

Pipeline Safety – State Perspective

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States and Pipeline Safety

- States have delegated authority to inspect intrastate pipeline systems
- Approximately 80% of all pipelines are regulated by state programs
- The National Association of Pipeline Safety Representatives (NAPSR) is an organization representing state programs.
- NAPSR Mission – to strengthen State pipeline safety programs through the promotion of improved pipeline safety standards, education, training, and technology.

2017 NAPSRS Priorities

- Continuation of the Federal-State partnership for pipeline safety
- Help operators understand and comply with recent or prospective rule changes (Transmission/Gathering, OQ/Cost Recovery, Underground Storage, Excess Flow Valves, Plastic Pipe)
- Continue to improve state Damage Prevention programs
- Prepare for the Congressional mandate for a national integrated pipeline safety regulatory inspection database
- Continue to promote Safety Management Systems
- Continue to advocate for state program funding

Recent and Pending Pipeline Safety Rule Changes

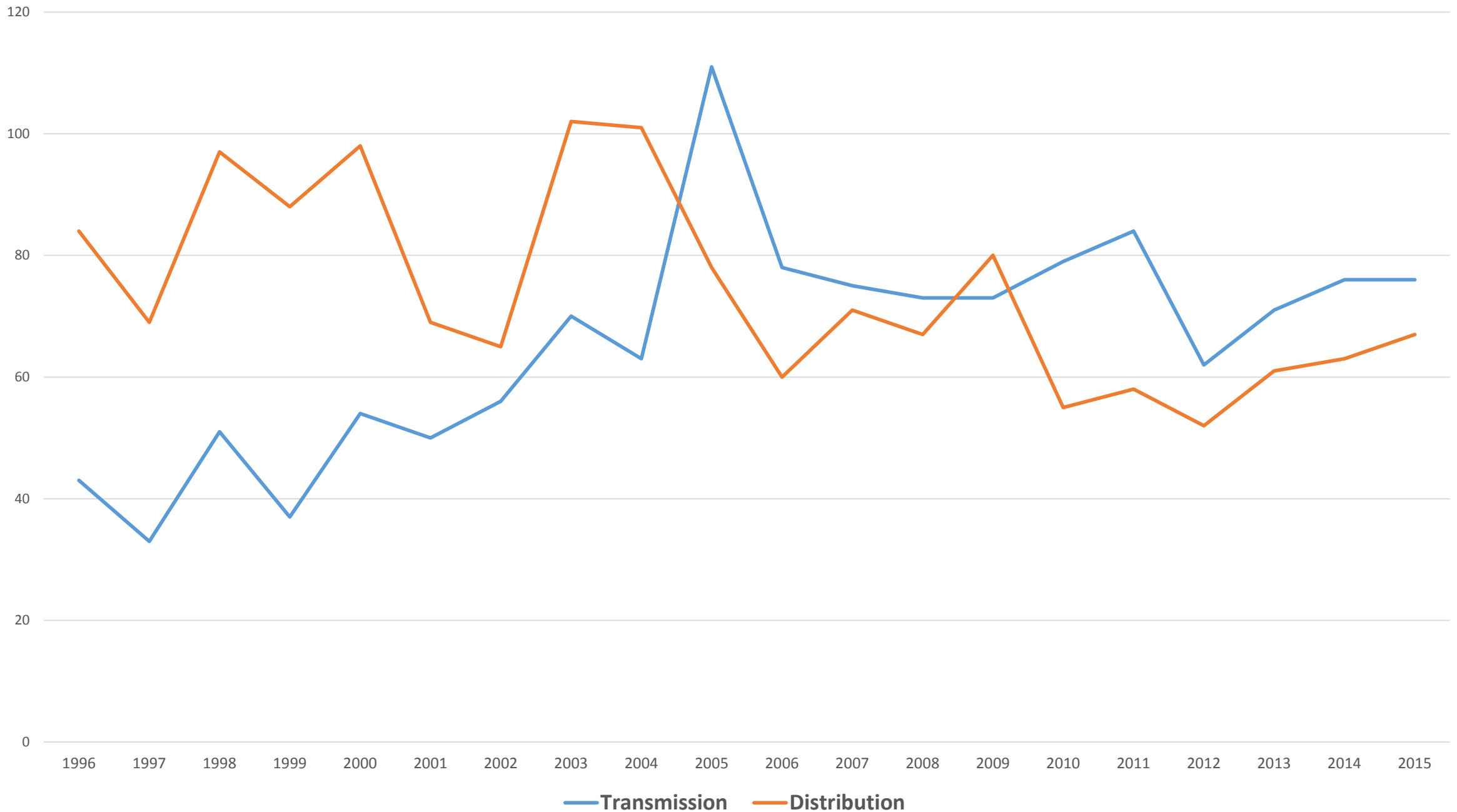
Rules keep getting bigger and more complicated

