER	PENNSYLVANIA	Yes	Yes	Yes	PLASTIC	MATERIAL/WELD/EQUIP FAILURE	MECHANICAL FITTING	1	3	\$2,232,230
2016	5/10/2016	BATH	LEHIGH	PENNSYLVANIA	No	No	No	STEEL	EXCAVATION DAMAGE	THIRD PARTY EXCAVATION DAMAGE	0	0	\$69,000
											1	3	\$2,362,230

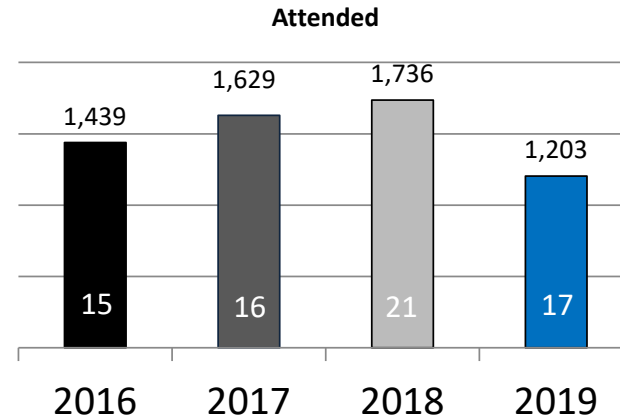
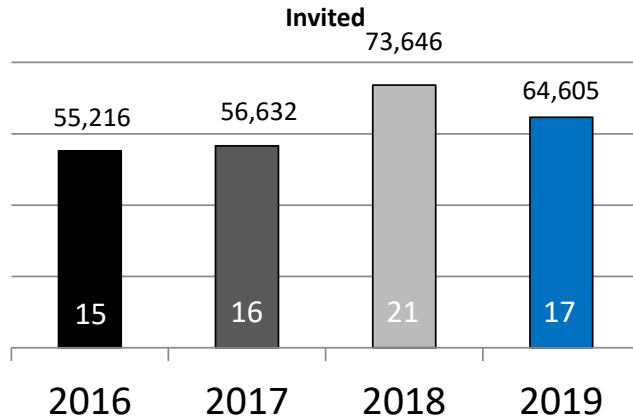
UGI Utilities, Inc. had 3 incidents reported from 2016-2019 and no incidents reported in the previous 4 year period (2012-2015). Two of three incidents reported were attributed to third party excavation resulting in total property damages of \$130,000, with no injuries or fatalities. One incident was a result of a material failure (mechanical fitting) and resulted in 1 fatality, 3 injuries, and total property damages of \$2,232,230.

KEY FINDINGS – BOTTOM LINE RESULTS

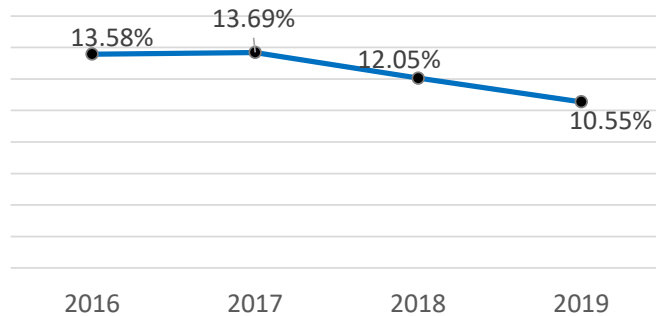
1. Almost two thirds (63%) of the Affected Public who rated UGI Utilities gave a rating of 8 or above, with the most frequent rating being a 10 (29%) . Over two thirds (68%) of Excavators rated UGI Utilities at 8 or above, with the most frequent rating being a 10 (36%); the highest amongst all stakeholders. 71% of Emergency Responders gave a rating of 8 or above, with the most frequent response being a 10 (32%). Only 10% of all stakeholders gave UGI Utilities a score of 4 or lower.
2. A significant majority of all stakeholders surveyed (88%) feel prepared if faced with a pipeline emergency.
3. A significant majority of all stakeholders surveyed (95%) consider the information within the brochure useful.
4. UGI Utilities, Inc. had 3 incidents reported from 2016-2019 and no incidents reported in the previous 4 year period (2012-2015). Two of three incidents reported were attributed to third party excavation resulting in total property damages of \$130,000, with no injuries or fatalities. One incident was a result of a material failure (mechanical fitting) and resulted in 1 fatality, 3 injuries, and total property damages of \$2,232,230.

LIAISON MEETING ATTENDANCE

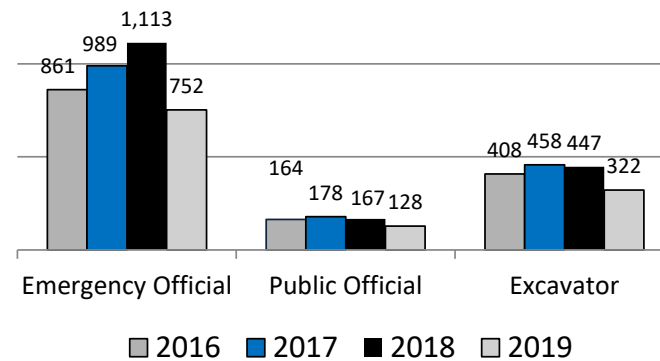
PA Liaison Meeting Attendance Trends (2016 – 2019)



