

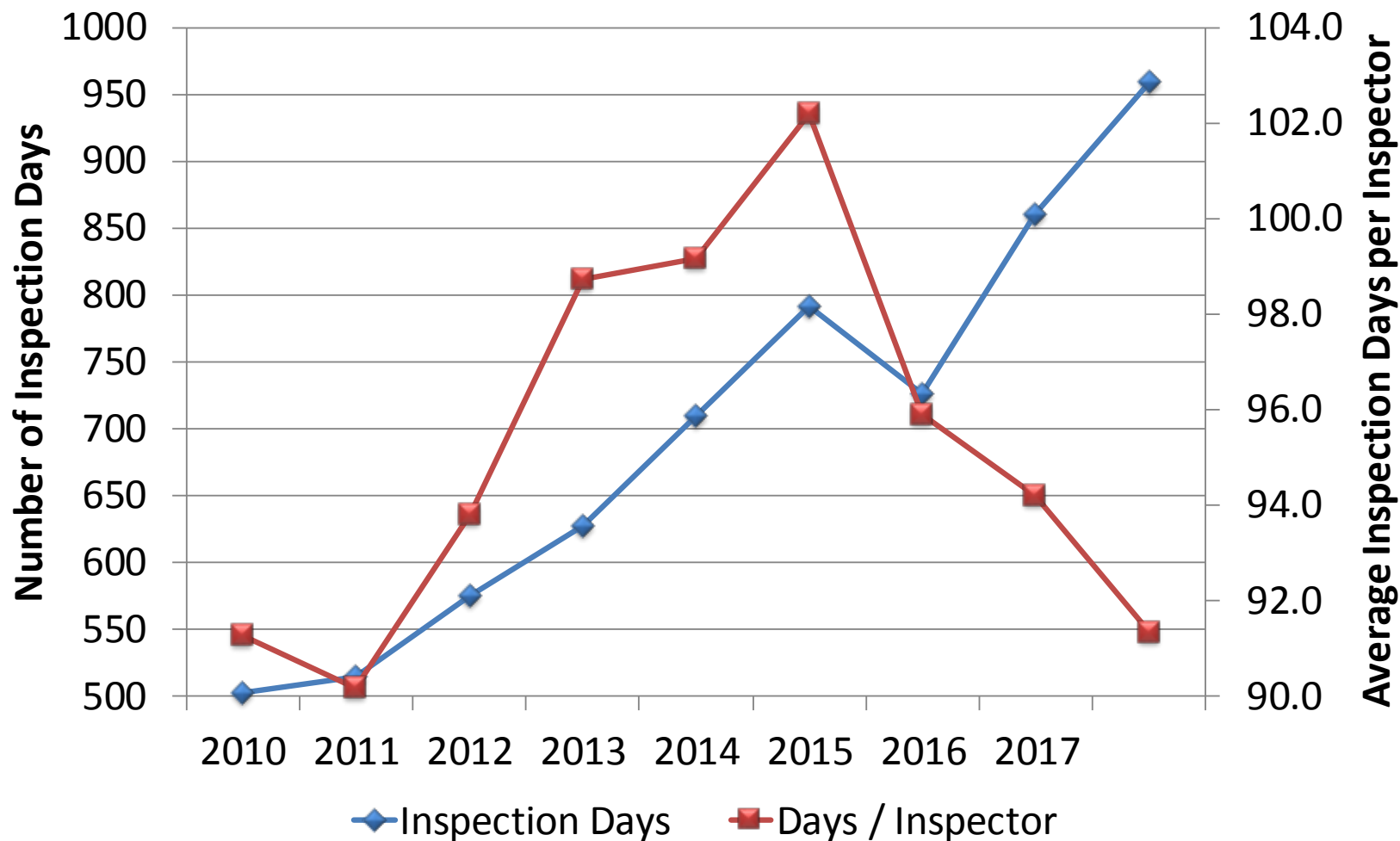
# 2019 Communication Meeting

Michigan Public Service Commission  
Energy Operations Division

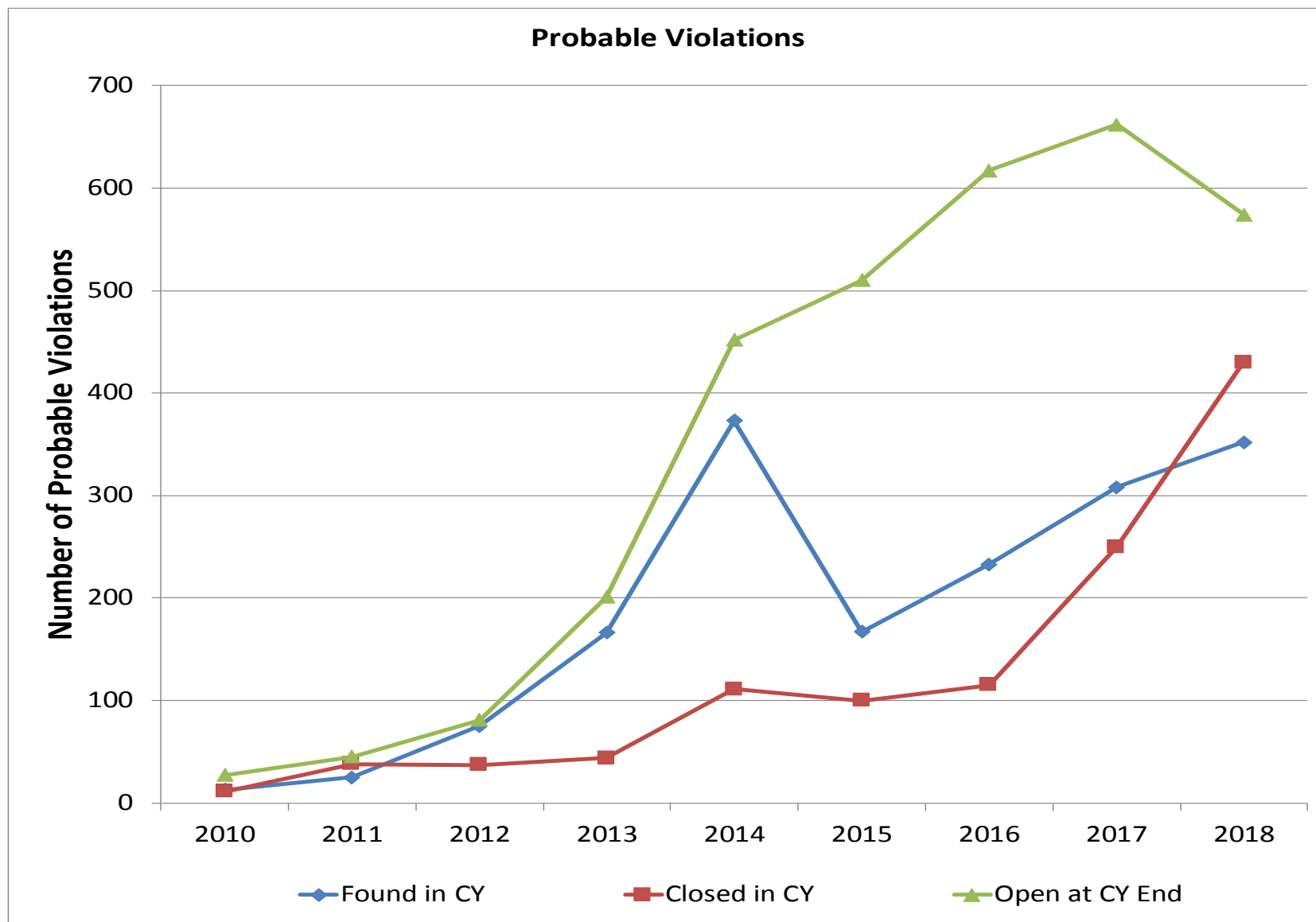


