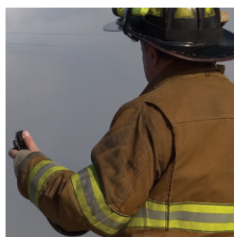


Save Lives
Reduce
Claims
Mitigate Litigation
PREVENT
Injuries
manage risk
Increase
Stakeholder
VALUE
Enhance
Your Brand



Public Safety Engagement

Promoting Utility Business Goals, Keeping Pace with Regulation, Demonstrating Continuous Improvement, and Achieving Bottom-Line Results

Amy Rosenkrantz, Culver Company, LLC
December 10, 2018



**California Underground Facilities and
Safe Excavation Board**

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Agenda

- Culver Company Overview
- Public Safety Context
- Culver Company's Approach
 - The Situation
 - Developing Programs Based on Risk and Influence
 - Case Study—Public Safety Across the Enterprise
- Solutions
 - At-Risk Workers
 - Emergency Responders/First Responders and Public Officials
 - Educators, Students and Families/Affected Public
- Next Steps

Culver Is Uniquely Qualified to Provide Insights into Utility Public Safety Outreach Programs

- Our Heritage: Utility public safety strategists for 41 years
- Our Offering: Strategic planning for utility public safety outreach
 - Litigation and regulatory support
 - Public safety risk assessment and tactical solutions to fill gaps
 - Risk management reporting
 - Program design, implementation, evaluation, and refinement
 - Primary research on program effectiveness (national benchmarks and company baseline)
 - Behavior change experts
- Our Expertise:
 - Providing public safety programs, data, and services to utilities and industry partners in 50 states and Canada
 - Serving approximately 700 utilities annually
 - Reaching nearly 2 million at-risk third-party workers, 400,000 first responders, 3.5 million students, and 360,000 educators annually
 - Providing advisory services in support of AEGIS insurance assessments, state, and local regulatory proceedings and rate cases as well as in support of hearings before FERC, the National Transportation Safety Administration, and the Pipeline and Hazardous Materials Safety Administration
- Some of Our Utility Partners Include:



Public Safety Risks and Opportunities Impact Utilities at Strategic, Cultural, and Functional Levels

- Investment community confidence
- Credit risk
- Remediation
- Litigation

- Performance gaps
- Operational inefficiencies
- Risked infrastructure
- Workforce turnover
- Institutional knowledge transfer

- Fines
- Reduced license to operate
- Risk earning authorized rate of return
- Required resources for hearings

Regulatory

Image and Reputational

- Negative media attention
- Special interest group attacks
- Employee disengagement
- Customer dissatisfaction
- Public confidence and trust
- Key stakeholder relationships (e.g., public officials, customers, emergency responders)

Stakes Are High. Utilities' Financial and Reputational Risks Around Public Safety Continue to Escalate, Driven Partly by Lack of Proactive Processes

Issues



- 1 in 4 utilities report having had a “recent risk surprise”
- Nearly 60% do not require a risk analysis to determine an acceptable resilience/recovery level
- 2 out of 3 companies did not define when a risk issue needed to be escalated

Impact



- Reputational impacts from safety incidents can far exceed operational losses and are often times not fully considered

Implications



- Identifying gaps in risk management processes can allow companies to more effectively protect against comprehensive impacts of safety incidents
- A better predictor of risk is needed across the industry

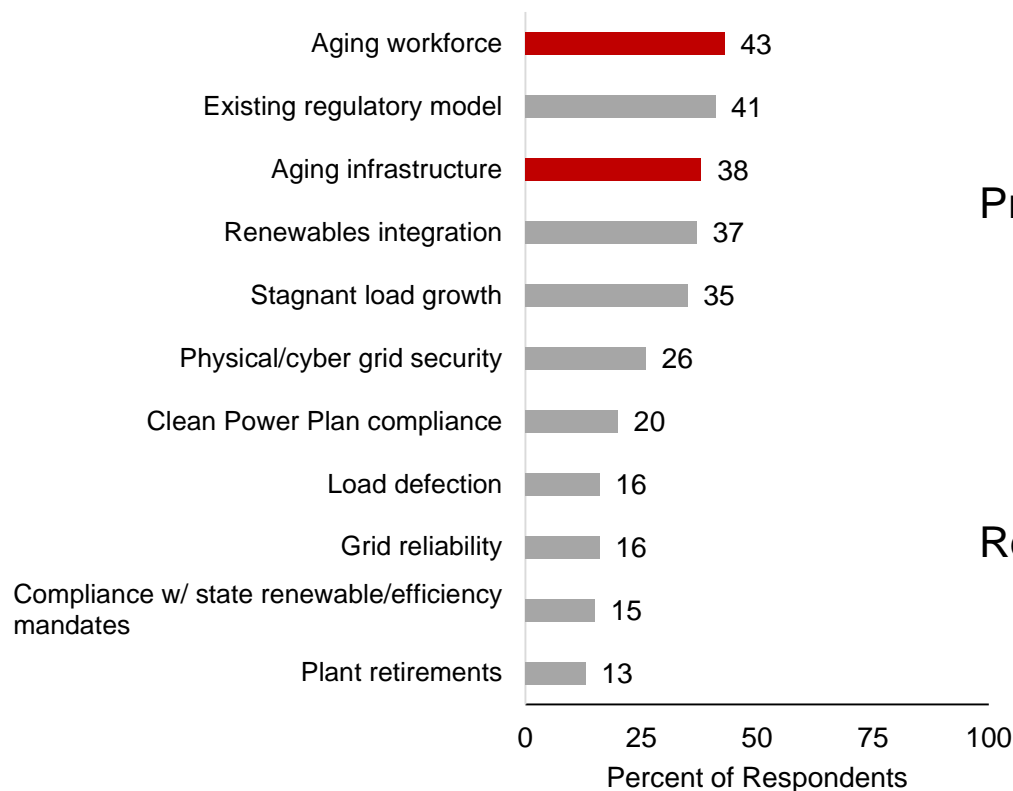
True Cost of Failing to Adequately Manage Risk

\$45.8 M	Legal: administrative
\$25.7 M	Legal: settlements
\$8.5 M	Health and safety: third party settlements
\$4.3 M	Health and safety: administration
\$50.0 M	Other settlement costs
\$10.2 M	Excess liability
\$3.7 M	Insurance: Directors Sarbanes-Oxley
\$5.5 M	Risk management
\$153.7M	Total

Source: ERM Industry Assessment of 103 AEGIS Member Utility Companies, presented by Dr. Paul Walker, St. John's University, Tobin College of Business, School of Risk Management at 2015 AEGIS Policy Holders Conference

Aging Workforce & Infrastructure Challenge Our Industry. Public Safety Outreach Investments Are Even More Critical

Executives' Most Pressing Concerns



Unprecedented Retirements

- Knowledge loss and lack of implementation/
- Different mindset/culture of new employees

Proof Points

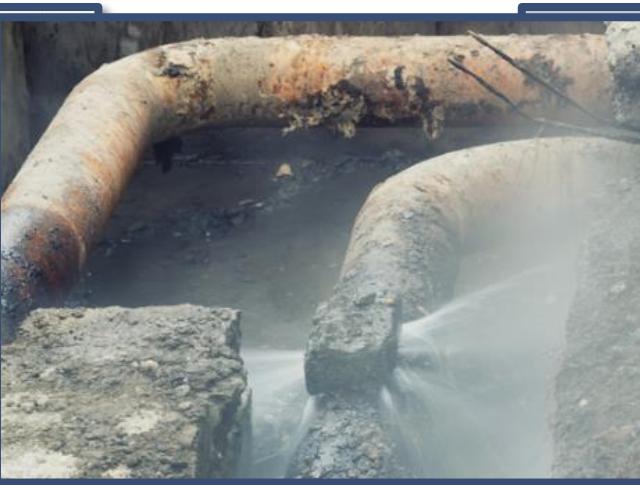
- Safety stakeholders – more on your shoulders
- Culver increasingly asked to connect the dots, fill in the gaps on incidents
- Investment in capital projects