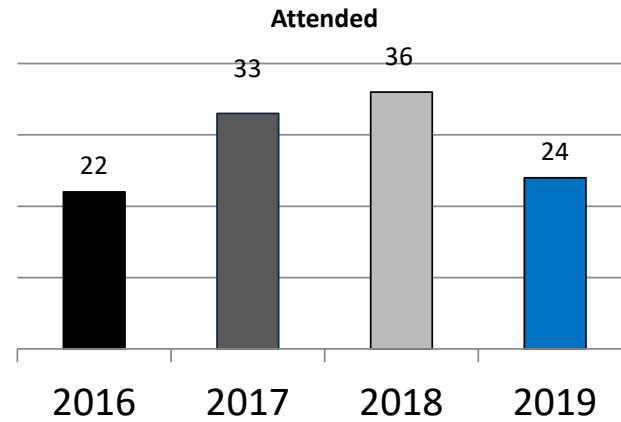
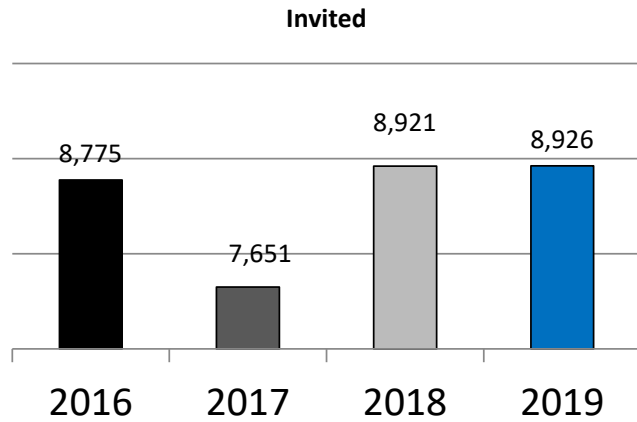
Percentage of Emergency Officials Invited who Attended



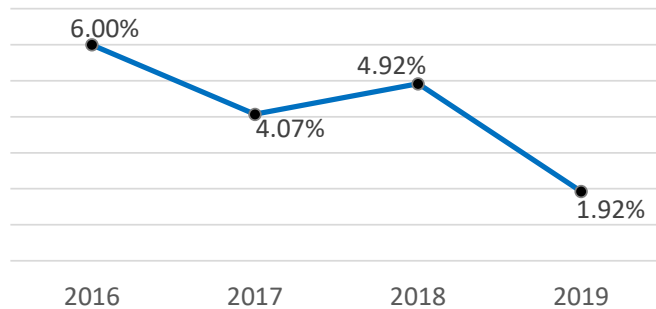
2016 vs 2019 Stakeholder Attendance by Audience



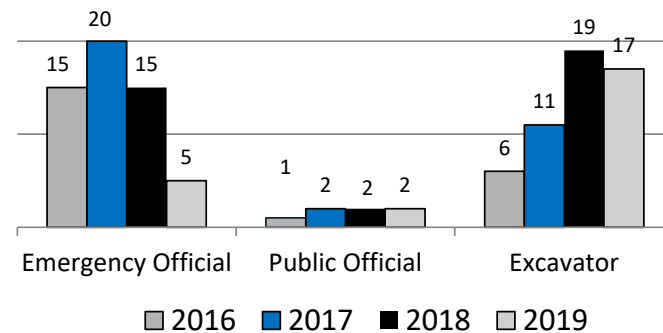
MD Liaison Meeting Attendance Trends (2016 – 2019)



Percentage of Emergency Officials Invited who Attended



2016 vs 2019 Stakeholder Attendance by Audience



From 2016 to 2019 UGI sponsored an average of 18 meetings per year. From 2016 – 2018 the overall number of meetings sponsored and aggregate attendance progressively increased, however a statistically relevant decline occurred in 2019. The percentage of Emergency Officials invited who attended meetings remained relatively flat from 2016 – 2017, but decreased in 2018 and 2019.

CONSIDERATIONS

Considerations

The following considerations are meant to provide UGI Utilities, Inc. with direction for improving their public awareness program outreach. These considerations do not guarantee increased results. They are simply Paradigm’s identification of areas for improvement and application of our experience through the implementation of public awareness programs.

1. Per Summary of Program Recommendations and Table 2-1 within API RP 1162, UGI Utilities, Inc. should continue its timely and consistent implementation of direct mail programs to all stakeholder groups. Results from survey responses may continue to show an increased awareness of stakeholders comfort with the companies’ effort to educate its constituents and familiarize them with various different ways of identifying UGI Utilities, Inc. assets in the area. Increased mailing frequency or supplemental focus on Affected Public and Excavator stakeholders may be considered.
2. Per Section 2.3.2 within API RP 1162, UGI Energy should continue their ongoing liaison activities to help prevent incidents and assure preparedness for emergencies.
3. Per Section 4.5 within API RP 1162, UGI Utilities, Inc. should continue their partnership with State One Call Centers to educate stakeholders on the importance of calling 811/State One Call Centers before you dig. Stressing key damage prevention messages which may hopefully continue the positive response and actions moving forward.
4. In addition to continuing to focus on required messaging, UGI Utilities, Inc. should consider implementing some of the program deficiencies, which are identified within this Effectiveness Evaluation Program.



Thank you!

[Redacted]
Public Awareness Consultant
[Redacted]