



Public Awareness Program Effectiveness Research Survey (PAPERS): Questions and Answers

Why is the PAPERS program offered?

The U.S. Department of Transportation (DOT) requires pipeline operators to conduct public awareness programs and measure their effectiveness every four years. A joint survey program, which is most cost-effective, is one way to do this.

Who is offering the PAPERS program?

API, AOPL and INGAA created the PAPERS program. It was designed for transmission pipeline companies and is conducted every two years. The survey was conducted in 2007, 2009, 2011, 2013, and 2015 with the following number of operators participating each year:

2007: 18 operators

2009: 26 operators

2011: 22 operators

2013: 25 operators

2015: 15 operators

The contractor for the 2009, 2011, 2013, and 2015 PAPERS program was Customer Care Measurement & Consulting. Companies interested in participating in future surveys should contact Crystal Harrod (202-682-8492 or harrod@api.org) or Karen Simon (202-682-8224 or simonk@api.org). They can provide information about how the program works, including services offered and costs.

What can the PAPERS program tell a company?

The API/INGAA/AOPL PAPERS program provides participating companies with a robust, uniform, and cost-effective mechanism for satisfying all of the requirements of the Program Evaluation section of RP 1162. The results from this study will enable participants to answer key questions posed as part of RP 1162, such as:

- Is the information reaching the intended stakeholder audiences?
- Are the recipients understanding the messages delivered?
- Are the recipients motivated to respond appropriately in alignment with the information provided?

The answers to these key questions will help a company determine where and how its public awareness program can be improved. The PAPERS program provides each company with its own results and the aggregated results of all other companies participating in the same survey round. The two data sets allow companies to compare their individual performances against an “industry” average.



How does the PAPERS program contractor determine who should be surveyed?

To provide the most accurate and robust survey results, the desired sampling frame for the Affected Public and Additional Audiences are based on the database used to fulfill an operator’s pipeline awareness campaign. In addition to, or as a supplement if necessary, the PAPERS program may utilize GIS data, public awareness stakeholder lists, and/or directory and other information to locate addresses within a certain buffer zone (generally 660 feet or 1,000 feet) or within a geographic jurisdiction adjacent to the pipelines. With this information, a sufficient number of potential respondents are randomly selected to complete the survey.

How many responses must be tallied for a completed survey?

Depending on company size, a minimum of either 400 or 235. A specific breakdown of responses (“completes”) is set forth in the chart:

Audience	Methodology	Completes* / Company	
		Large Co.	Small Co.
Affected Public	Mail	150	75
Additional Audiences	Telephone	250	160
Public Officials	Telephone	50	30
Emergency Officials	Telephone	50	30
Excavators	Telephone	150	100

**Number of completes indicates how many completed responses must be received. The total number of mail questionnaires distributed or telephone calls made is far higher.*

Why does the number of responses differ?

An important reason is that the number of potential respondents is different. A small company (fewer than 500 miles of pipeline) often has a limited universe of, for example, Emergency Officials to contact compared with a larger company with possibly thousands of miles of pipeline. Also, in most places, there are likely to be more members of the Affected Public or Excavators available to be contacted than Emergency Officials or Public Officials.

Why were these response numbers selected and who chose them?

Customer Care Measurement & Consulting and the API Statistics Department recommended these numbers, believing they would provide useful data at reasonable cost. There is no absolute right number of responses. More responses increase the confidence that repetition of the survey would produce similar results and more strongly suggest the results are representative of the entire population of potential respondents.

What is the level of statistical confidence in the results?

The results are reported with reference to a confidence level (95 percent) and a confidence interval or margin of error, which varies with sample size (number of completed responses) and sample universe (the entire population in the target area).



Below is a chart presenting margins of error for the various sample sizes employed in the joint survey program. Target universes are arbitrary and could be different depending on a company’s specific situation:

Sample Size (completed responses)	Sample Universe (entire population in target area)*	Margin of Error at 95% Confidence Level
150 Excavators	≥ 3,000	+ 8.0%
150 Affected Public	≥ 3,000	+ 8.0%
100 Excavators	≥ 2,000	+ 9.8%
75 Affected Public	≥ 1,500	+ 11.3%
30 Public Officials/Emergency Officials	≥ 600	+ 17.9%
50 Public Officials/Emergency Officials	≥ 1,000	+ 13.8%

**If entire population is less than sample universe numbers listed, it will start to decrease the margin of error.*

What does a 95-percent confidence level mean?

It means how confident we are that a second survey would produce the same results. The confidence level is expressed within a range, also called a margin of error or confidence interval. Consider if our survey consisted of a single question: “Do you know that a pipeline is near your home?”

Let’s assume 4,000 people live around a pipeline and that we sampled (received an answer to the hypothetical question from) 250 of them. Let’s also assume that 30 percent of the respondents said “Yes.” A statistician determines the margin of error at 95 percent confidence level to be ± 10 percent. What does that mean?

First, 10 percent of 30 percent is 3. So the confidence interval around the result is 30 ± 3 or 27 to 33. In statistical terms, this means that had we sampled a different 250 people (different from the 250 we got responses from), we are 95 percent confident that between 27 percent and 33 percent would also have answered “Yes” to the question.

It also means that if all 4,000 people living around the pipeline had responded, we are 95 percent confident that between 27 percent and 33 percent would have answered “Yes.”

How are survey respondents contacted?

For the Affected Public, direct mail methodology is used, with an option to participate using an online instrument. A mail survey is the most cost effective methodological approach, because of the preponderance of rural (C&D county) households. A mail survey can be conducted at a much lower cost than telephone surveys with greater sample availability. In addition, the mail survey provides a wider range of responses for open-ended questions and is better received because people can fill it out at their convenience, as opposed to the intrusive nature of telephone interviewing.



For the Additional Audiences, a telephone methodology is used. When conducting research with a hard to reach professional audience, it is important to identify the most effective methodology. In the case of Public Officials, Emergency Officials and Excavators it is believed that telephone interviewing is the most effective methodology. Professional audiences of this nature have lower response rates using any methodology; however, combined with a lack of names in the sample files, these audiences become even more difficult to reach by mail.

How can the results be meaningful when (for some companies) populations around multiple pipelines in multiple locations are surveyed?

As long as the same communications are used system-wide and the population surveyed is randomly selected, the survey results are valid for a company's entire system, whether intrastate or interstate, large or small operator, and regardless of the number of pipelines. Similar to political polling, it is only necessary to survey a small portion of the population to provide meaningful information.