Reliability and Safety

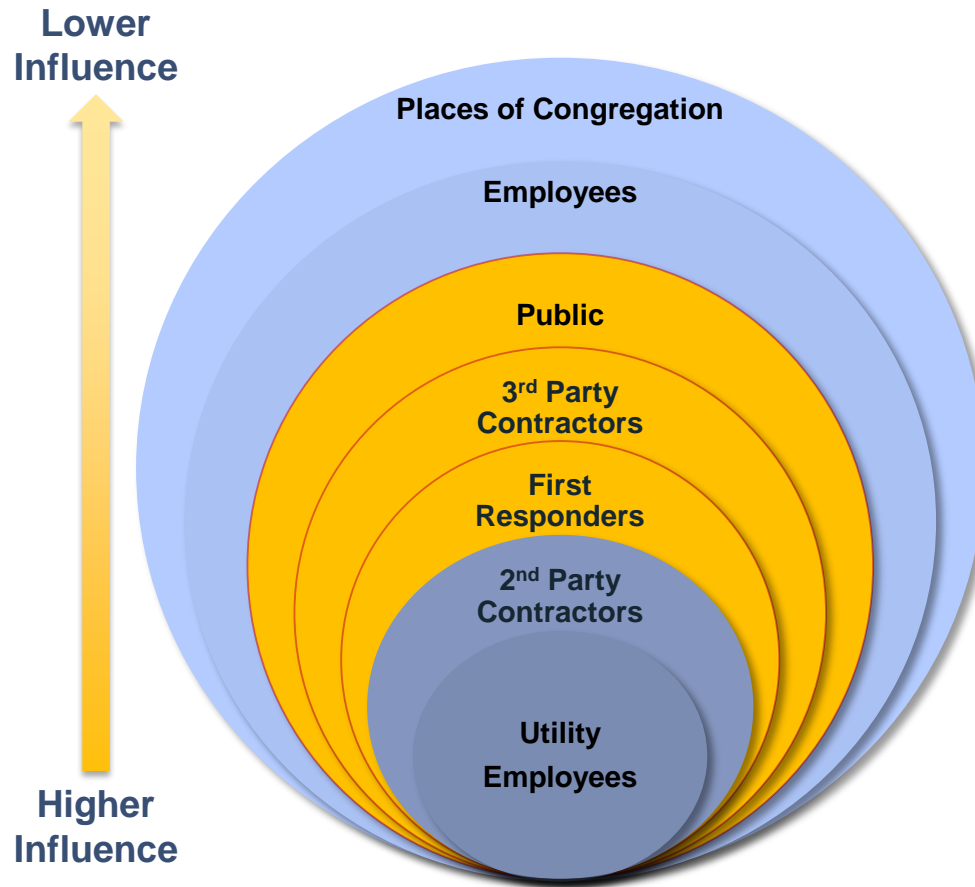
- Aging electric and gas infrastructure
- Limited maintenance investments

Source: 2016 State of the Electric Utility Survey, Utility Dive
Online survey conducted with 515 electric utility executives (61% IOUs, 15% Muni, 14% Coop and 10% public power)

What We Mean When We Say “Utility Public Safety”



Knowing the Target Audience and Developing Programs Based on Risk and Influence

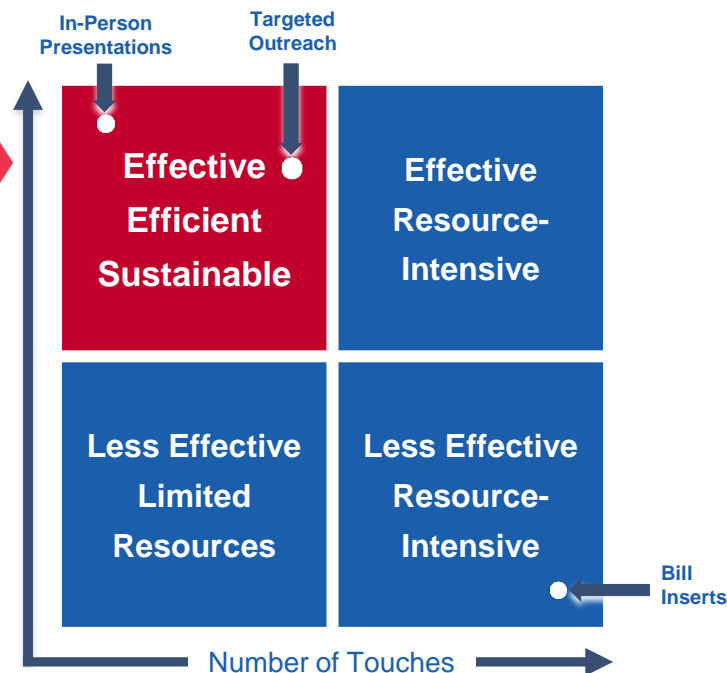


Culver Company's Outreach Programs Promote Public Safety By Driving Behavioral Change Among At-Risk Stakeholders