- Transmission/Gathering rule
- Excess Flow Valves
- Enforcement of State Excavation Damage laws
- Plastic Pipe / Marking Standards
- Operator Qualifications / Incident Notification
- Enhanced Emergency Order Procedures
- Underground Storage
- Onshore Hazardous Liquid Lines
- Valve Installation and Minimum Rupture Detection Standards

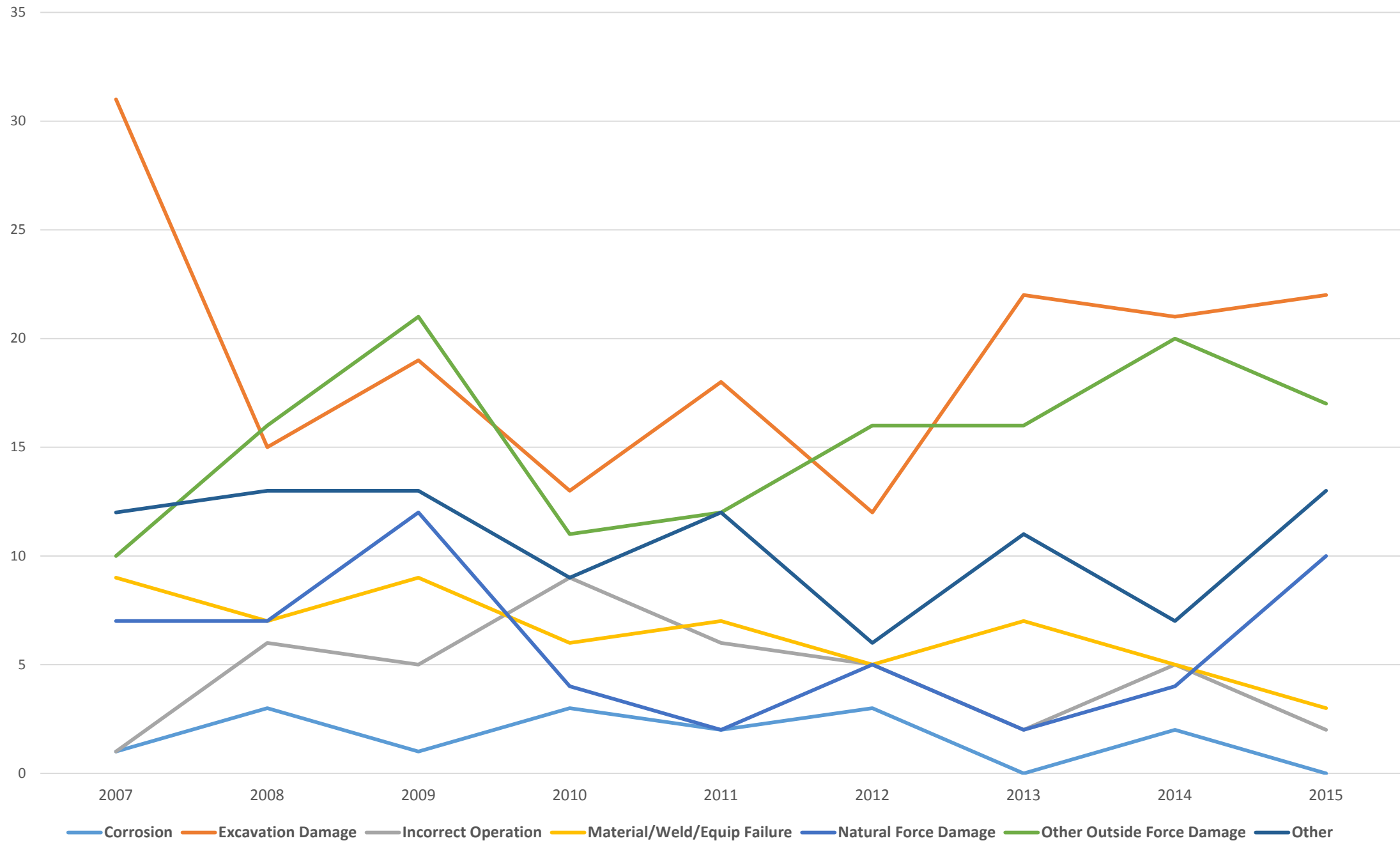
Incident Trends

- What do incident trends tell us about pipeline safety threats?
