Mechanical Fitting Failures

Reporting and Data Analysis

MFFR Reporting

- **§ 191.12 Distribution Systems: Mechanical Fitting Failure Reports.** Each mechanical fitting failure, as required by § 192.1009, must be submitted on a MFFR Form PHMSA F–7100.1–2.
- Must submit for previous calendar year.
- May elect to submit its reports throughout the year.
  - (Developing tool for batch uploads)
- Must also report this information to the State pipeline safety authority if applicable.

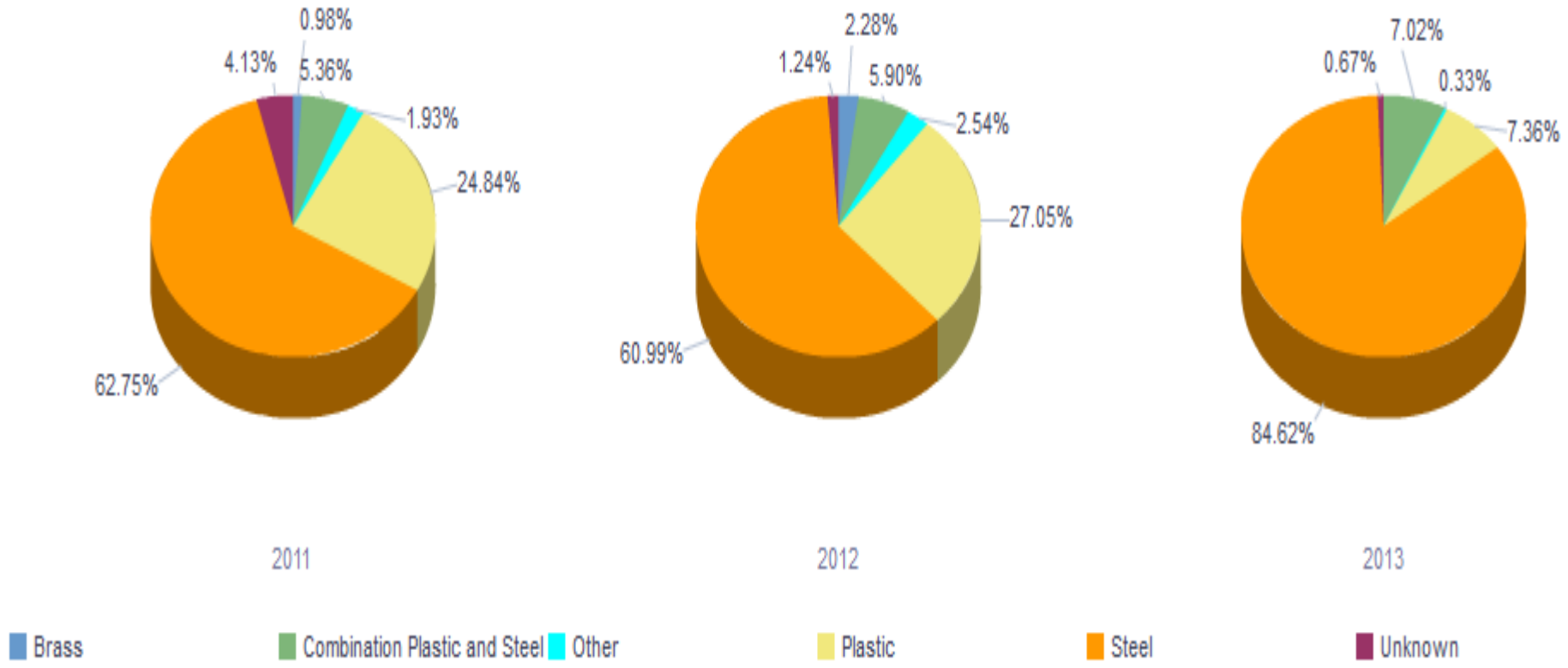
Reporting and Data Analysis

- Communication of Performance Data through DIMP web page
- The MFFR instructions have been revised.
- Failures resulting from a construction or installation defect should be identified with the "Incorrect Operations" leak cause and not the "Material or Welds/Fusions" leak cause category (as is described in PHMSA F 7100.1-2 and the Instructions).
- See Advisory Bulletin (ADB-2012-07) [77 FR 34457] pages 34457 -34458