Prevention-Based Strategy

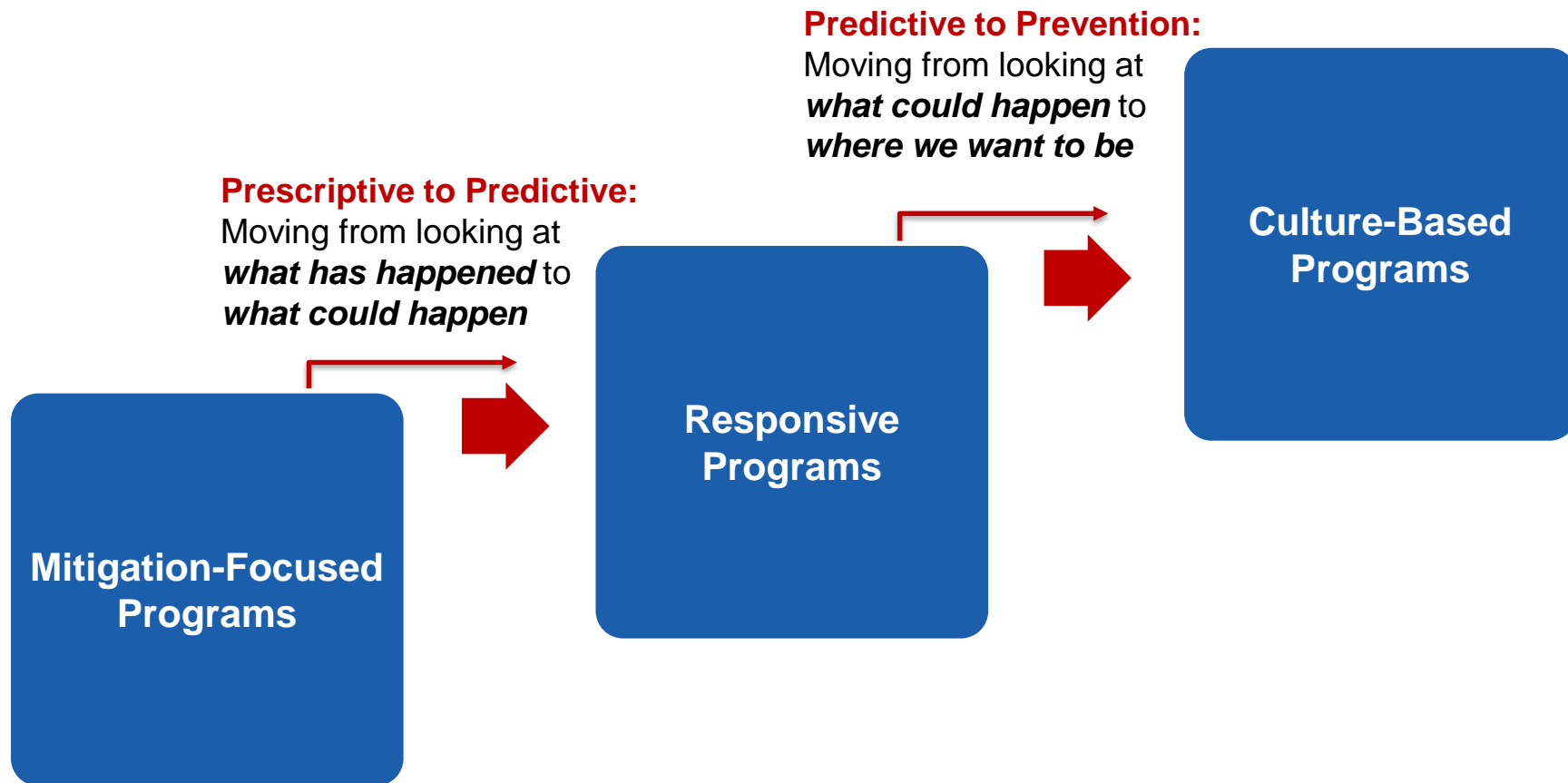


Strategic Framework for Decision Making

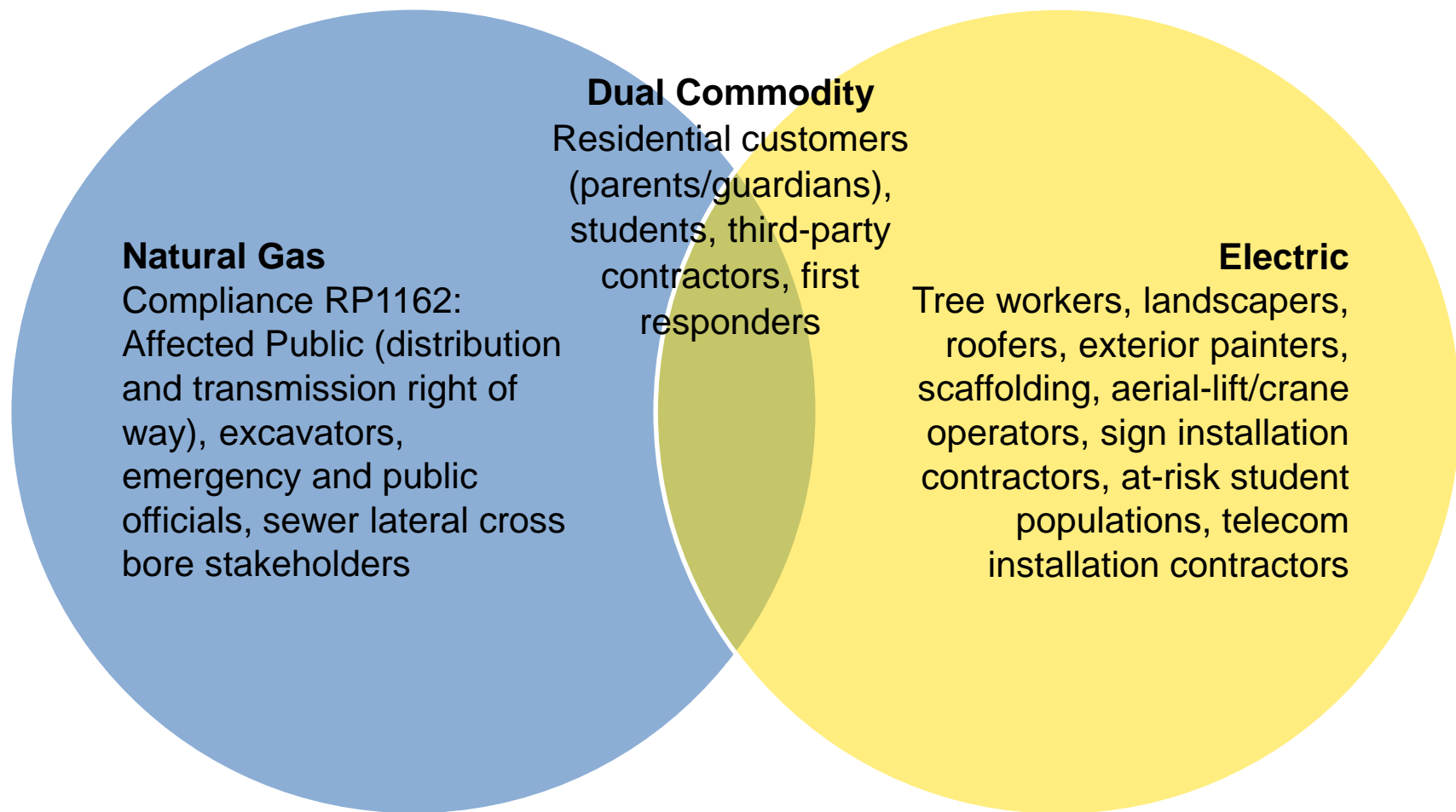


A Prevention-Based Strategy Increases Engagement, Awareness, and Safe Behaviors Among Affected Audiences

Evolution of Public Safety Programs In a Changing Environment



Public Safety Outreach Creates a Customer-Centric, Unifying Messaging Platform that Eclipses Operational and Regulatory Differences and Enhances Enterprise Value



Efficiently Deploy Unified Safety Messaging Using Stakeholder-Preferred Channels, Maintaining Brand Consistency

Affected Public

We are committed to your safety



Please share this brochure with your family.

Natural gas pipelines transport natural gas safely and efficiently to our customers throughout New York, Massachusetts and Rhode Island, as well as to a liquefied natural gas (LNG) storage facilities in Greenpoint, Brooklyn.

We have a longstanding history as a safety partner in your community. To ensure public safety and service reliability, National Grid crews continually test, inspect, repair and improve our pipelines and monitor for potential gas leaks. We also conduct training and drills with local emergency responders to prevent and prepare for natural gas emergencies.

Despite our efforts, the possibility does exist for a gas leak that could lead to a fire or explosion. Although these events are extremely rare, it is important for you to know how to recognize, react and respond to pipeline emergencies, to know where natural gas pipelines are located in your area and how to protect these pipelines from damage.



Teachers and Families

Let's learn electrical & natural gas safety!

Learn to avoid electrical and natural gas hazards and how to respond to risky situations.



Students



Teachers



Teacher resource center

Order FREE materials
Order FREE materials to use in the classroom.

Give feedback
Offer feedback for the continued improvement of our program.

E-newsletter
Peruse our biannual Energy Education newsletter for students & teachers

Emergency Officials



Be prepared to respond to utility incidents.



We develop this elearning site to:

- provide free online training to firefighters
- offer self-paced coursework to accommodate busy
- cover valuable utility incident response lessons
- satisfy department in-service training requirements.

Keep yourself, your team and the public safe. Register and complete your online training today.

Visit firstresponder.ngridsafety.com and connect with us on

Excavator safety near underground natural gas pipes

Hang this poster

Help protect natural gas pipelines

- National Grid pipelines deliver natural gas safely and reliably to homes and businesses across New York, Massachusetts and Rhode Island. We respectfully request these practices for contractors and others, whether for tests and conduct routine maintenance.
- The greatest risk to gas pipelines is accidental damage during excavation.
- Using a natural gas pipeline has serious consequences. Even a tiny gouge, scratch, dent or crack to a gas pipe or its coating may cause a leak that could lead to a fire or explosion.

