

ARIZONA CORPORATION COMMISSION
PIPELINE SAFETY SECTION



2016

Trends on Pipeline Damages
Caused by Excavation

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EXECUTIVE SUMMARY

This report examines and measures the trend on pipeline damages caused by excavation activities of all local companies (LDC) that own and operate (Operator) a pipeline system in the State of Arizona.

The definition of “Operator” and “pipeline system” under R14-5-201 of the Arizona Administrative Code Title 14, Chapter 5 are as follows;

“Operator” means a person that owns or operates a pipeline system or master meter system.

“Pipeline system” means all parts of the physical facilities of a public service corporation or provider through which gas, LPG, LNG, or a hazardous liquid moves in transportation, including but not limited to pipes, compressor units, metering stations, regulator stations, delivery stations, holders, fabricated assemblies, and other equipment, buildings, and property so used.

In the year 2012, the Arizona Corporation Commissions, Office of Pipeline Safety (ACC) instructed the Operators to submit a quarterly report of pipeline damages (data) caused by excavation with the following information;

1. The total number of locate requests received by the Operators
2. The total number of excavation damages
3. The date, location, and name of the company or person responsible for the damage
4. The cause of each damage classified into four root causes;
 - No 811 ticket requested by excavator
 - Incorrect marking of pipeline facilities
 - Error by excavator
 - Error by operator or operator contractor.

The goal of this report is to identify the leading cause of “pipeline hits” and to suggest improvement of identification and tracking of areas that have more “pipeline hits” which will be critical to gas pipeline safety.

There are twenty two (22) operators included in this Damage Prevention Performance Report, they are the following:

◆ Abbott Laboratories	◆ Gila River Power LP
◆ Alliant Gas Arizona Propane LLC	◆ Graham County Utilities Incorporated
◆ APS Energy Services	◆ NUCOR Steel
◆ Calpine Energy Services LP	◆ Pimalco Incorporated
◆ City of Benson	◆ Plains LPG Services
◆ City of Mesa	◆ Southwest Gas Corporation (SWG)
◆ City of Safford	◆ Swissport Fueling Incorporated
◆ City of Willcox	◆ Unisource Energy Services (Unisource)
◆ Colorado City	◆ Valley Airpark
◆ Copper Market Gas Incorporated	◆ Zapco Energy Tactics Corporation
◆ Duncan Valley Electric Cooperative	

These 21 Operators have a total combined pipeline length of 40,526 miles and 1,288,965 total number of gas services.

DATA ANALYSIS

DATA SUMMARY

Data shows that there is a 20% increase in 811 tickets generated for 2016. There were 509,083 - 811 tickets received in 2015 and 611,063 - 811 tickets received in 2016.

There was a 5% increase of pipeline damages due to excavation from 711 pipeline damages in 2015 up to 746 pipeline damages in 2016.

Pipeline damages by excavation due to no 811 ticket increased 16%. There were 230 cases in 2015 and 267 cases in 2016.

Pipeline damages by excavation due to incorrect marking stayed the same. There were 83 cases in 2015 and 83 cases in 2016.