- Observations
 - Excavation Damage is the top threat for Distribution piping
 - Time dependent threats (Material, weld or joint failure, corrosion) are the top threats for Transmission lines
 - Damage Prevention programs appear to be effective
 - A Safety Management Systems approach may be helpful

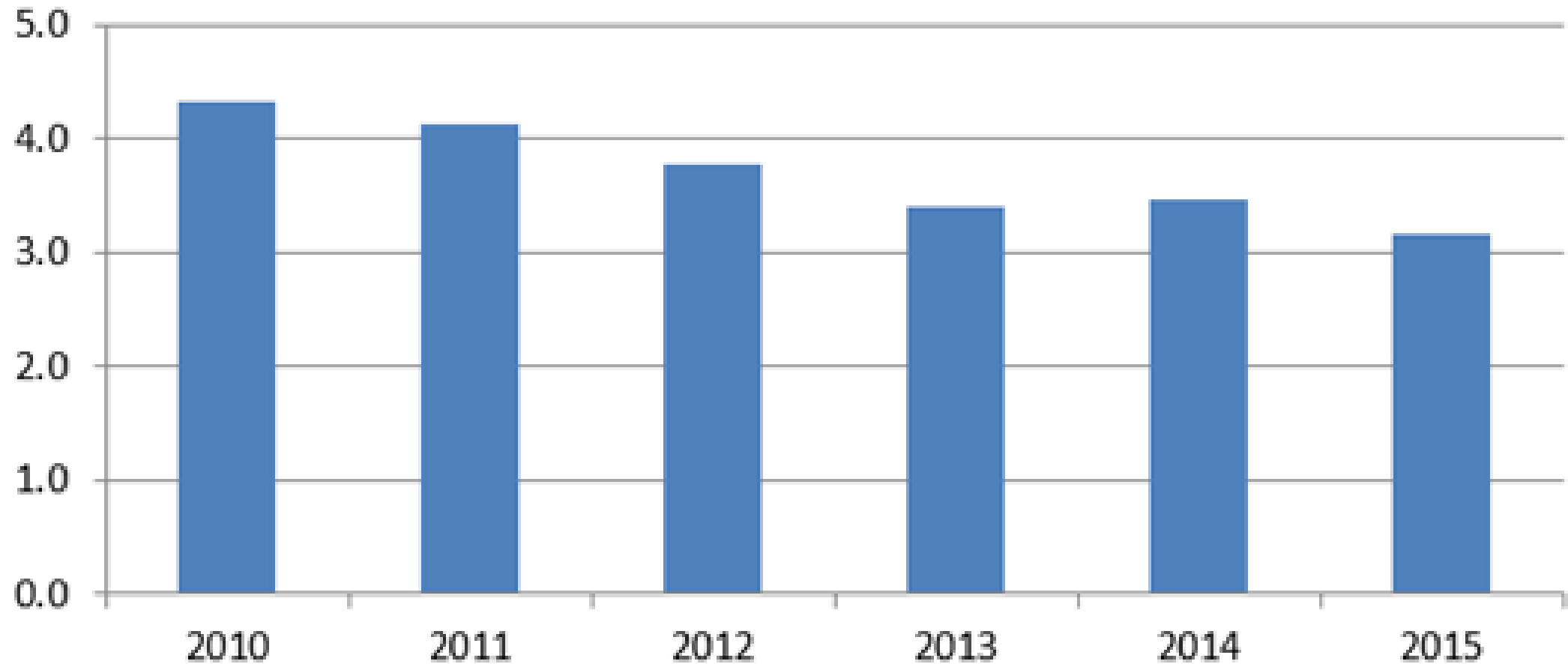
20 Year Trends - Gas Transmission and Distribution Significant Incidents