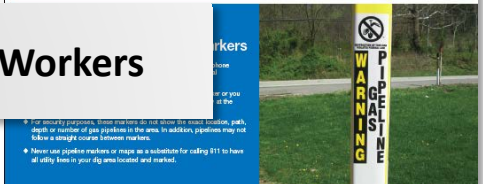


Call 811, and dig with care

- State law requires you to call Dig Safe New York at least two full working days before any excavation starts, including weekends and holidays. This free service will arrange for marking of buried natural gas lines and other utilities so you can work a safe distance away from them.
- Call Dig Safe New York: 811 or 1-800-962-1922 (digsafe.ny.gov).
- Before you call, pre-mark your proposed dig area with white paint, flags or stakes.
- Wait for utilities to be marked before digging.
- Physically locate marked natural gas pipelines by hand digging. If you suspect locate marked pipelines, STOP. Digging and contact National Grid immediately.
- Do not use mechanical excavation equipment within the "reference zone," which means the width of a marked utility plus 24 inches from each excavated outside edge. Use ONLY hand tools or vacuum technology within this safety zone.
- If you are working near an exposed natural gas main-line pipe, contact National Grid.



At-Risk Workers



- For security purposes, some markers do not show the exact location, path, depth or number of gas pipelines in the area. In addition, pipelines may not follow a straight course between markers.
- Never use pipeline markers or maps as a substitute for calling 811 to have all utility lines in your dig area located and marked.

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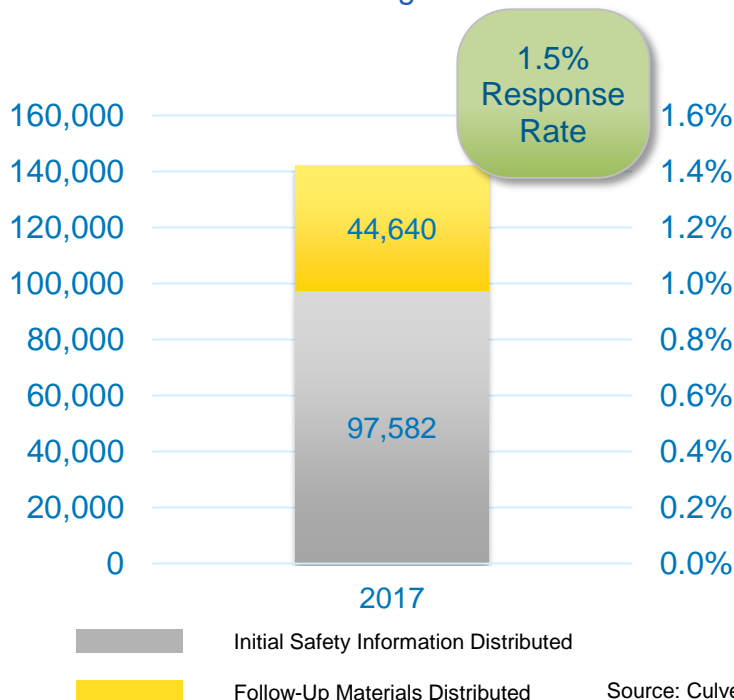
At-Risk Workers

Annually Reaching More Than 100,000 Third-Party Contractors At Risk of Injury or Creating an Incident

Culver Company's Methodology for Identifying and Communicating With Stakeholders



At-Risk Worker Program Distribution



The National Response Rate for Third-Party Contractor Programs Is 1.5%

Source: Culver Company 2017 customer program.

Additional Safety Materials



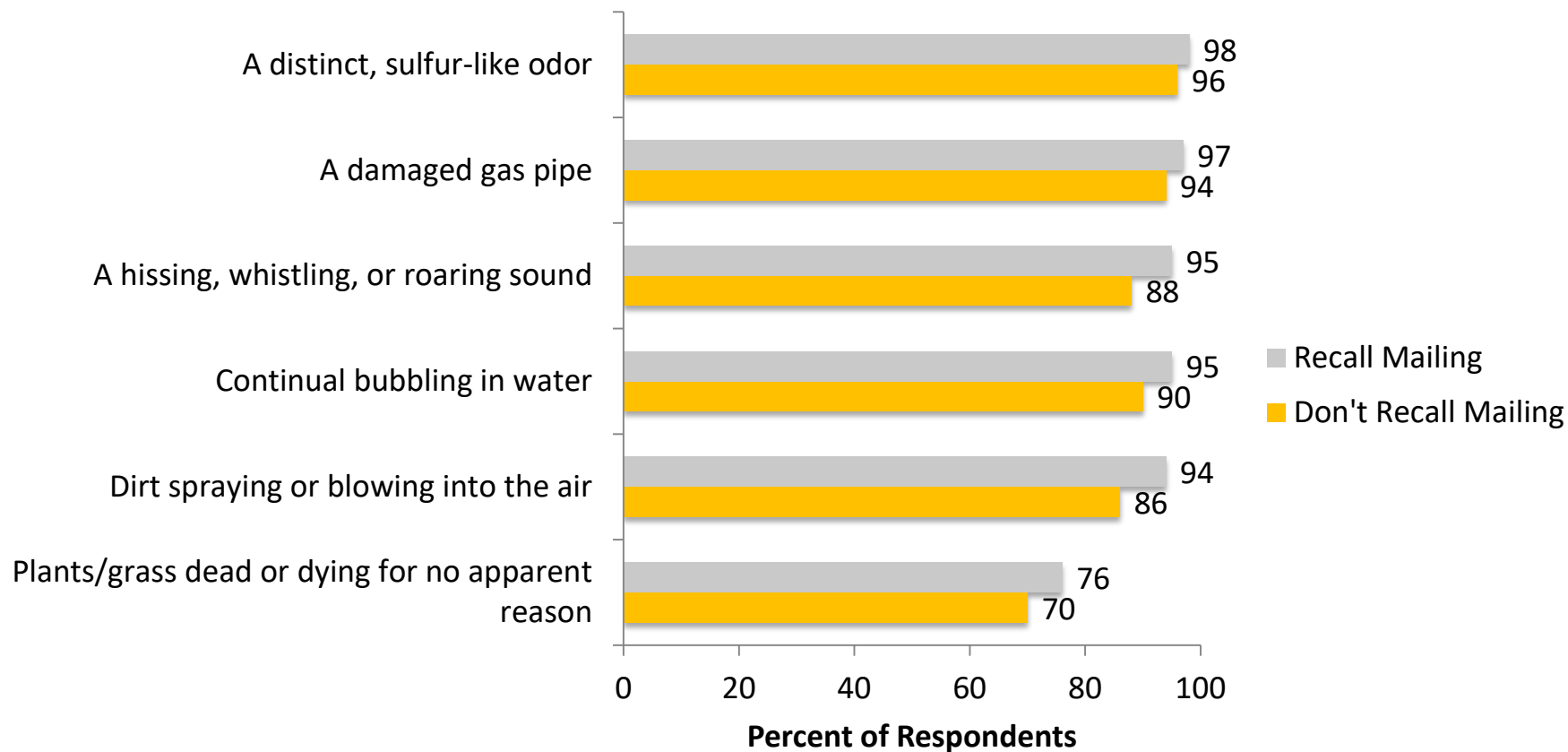
Source: Culver Company Benchmark Data, 2017 National Average n=8,470, Utility customer 2017 n=217

Effective Communications Gain Impact by Segmenting for Industry, Language, and Message-Delivery Preferences



Excavators Who Recall Utility Safety Mailings Better at Recognizing Gas Leaks, Particularly Signs Other than the Scent of Mercaptan Alone

Identified as a Natural Gas Leak Sign



Enhanced Communication Drives Awareness and Evokes Emotions, Which Drive Desired Behavior

Know.