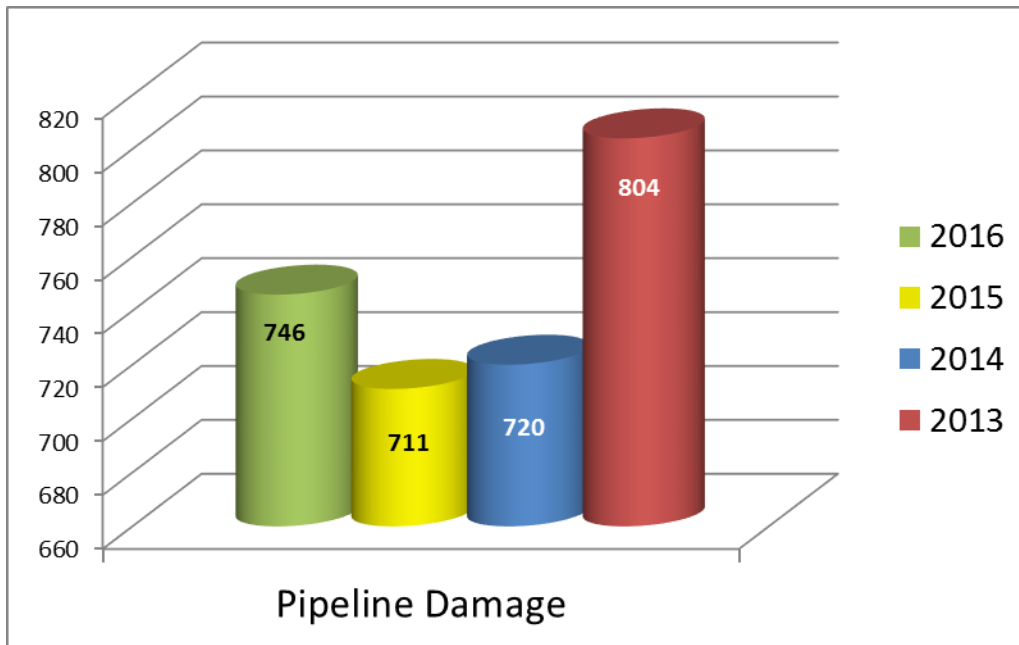
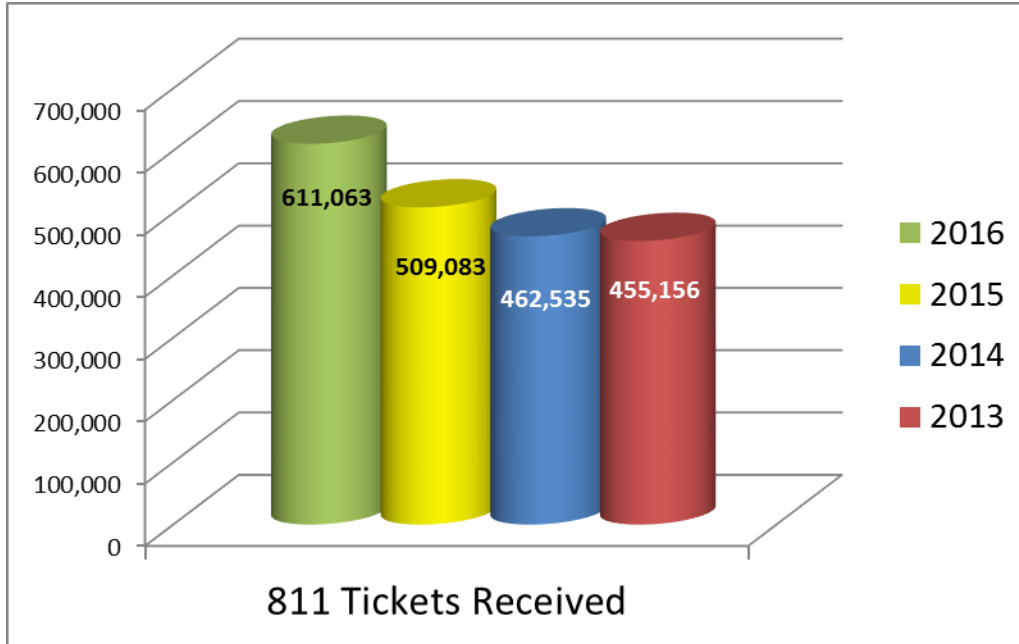
Pipeline damages by excavation due to 3rd party excavator error decreased 1%. There were 273 cases in 2015 and 271 cases in 2016.