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-2

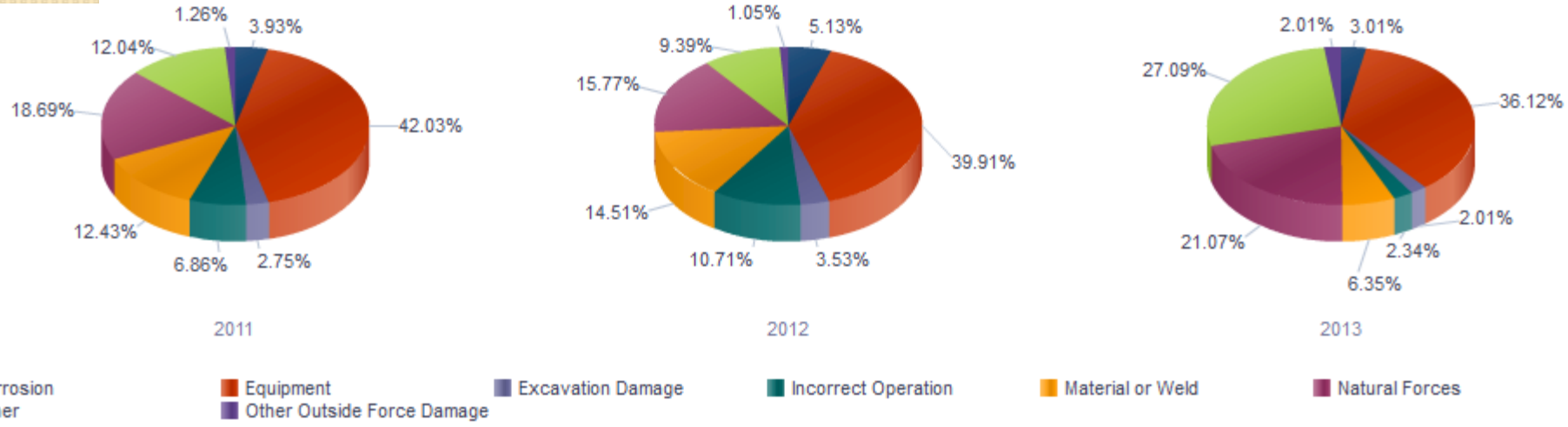
- Make an entry in each block for which data are available. Some companies may have very old pipe for which installation records do not exist. *Estimate data if necessary*. ***Avoid entering "Unknown" if possible.***

Mechanical Fitting Failures by Material



Mechanical Fitting Failures by Cause

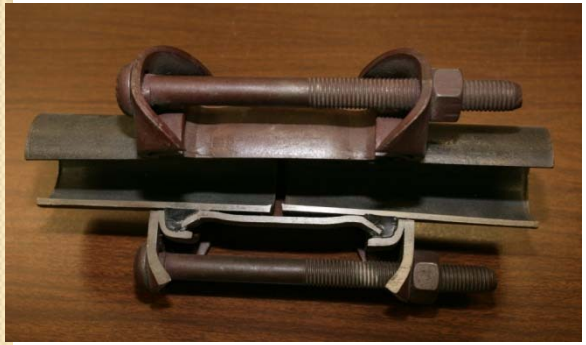
	2011	2012	2013	
Leak Cause				
Corrosion	328	384	9	**721**
Equipment	3504	2989	108	**6601**
Excavation Damage	229	264	6	**499**
Incorrect Operation	572	802	7	**1381**
Material or Weld	1036	1087	19	**2142**
Natural Forces	1558	1181	63	**2802**
Other	1004	703	81	**1788**
Other Outside Force Damage	105	79	6	**190**
Grand Total	**8336**	**7489**	**299**	**16124**