- Messages in enhanced mailings get noticed
 - 47% of excavators reported messages stood out
 - Call 811 before digging in particular attracted their attention with 57% mentioning this in response to an unaided question

Feel.

- They tap into what is meaningful to the target audience
 - 86% will change how they approach work because they learned safe practices reduce costs
 - Excavators also tend to recall photographs and images

Do!

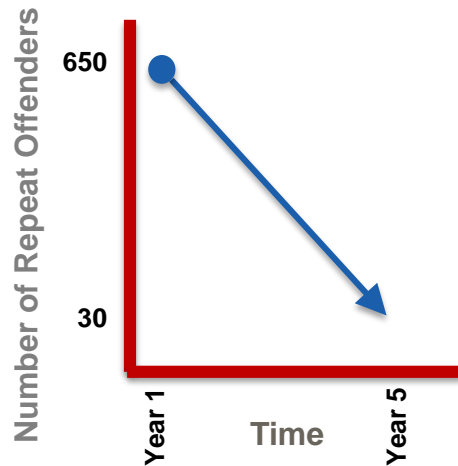
- And, they drive behavior
 - 82% said the safety messages in the mailing were effective at changing behavior
 - 64% will change their on-the-job behavior because of the call before you dig messages they saw

Integrating Repeat Offender Outreach Programs to Reduce Incidents, Mitigate Risk, and Address Regulatory Concerns

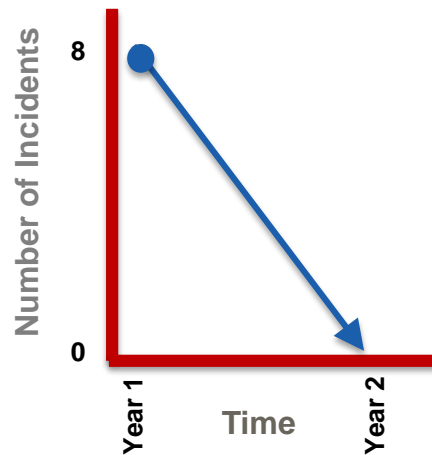
Culver Company Has Teamed with Numerous Utilities to Deliver Verifiable Reductions in Incidents and Related Hard and Soft Dollar Savings



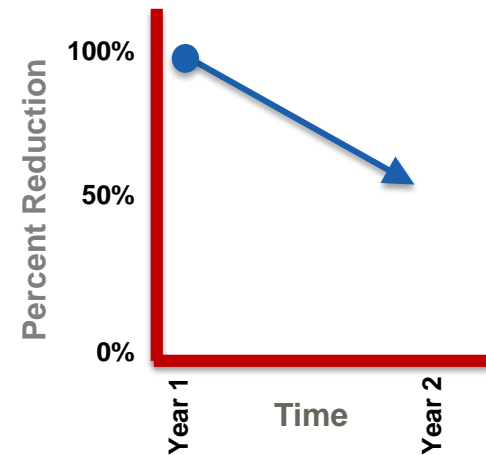
Dual-Commodity Repeat Offender List



Electric Overhead Incidents



Excavator Pipeline Strikes



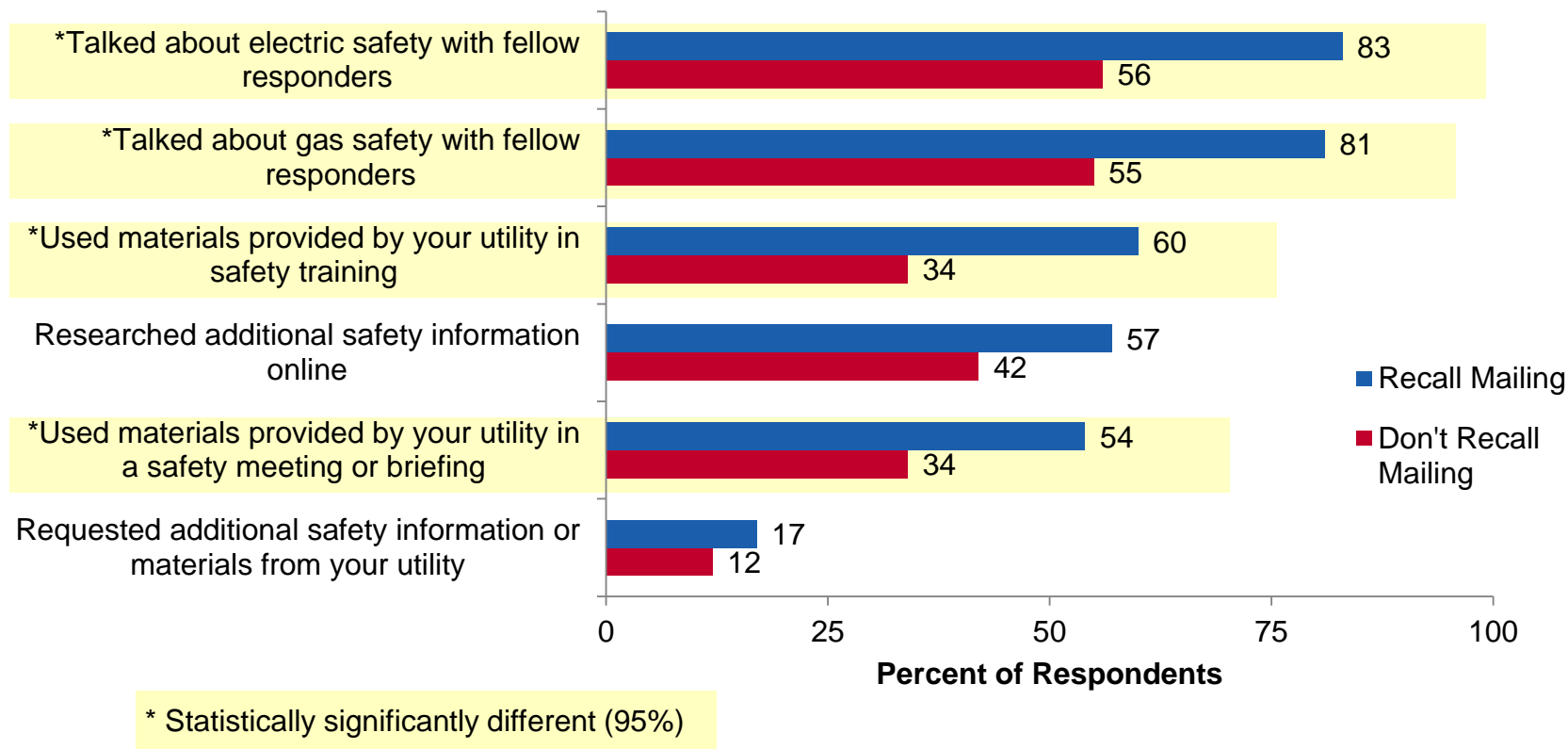
Save Lives
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**At-Risk First Responders,
Students and Their Families**