# Gas Safety Program Statistics

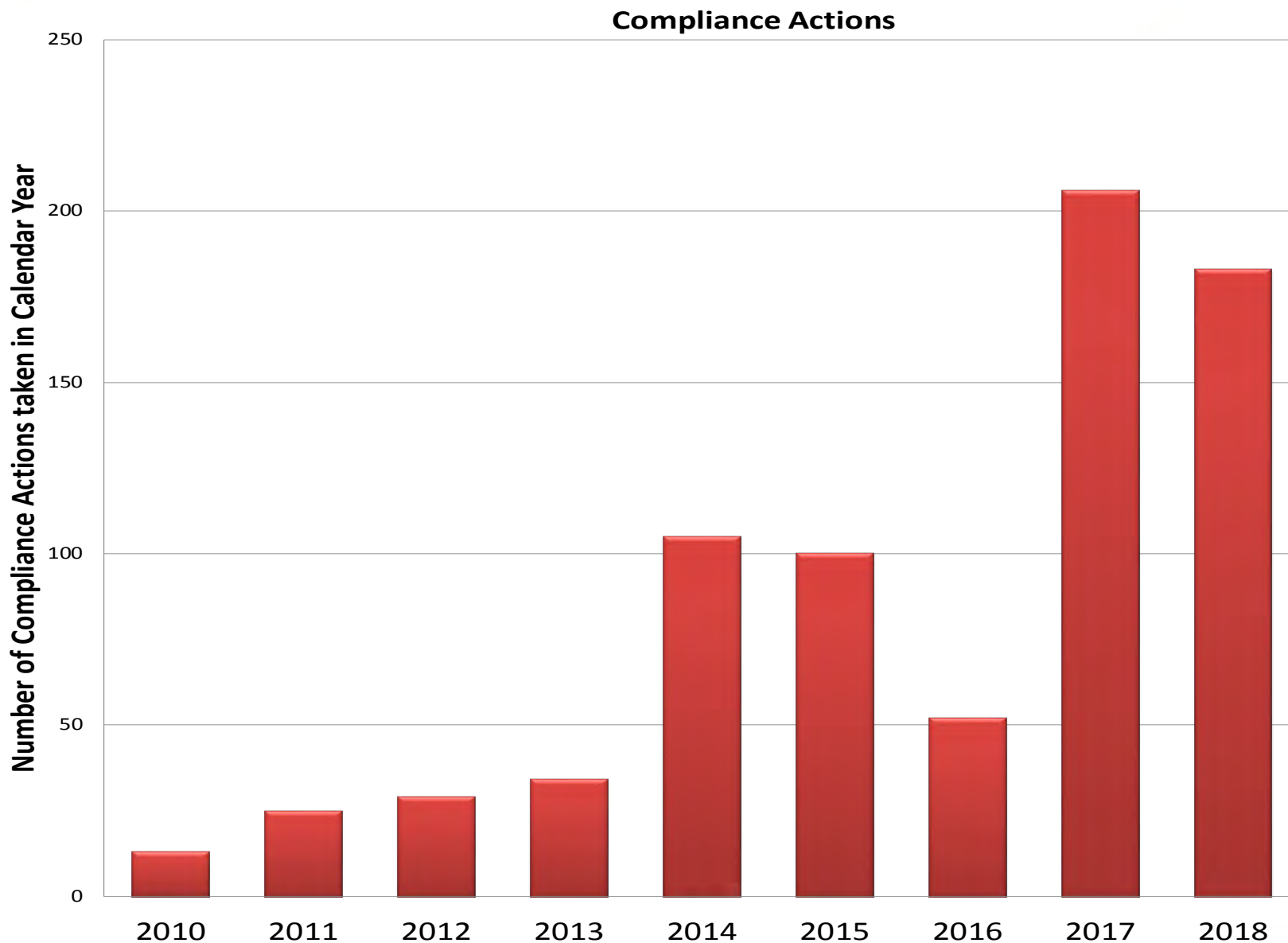
Inspection Day Trend



# Gas Safety Program Statistics



# Gas Safety Program Statistics



# Damage Prevention Statistics

Michigan	
Excavation Damages	4,271
Excavation Tickets	820,336
Excavation Damages / 1000 Tickets	5.2
National	
Excavation Damages / 1000 Tickets	3.2