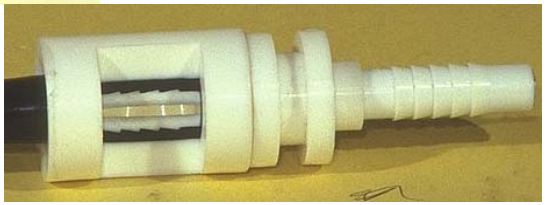
Specify the Mechanical Fitting Involved

Stab Type

Nut Follower

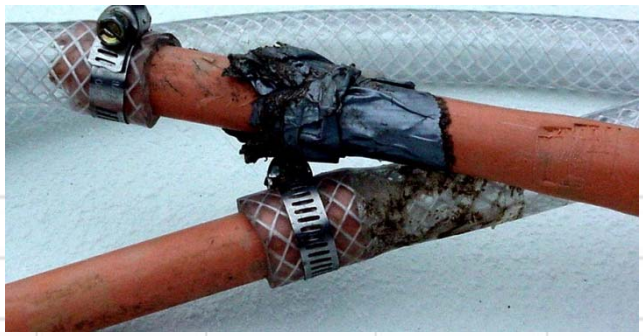


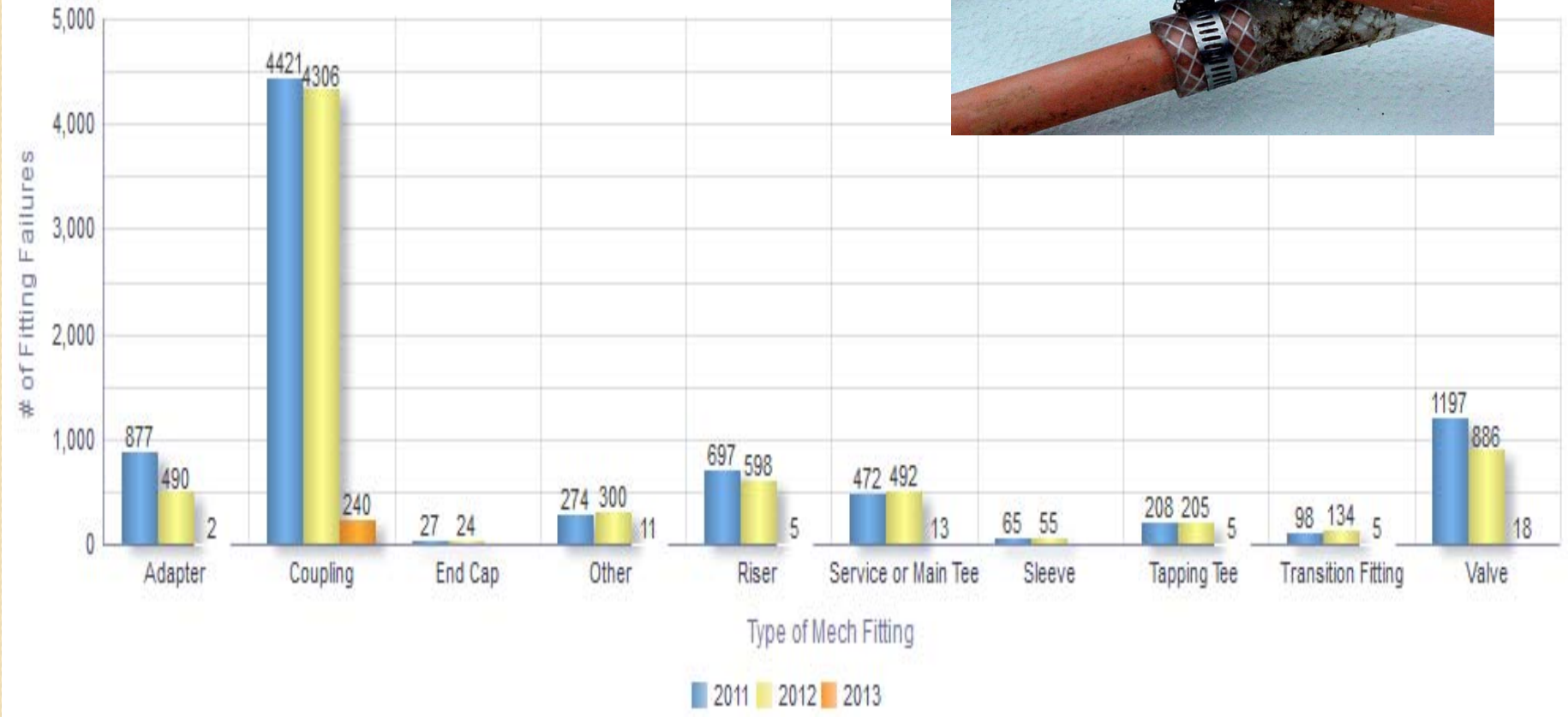
Bolt Type



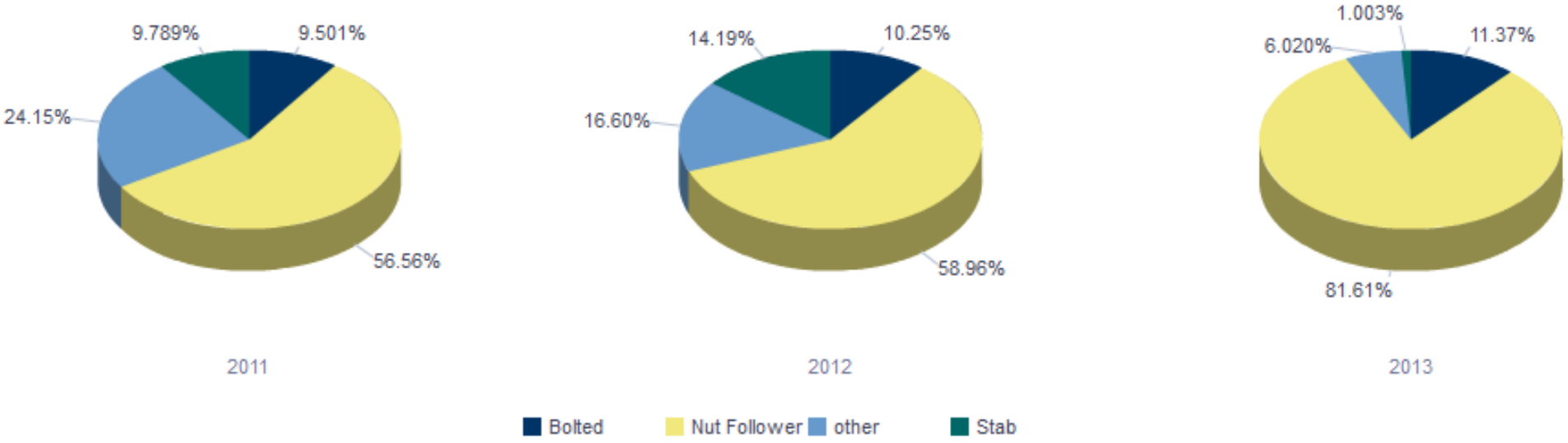
Other(s)