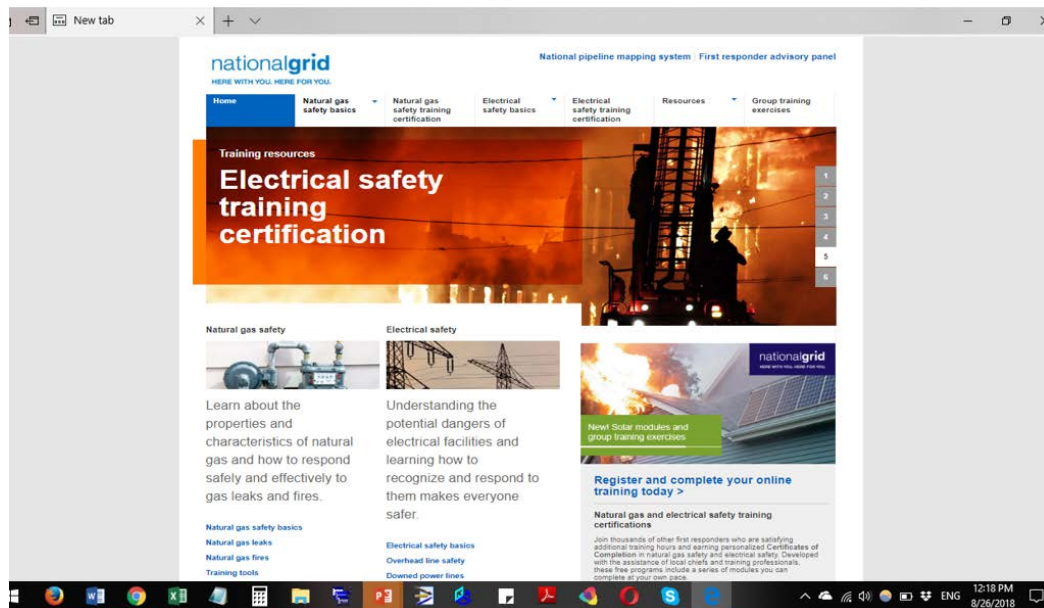
Behavior Data Indicate Impacts of the Public Safety Materials Distributed by the Utility to the Emergency Responder Community

Actions Performed by Emergency Officials Over the Past Three Months



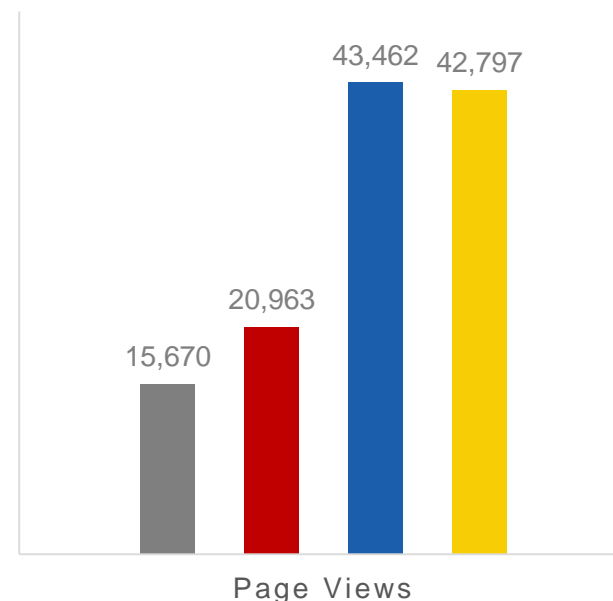
Source: Culver Program Partner data, 2016

Best-in-Class Programs Leverage Metrically-Driven Solutions to Strengthen Ties with First Responders



Website Engagement Annual Comparison

■ 2014 ■ 2015 ■ 2016 ■ 2017

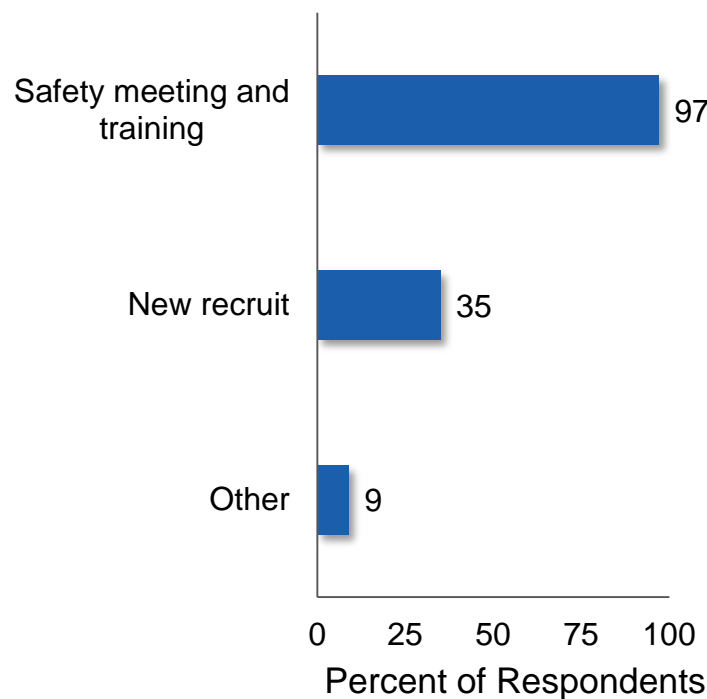


First Responder e-Learning Metrics:

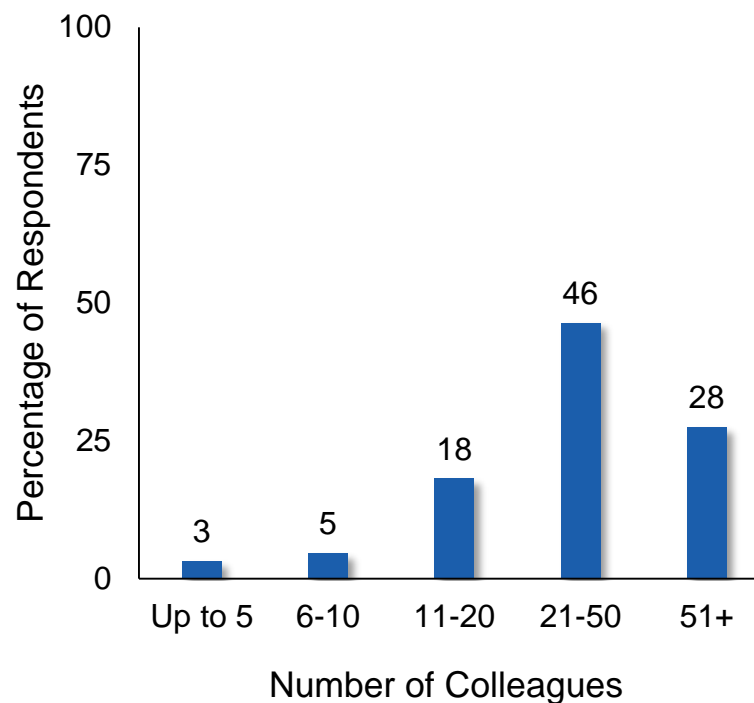
- 400 webpages and growing
- 40,000+ page views annually
- 6,000+ completed trainings, and expanding
- Validated by regulators and industry

First Responders Nearly Universally Depend on Quality Safety Content from Their Utilities As a Foundation for Safety Training