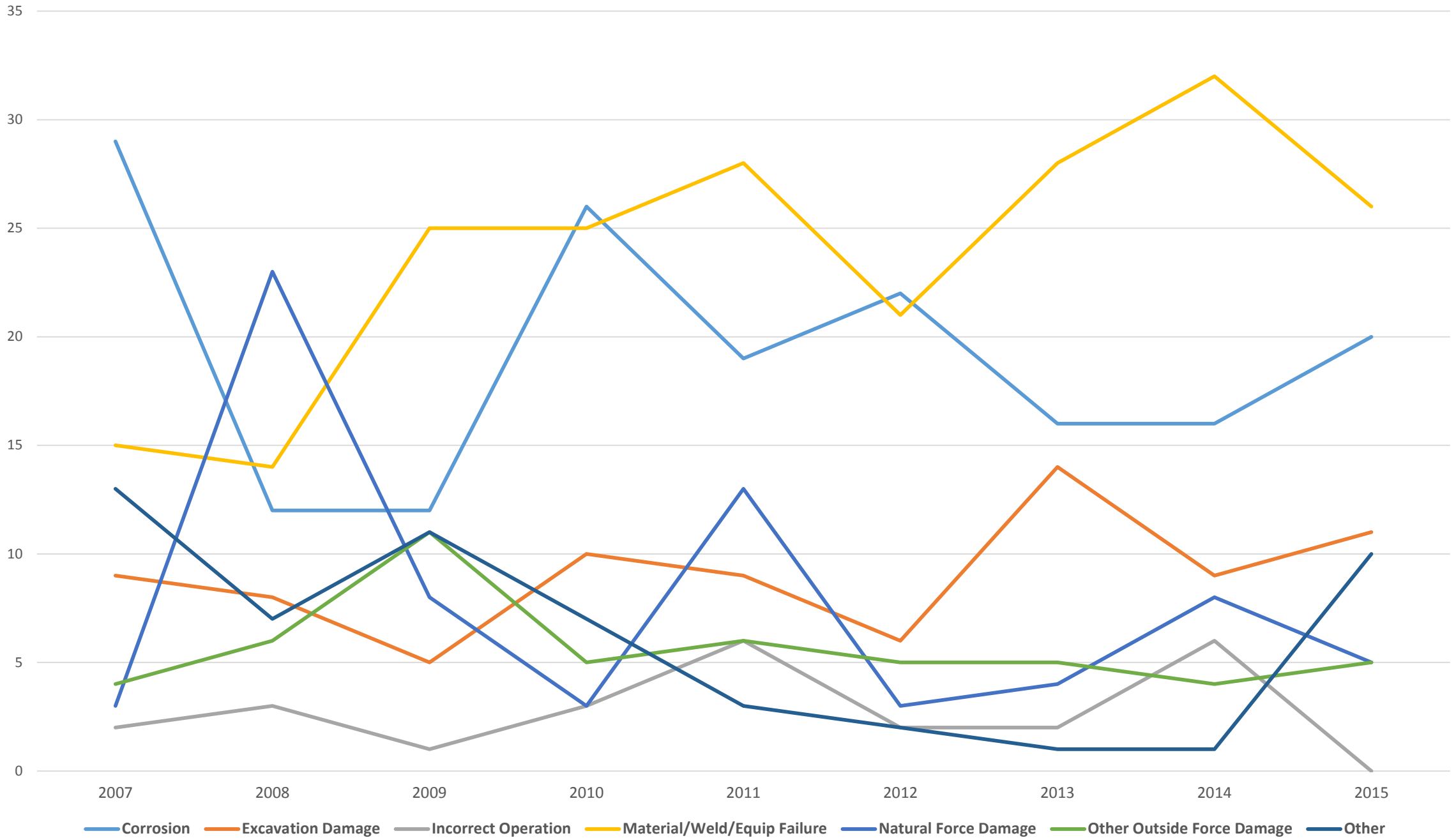
Significant Incidents by Cause - Distribution