Mechanical Fitting Failure by Type

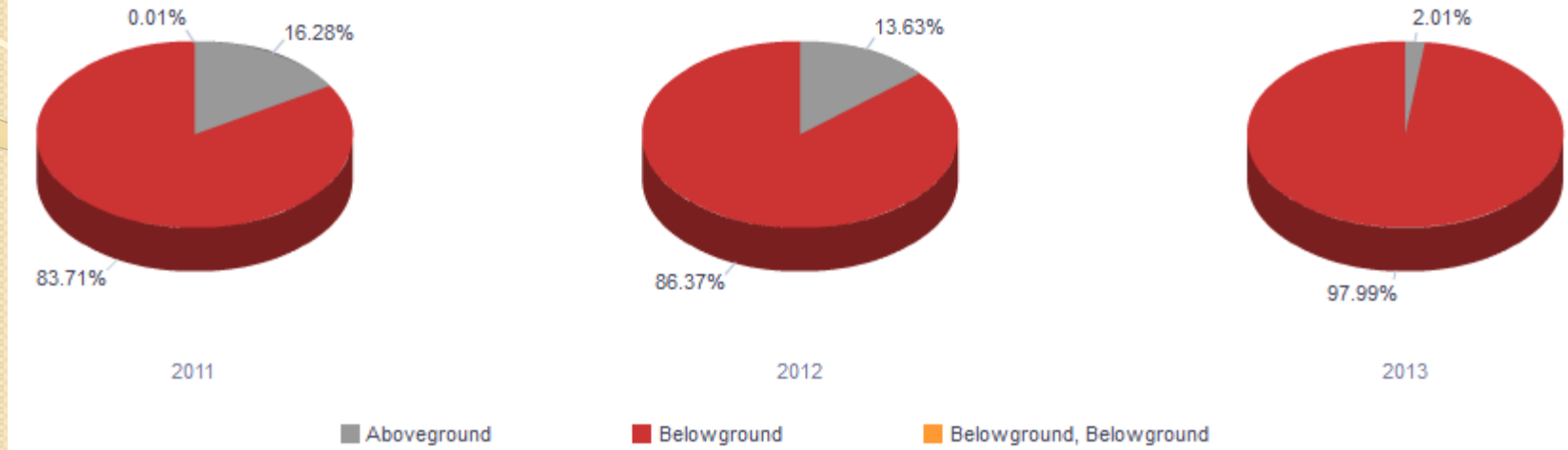


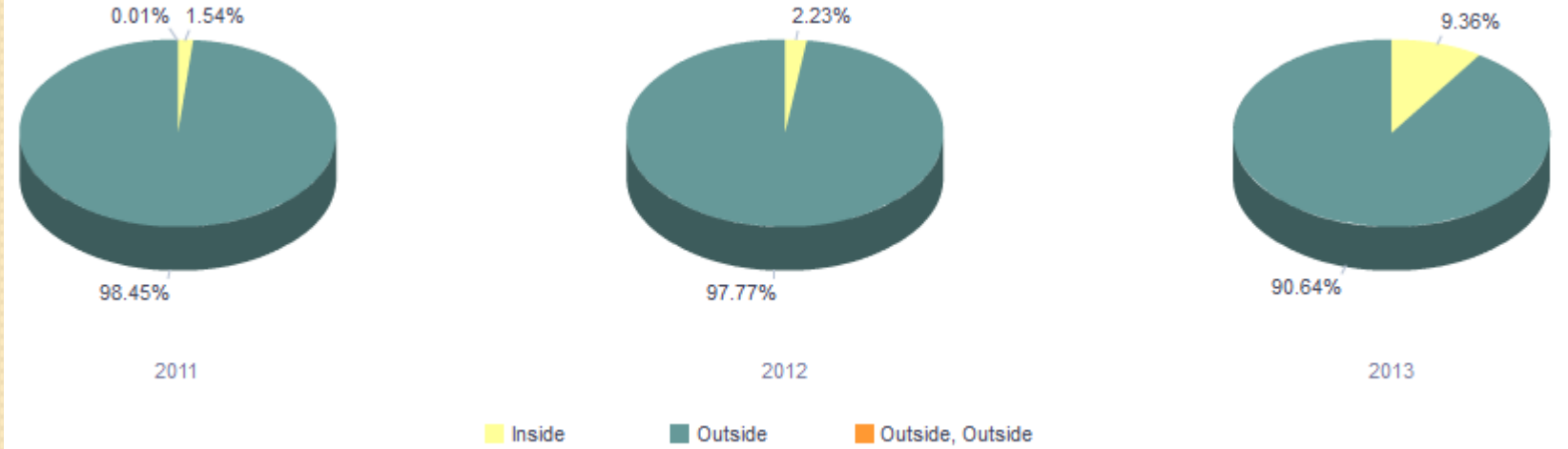


Mechanical Fitting Failures by Type



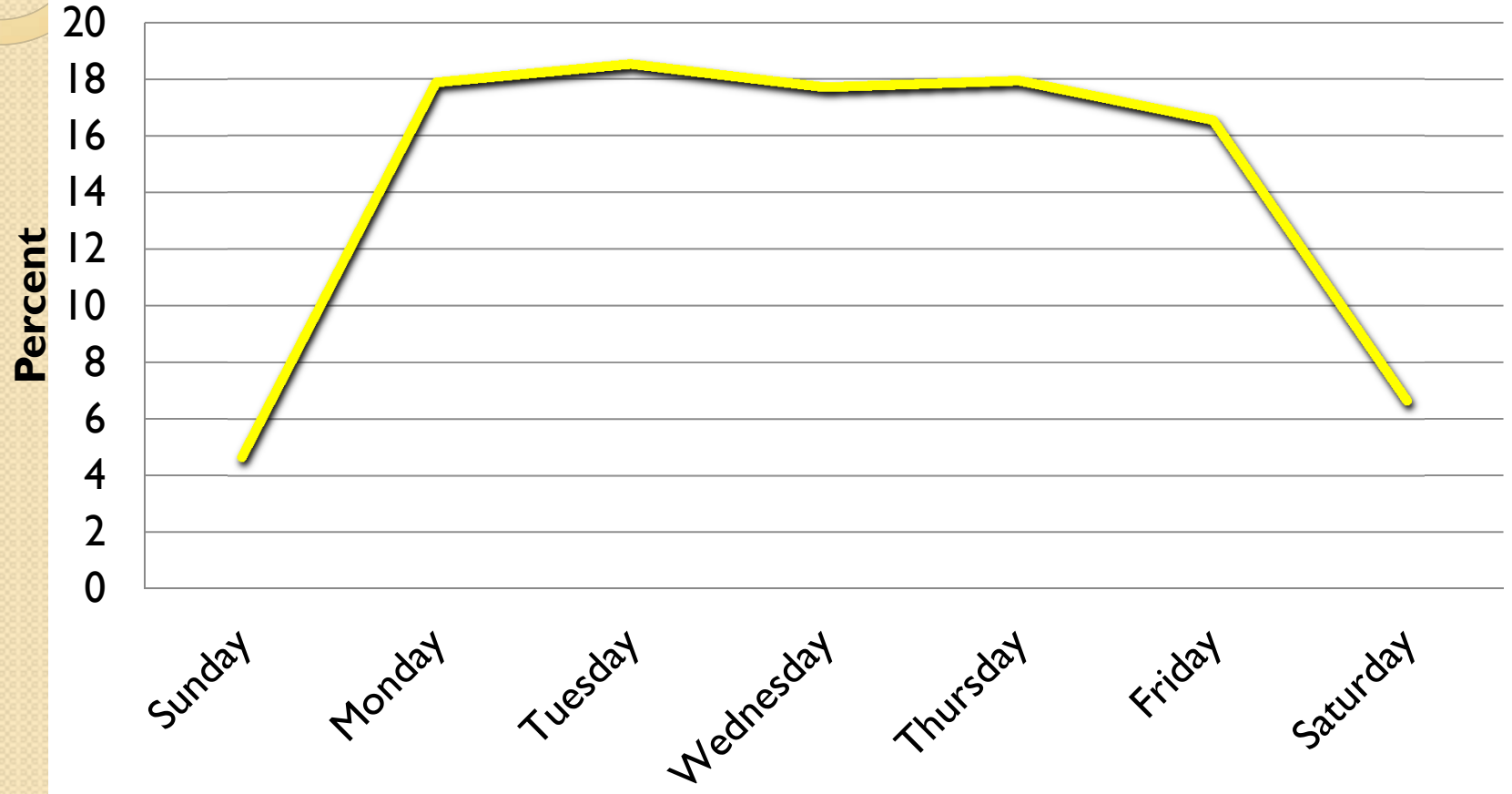
Failures By Leak Location





Dakotas / Wyoming Data

Day of Week of Failures



MFFR Data Analysis

- Raw data received through March 22, 2013 is presented here.
- MFFR Team has begun QA/QC the data and initiated analysis.
- Preliminary analysis of the data is posted on the DIMP Website.
- Two years data a trend does not make

Data Summary

- Confirmation of information
  - The decade of installation
  - States with the most mileage
- Majority of issues couplings
- Belowground, outside and service to service
- Plastic or combination fittings higher risk for incorrect operation or material/weld
- Steel fittings higher risk for equipment as cause