How First Responders Use Program Safety Information



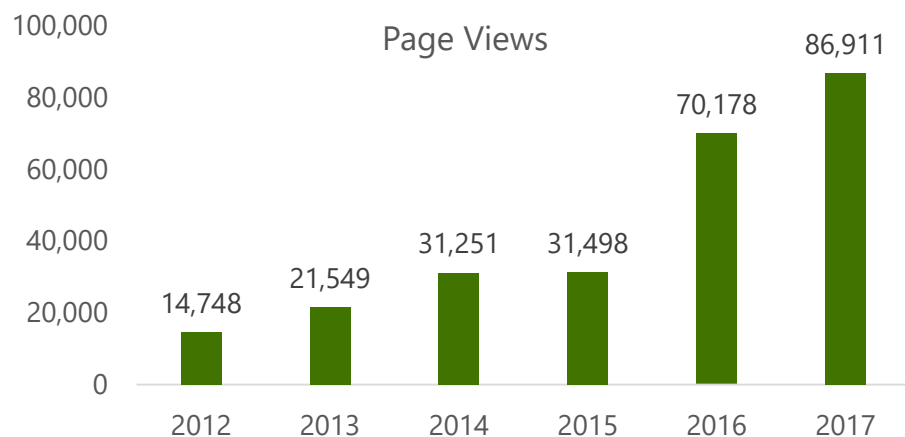
Number of Colleagues to Whom First Responders Provide Training Materials



Culver First Responders Insights Benchmark Analysis 2018

All-Electric Company Proactively Invests in Student/Family Safety Communications, with Impressive Engagement Metrics

- History
 - School program reaches educators, students, and their families with direct mail and online resources
 - Since 1999, reached 2,559,875 students with electrical safety education
- Educational Materials
 - Offers 4th and 5th grade safety booklets to area educators, students, and families
 - e-SMARTkids educational website





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EDISON**
Energy for What's Ahead™

**WE'RE OFFERING FREE
CLASSROOM MATERIALS.**

Order Now!



Meet Teaching Objectives with Complimentary Energy-Related Educational Materials That Meet California Content Standards

To help you support student achievement and prepare students for the future, we have incorporated California Content Standards into our materials. This is intended to help you address critical subject matter about electrical safety and energy-related education while you meet your teaching objectives.

We offer two student books that teach about the safe and responsible use of electricity—each with an accompanying teacher's guide that provides valuable background information, activities, discussion topics, and resources to build upon each book's lessons.

Electrical Safety World
Grades 4-6
#37445

This imaginative activity book helps teach mandated science concepts like circuits, conductors, and states of matter while reinforcing safety.



Understanding Electricity and Electrical Safety
Grades 3-6
#37450

Packed with easy-to-follow experiments and challenging activities, this book helps kids understand how electricity works.



Classroom Educational Programs Offer Extensive Reach and Impact

For each request in the utility's territory, nearly 7 educators received materials, sharing these with an average of 38 students each



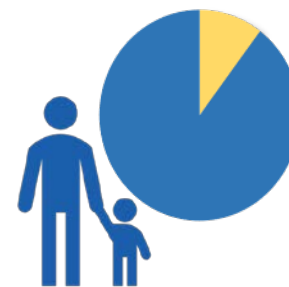
Total of 301
educators
requested
classroom
materials



For every request,
nearly 7 teachers in all
received the utilities
classroom materials
Total: 2,107 teachers



Each teacher
shared the utility's
materials with an
average of 38
students
**Total: 80,066
students**



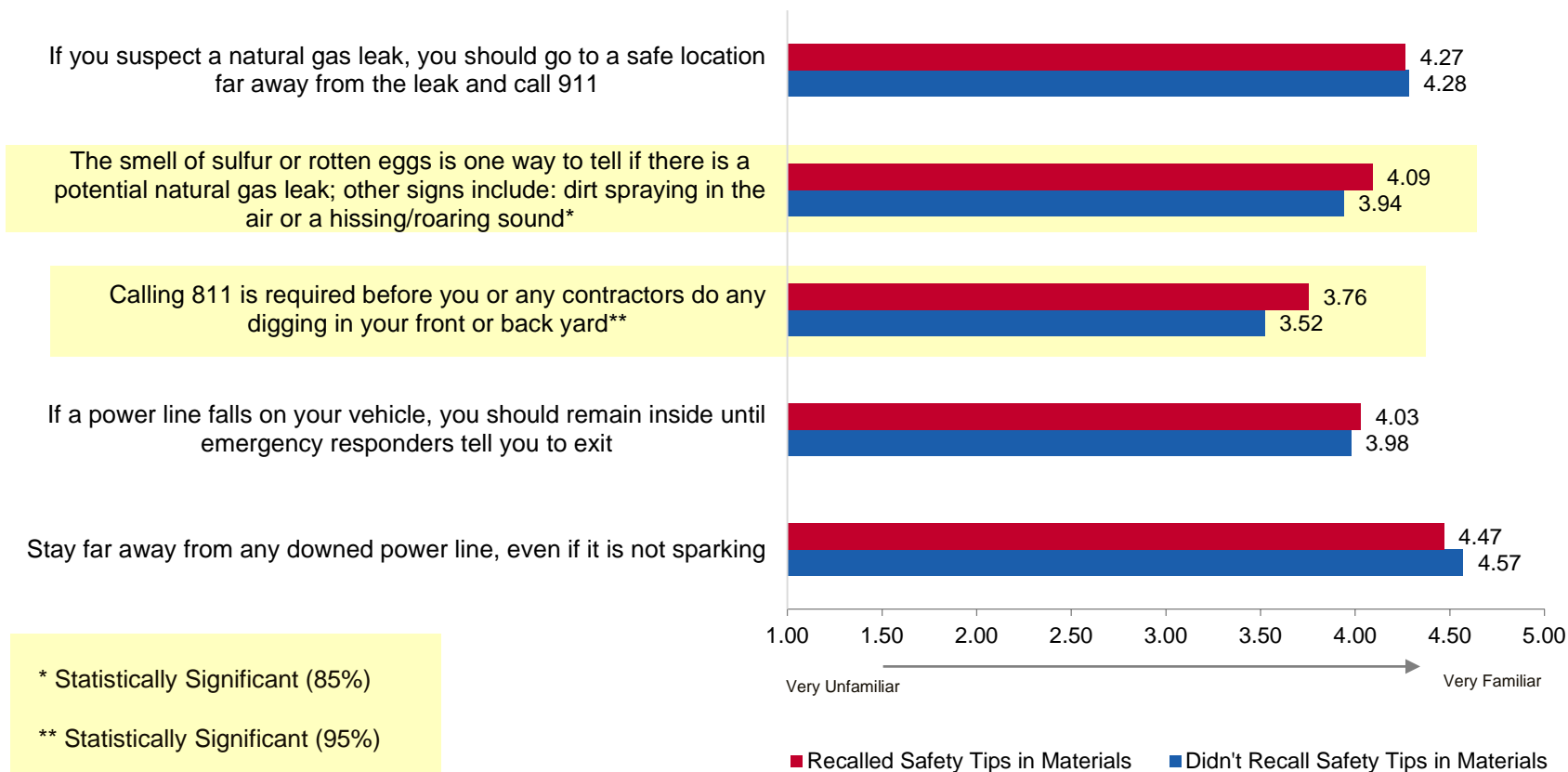
92%* of parents
report that they saw
the utility's safety
materials, which had
been brought home
by their students

Culver Company School Safety Program Data 2017

*Culver Company At-Risk Insights Benchmark Analysis 2018 n=636

Classroom Materials Increase Parent Awareness of Safety Behaviors (Call 811 before Digging; Identifying Signs of a Natural Gas Leak)