# Damage Prevention Statistics

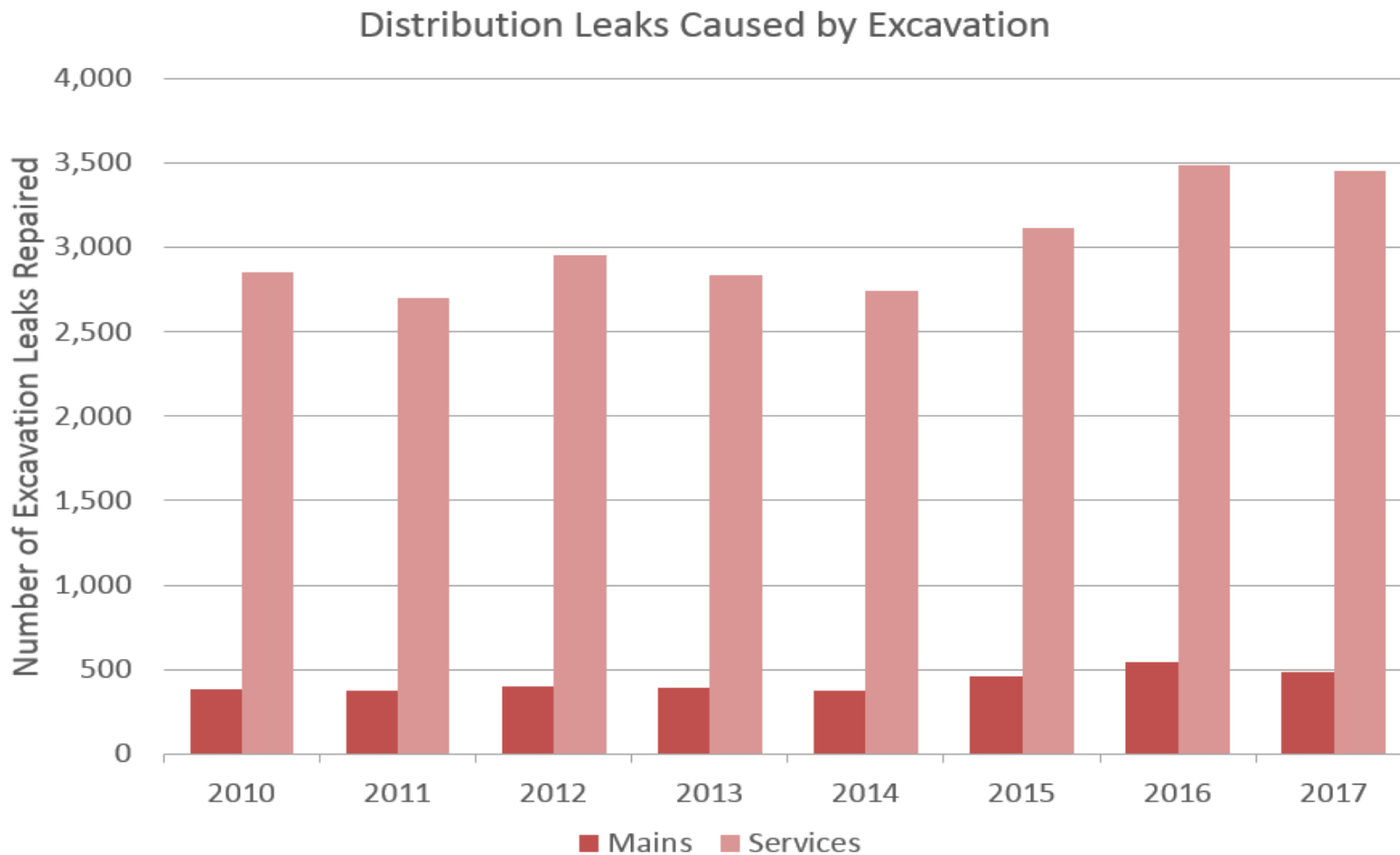
## Michigan Leak Summary

Mains	
Excavation Leaks	481
Leaks / 100 Miles of Main	0.81

Services	
Excavation Leaks	3451
Leaks / 1000 Services	1.05

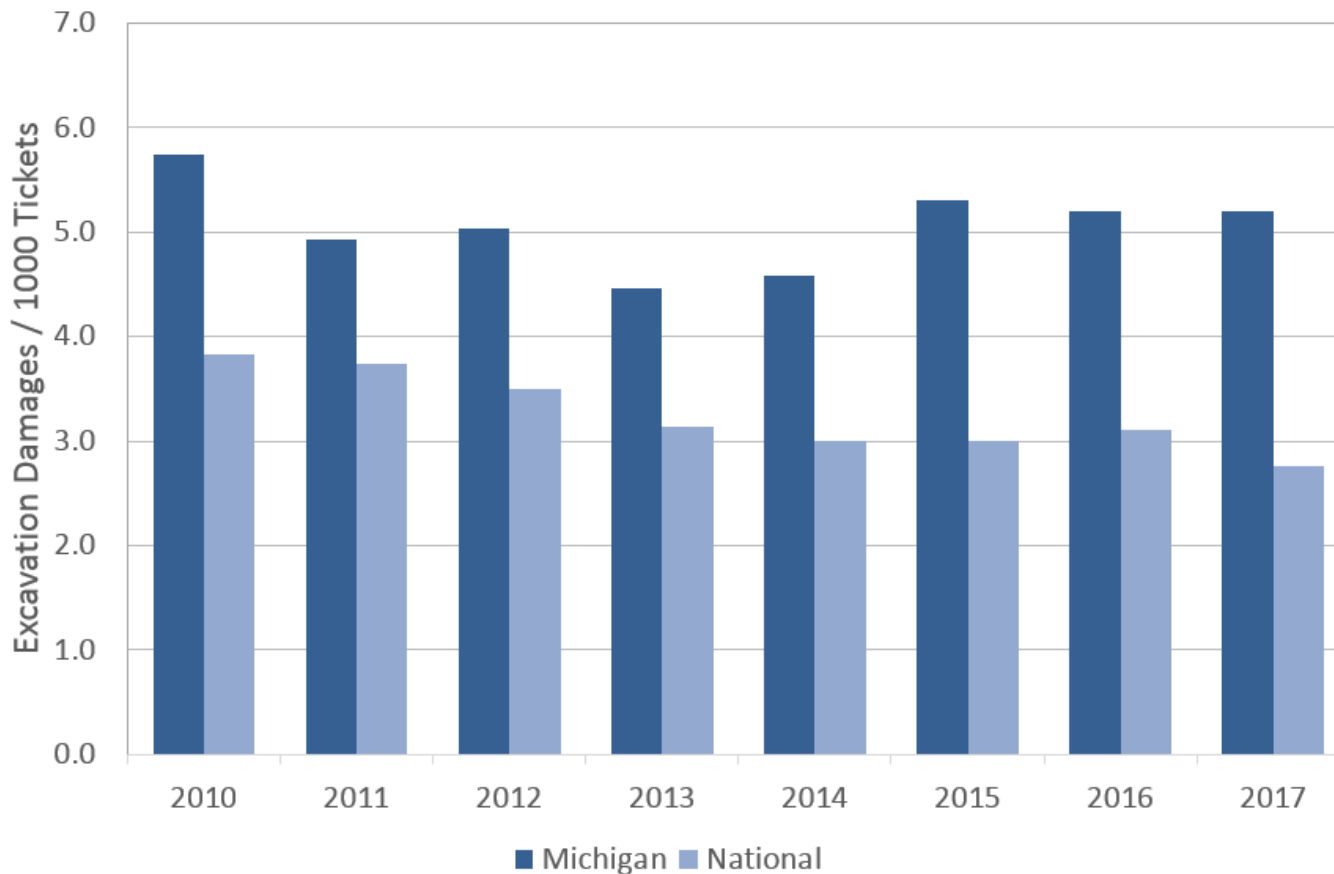
