Mechanical Damage Study Industry Introduction

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Perspective What's the Problem?

- Up to half of pipeline incidents / accidents
- Vast majority of failures at time of damage
 - Always someone present
- Recent years
 - Few, if any, previously damaged pipe failures
- Damage caused by:
 - 3rd Party anyone with a backhoe, dozer, grader, etc.
 - 1st & 2nd Party Us! And our contractors!

What does industry need to address?

- More effective prevention
 - Addresses both immediate and delayed
 - Different needs for 3rd vs 1st & 2nd party
- Means of assessing existing damage when found
 - Safety
 - Efficiency reasonable resource allocation
- Topics for the next two days

Layers or Protection in Depth

- Away from ROW
 - Education & information about pipelines
- Near or on ROW
 - Keep people with equipment off ROW
 - Use One-Call when working near ROW
 - Monitor excavations effectively
- On the Pipe
 - Report all damages
 - Assessment tools for damaged pipelines
- Technology needs
 - Identify, develop, implement

Technology Needs

- Prevention methods
 - Communication, location, efficiency
- Detection & characterization
 - Determine needs for analysis
- Develop / enhance analytical methods
- Determine data needs, sources
 - Current technology MFL, Geom. ILI
 - Vintage, History of Linepipe, other reports
 - Other data needs

Next Two Days

- Where we are now
- Opportunities for improvement
- How we get there