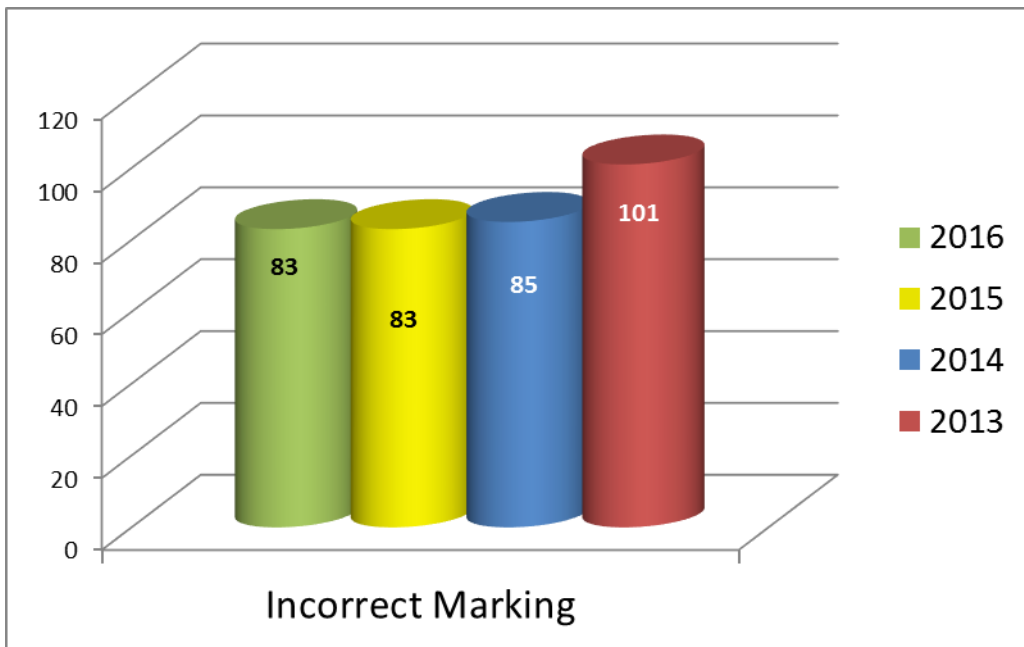
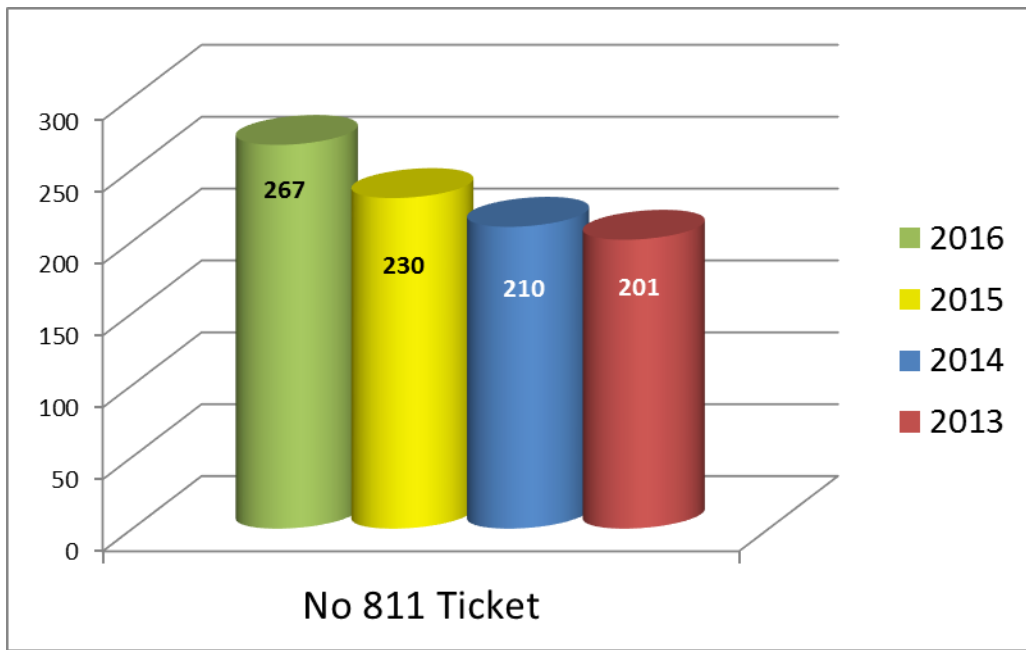
Pipeline damages by excavation due to operator or operator's contractor error stayed the same. There were 125 cases in 2015 and 125 cases in 2016.

