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EFFECTIVENESS OF CURRENT ROW MONITORING PROCESSES

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Objective

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Measure the Effectiveness of Damage Prevention Techniques

- **One-call System and Pipeline Operator Responses**
- **Locating and Marking**
- **Excavator/Pipeline Operator Communications**
- **Monitoring of Excavations**
- **Public Awareness Programs**
- **Conventional Right-of-Way Monitoring (aerial and ground patrolling)**

Scope

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- **Analyzed data on hits and near misses recorded by pipeline operators using data they had submitted to DIRT (Damage Incident Reporting Tool) sponsored by CGA (Common Ground Alliance).**
- **177 DIRT reports were reviewed that involved hits or near misses both when a one-call was made and when no one-call was made over a period of one year for six pipeline operators.**

Infrastructure Covered

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- **78,000 miles of pipelines in North America**
- **One year's worth of one-call tickets (1,136,193)**
- **One year's worth of "locates" (59,913)**

Results

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- **35 hits associated with a one-call ticket**
- **44 near misses associated with a one-call ticket**
- **24 hits associated with excavation with no notification**
- **74 near misses associated with no notification**

Conclusions

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- **The one-call process works 99.46% of the time.**
- **Some improvement in the process may be possible with enhanced communication between excavators and pipeline operators, but**
- **55% of the hits or near misses arose in conjunction with encroachments where no notification was given by the excavator.**
- **44% probability of a municipality, county, or other utility carrying out an excavation without making a one-call.**
- **94% probability of a land occupant (farmer, homeowner, tenant, etc.) carrying out an excavation without making a one-call.**

Recommendations

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- **Continue to collect and analyze DIRT data as a means of monitoring effectiveness of new directions and new technologies.**
- **Improve the DIRT process specifically for pipeline operators by following specific criteria for reporting hits and near misses (an industry group such as PRCI could do this without great expense).**
- **Continue to seek out and develop enhanced right-of-way monitoring technology to detect and prevent unauthorized encroachments.**
- **Pipeline operators need to enhance their public awareness programs to address the 94% probability that a land occupant will not make a one-call before excavating.**

Take-Aways

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- Pipeline operators should participate in DIRT but follow the specific reporting recommendations and definitions provided in the final report on this project. PRCI could establish an on-going program for collection and analysis of DIRT data for pipeline operators.
- Pipeline operators may need to consider more direct contact with land occupants. If there is a 94% chance that a land occupant will excavate without making a one-call, it would seem that the cost of extra visits to land occupants would be worthwhile.

Opportunities

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- **Partner with CGA Research & Development Committee to establish the basis for DIRT data collection specifically for energy transmission pipeline systems**
- **Expand the level of research being conducted to address Damage Prevention**
 - **Human Factors**
 - **Advanced technologies**
 - **Leveraging of resources and limiting redundancy**
 - **Continued Government-Industry Partnerships**
 - *PHMSA*
 - *VUPS*