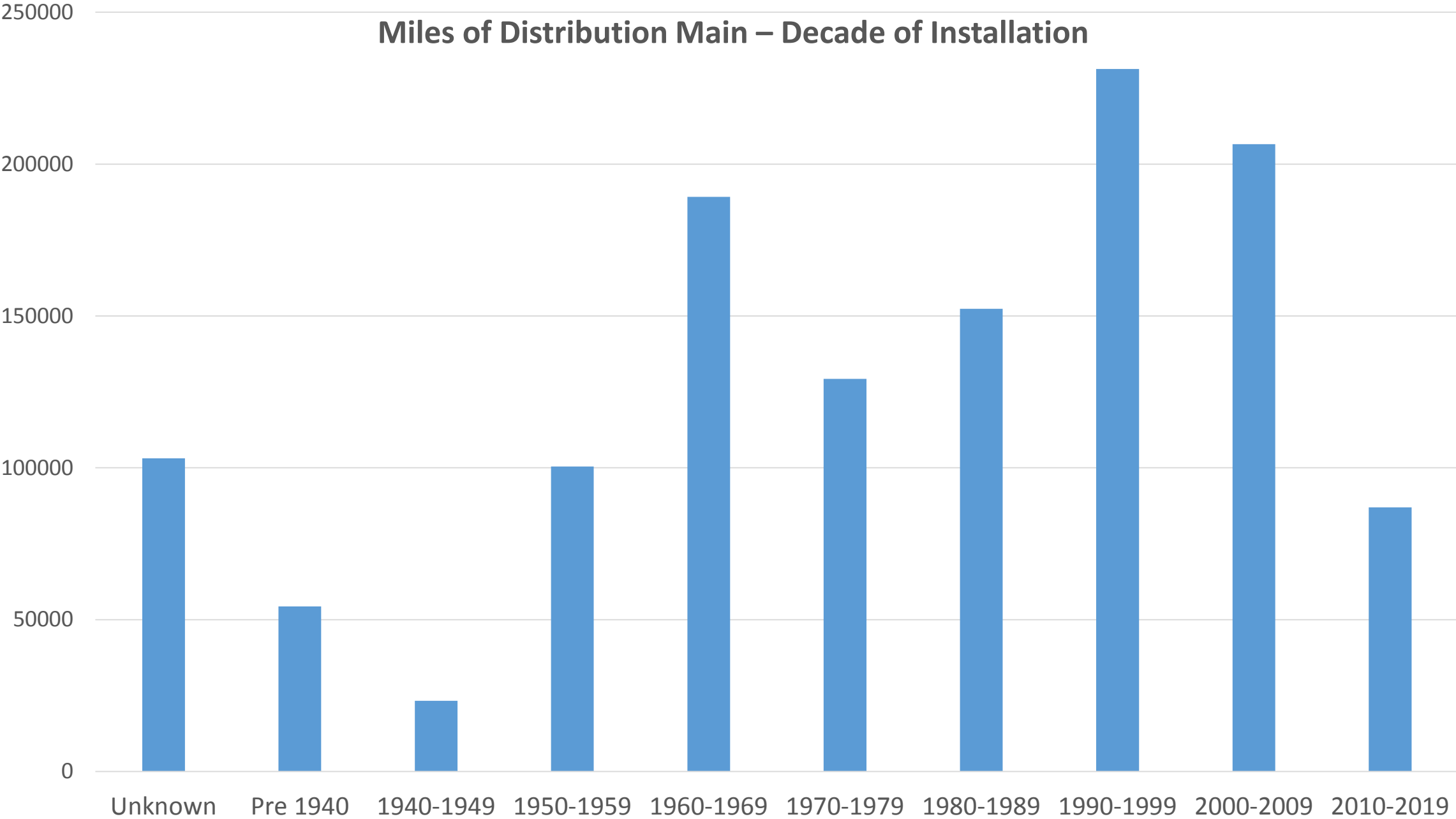
Ohio: Natural Gas Distribution Excavation Damages per 1,000 Tickets