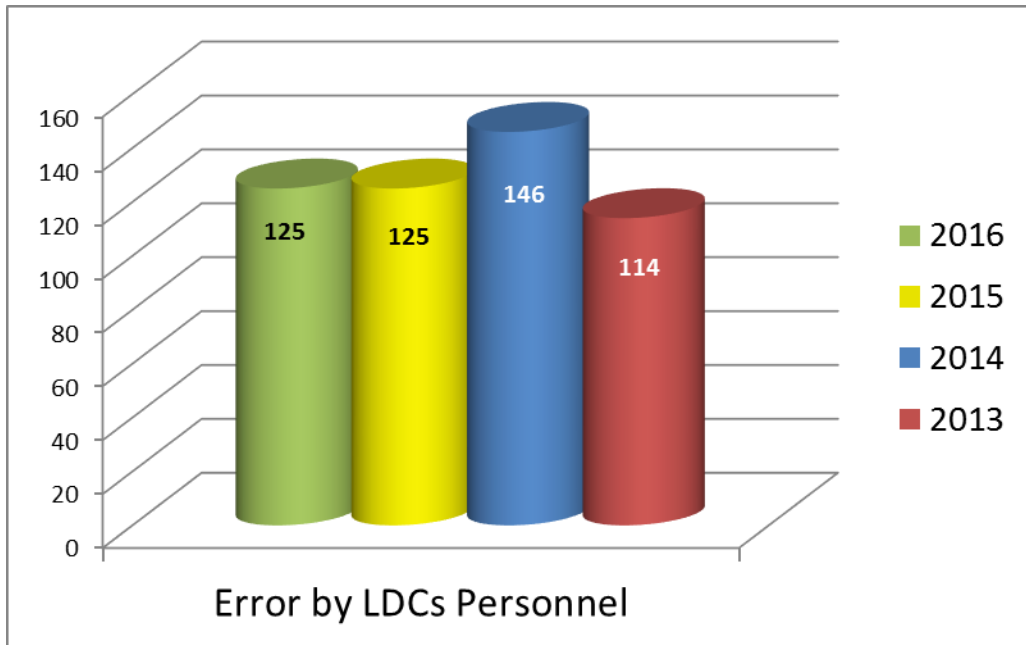
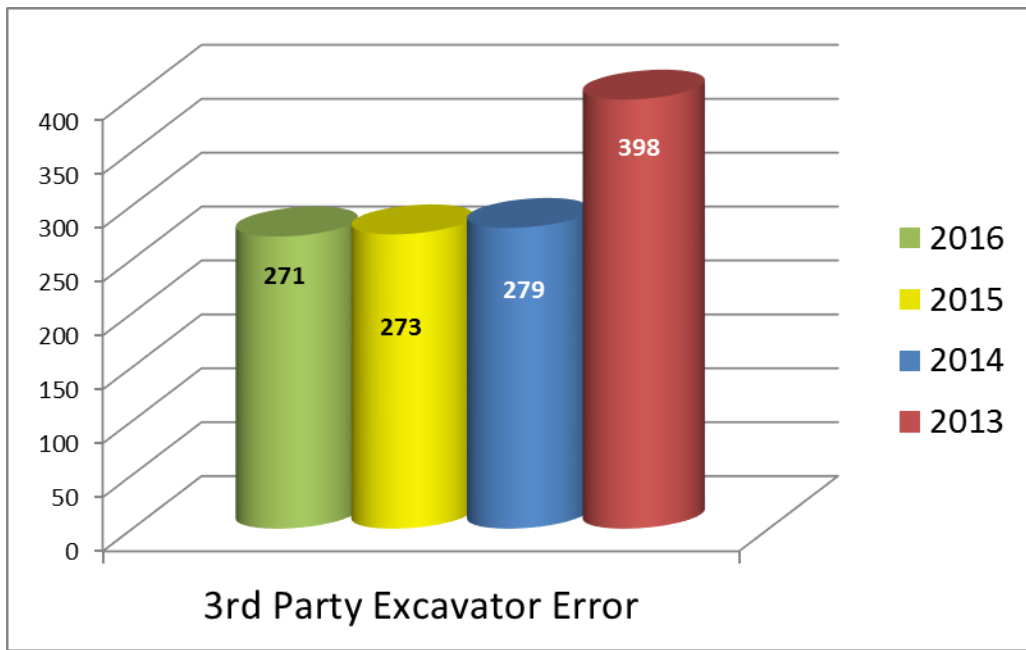
Based on this data, the average number of pipeline damages due to excavation per 1000 locate tickets decreased from 1.40 in 2015 to 1.22 in 2016.