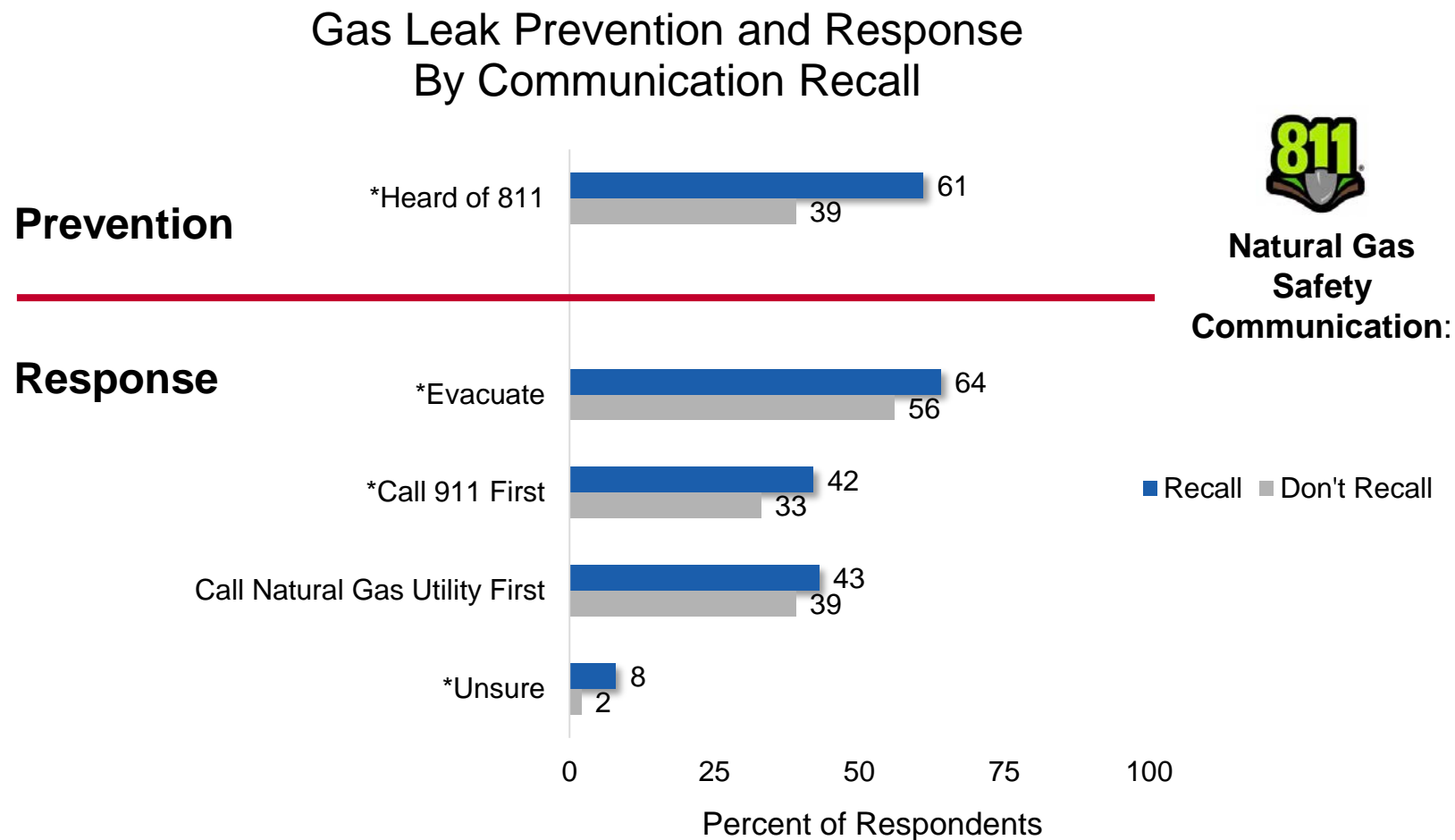
Level of Familiarity (1 to 5) with Safety Tips in School Materials



n = 449-621

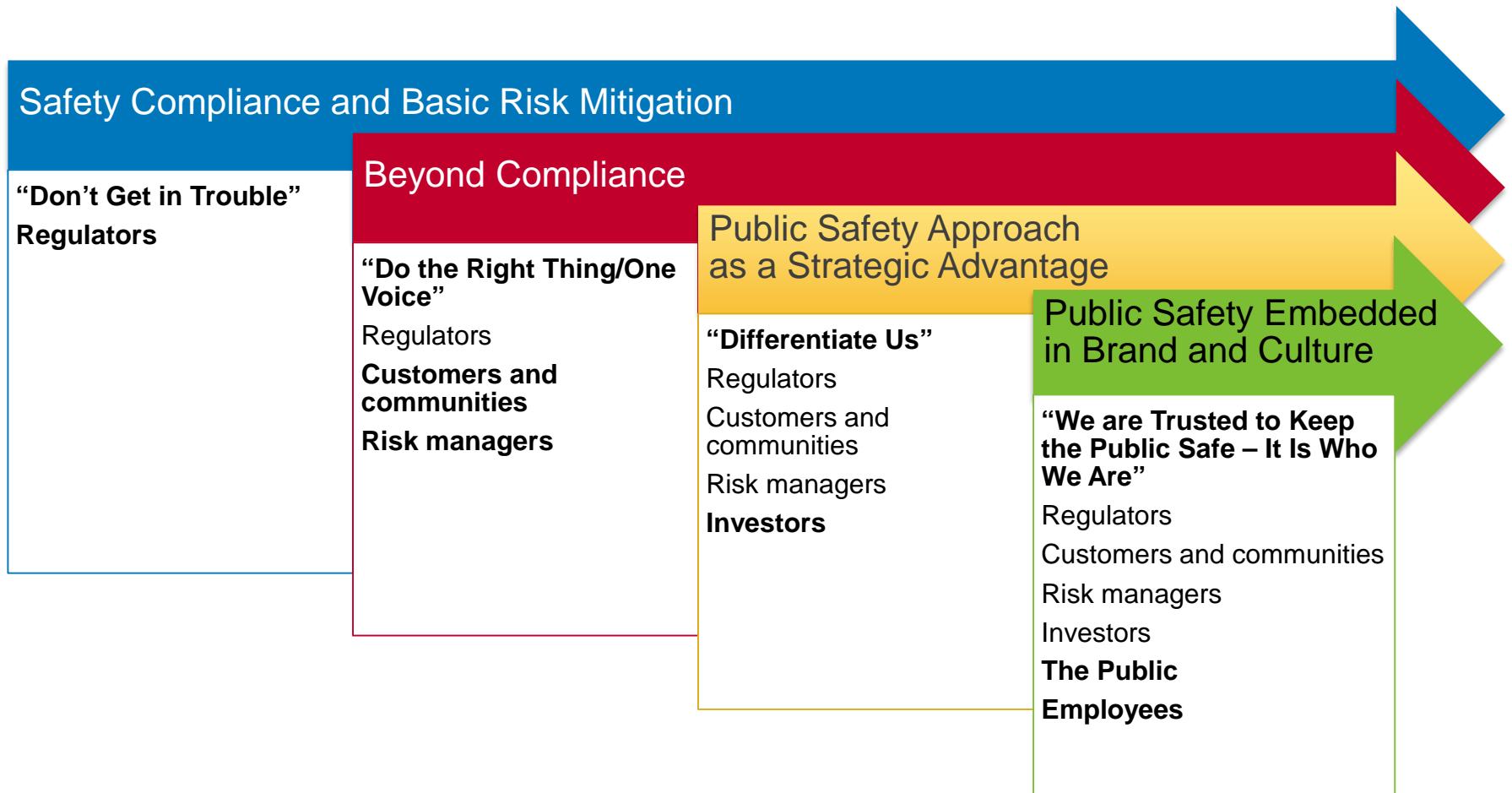
Source: Culver Company Parent Engagement Survey data, 2017

Our Communications Help Consumers Better Protect Themselves and Others



Culver Company Affected Public Insights Benchmark Analysis 2018

Leading Utilities Are Embedding Public Safety in Their Brand and Company Culture



Enhancing Public Safety Impact Through Our Partnerships, Approach, and Research