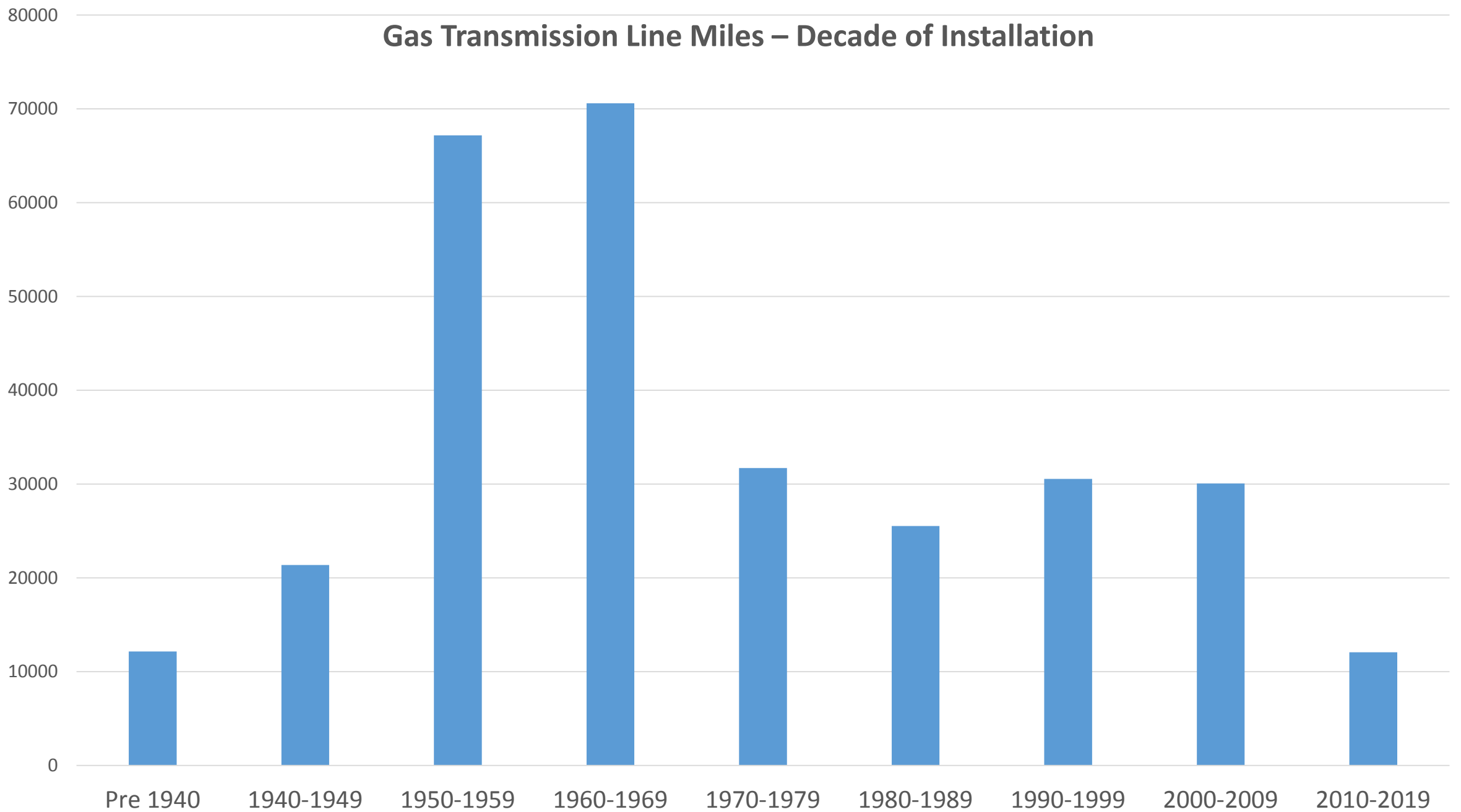
Significant Incidents by Cause - Transmission