Based on the data that was gathered, the number one root cause of pipeline damages by excavation is due to 3rd party excavator error.

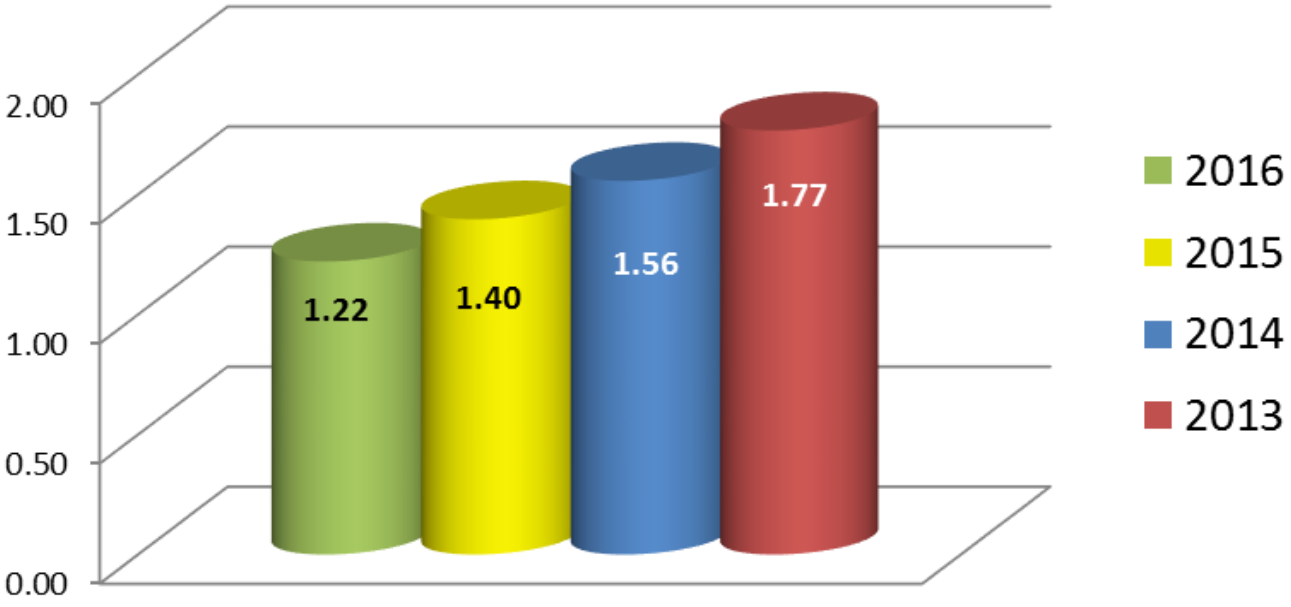
DATA SUMMARY FOR 21 OPERATORS







Average damages per 1000 - 811 ticket request



Conclusion:

For the year 2016, 3rd party excavator error was the number one root cause of pipeline damages. The number two root cause was no 811 tickets, followed by LDC personnel's error and incorrect marking of facilities.

Pipeline damage by excavation due to 3rd party excavator error continues to be the main cause even though there was a decrease of 1%. There were 273 cases in 2015 and 267 cases in 2016.

In 2016 there was an increase of 811 tickets received, a total of 20%, there were 509,083 called in 2015 and 611,063 in 2016.

The increase of 811 tickets called in to the Arizona 811 Center and the reduction of .18 average number of pipeline damages per 1000 ticket requests is a good indication that the people from our State are receiving the message to call 811 before they dig.

Inclusive, the decrease in damages is a positive trend and may be attributed to the ACC's proactive approach to enforcing the Underground Facilities Law and to the operators engaging and implementing their damage prevention and public awareness programs.