Miles of Distribution Main – Decade of Installation



Gas Transmission Line Miles – Decade of Installation



Safety Management Systems (API RP 1173)

- Provides operators with a framework to develop and implement a pipeline safety management system
- Based on approaches from other high hazard industries - nuclear, airline, etc.
- “Plan-Do-Check-Act: continuous improvement model
- Promotes a “Safety Oriented Culture” – where communication, risk reduction and continuous improvement is part of day to day activities



Example

- An operator has experienced a number of excavation damages (dig-ins) in the recent past, including an incident that burned down a multi-unit building.
- Checking the data on their PHMSA 7100 report shows a damage per thousand locate ticket rate almost twice the state average.
- Need a plan to reduce excavation damage.

PLAN

What exactly is the problem?

- Old Way
 - Anecdotal Evidence – What do you think the problem is based on your personal experience (can work for small systems)
 - Or – Classify damages by
 - One call notification practices not sufficient
 - Locating practices not sufficient
 - Excavating practices not sufficient
 - Other

PLAN

What exactly is the problem?

- New Way
 - Review locate request procedures
 - Establish damage investigation procedures
 - Classify damages so the results can tell you something. Ex:
 - Locating practices not sufficient:
 - Incorrect facility records / maps
 - Facility marking or location not sufficient
 - Facility was not located or marked
 - Facility could not be found or located

DO

Put the plan into action

- Train your people on your procedures
- “Operational Controls” – check to make sure the procedures are being followed
- Investigate failures (damages) for lessons learned
- Keep good records so somebody reviewing the records later can understand what happened
- “Stakeholder engagement” – Keep everyone (employees, contractors, excavators) involved. Public awareness.

CHECK

Can we use what we learned to get better?

- Check to see if your plan is effective (damages per thousand locates)
- Review incident investigations and lessons learned. Any patterns?
- Ex: for this operator, the most common cause of a dig-in is: Locating practices not sufficient -> Facility marking or location not sufficient
 - Further investigation shows the leading cause is that when a locate is done by contractors, no one is informing the excavator when a locate is untoneable.

ACT

Determine how your plan can be improved, and fix it

- Old Way – yell at your contractors
- SMS Way – review your procedures and contract, identify exactly what is going wrong





Questions?