# Damage Prevention Statistics



Source: 2010-2017 Annual Distribution Reports. Form PHMSA F7100.1-1

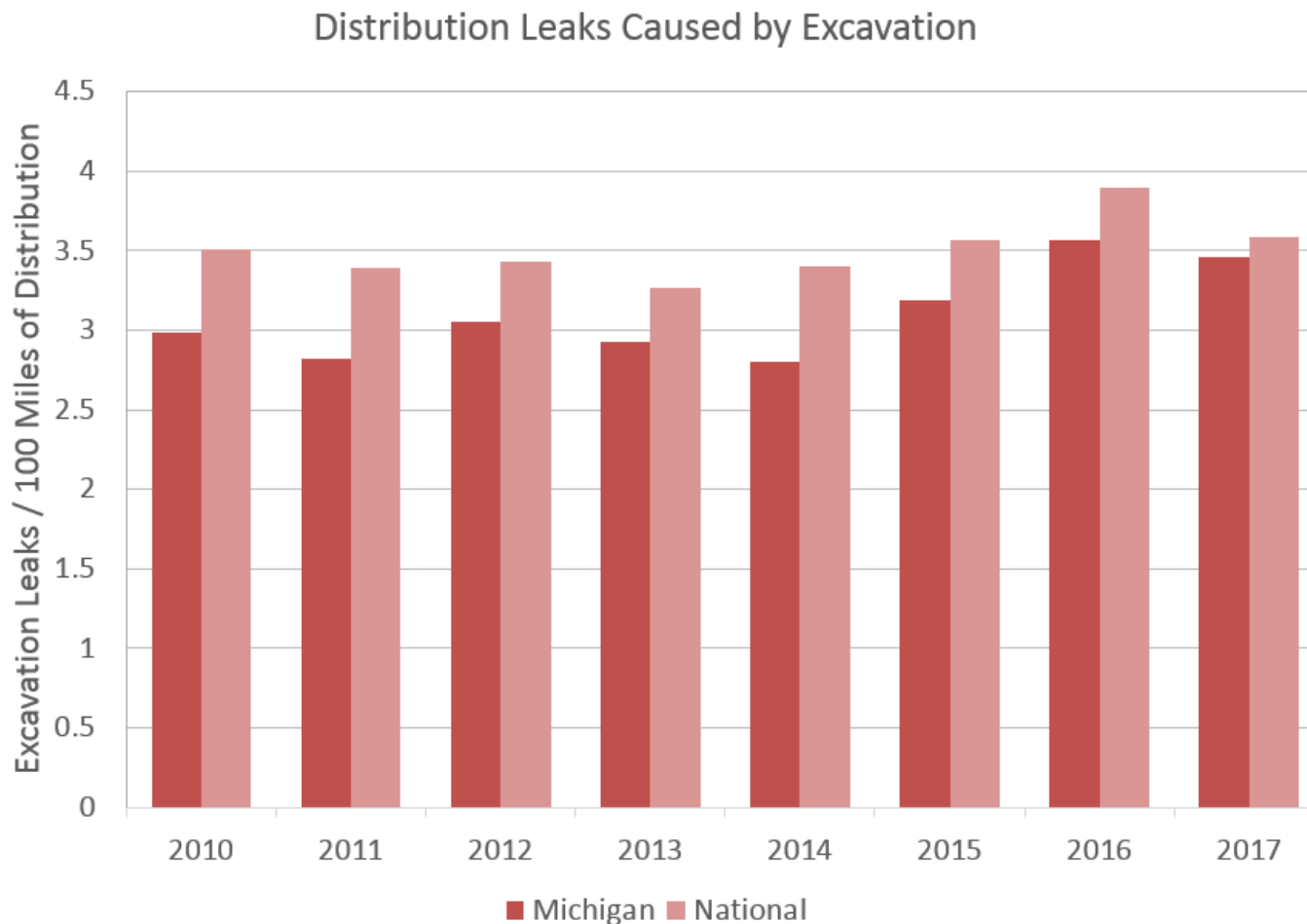
# Damage Prevention Statistics

Distribution Damages Caused by Excavation



Source: 2010-2017 Annual Distribution Reports. Form PHMSA F7100.1-1

# Damage Prevention Statistics



Source: 2010-2017 Annual Distribution Reports. Form PHMSA F7100.1-1

# Heather David

- Area of Responsibility:
  - Eastern Michigan.
  - Central Michigan.
  - Construction.
- Cell: 517-256-0342
- Email: [davidh@michigan.gov](mailto:davidh@michigan.gov)

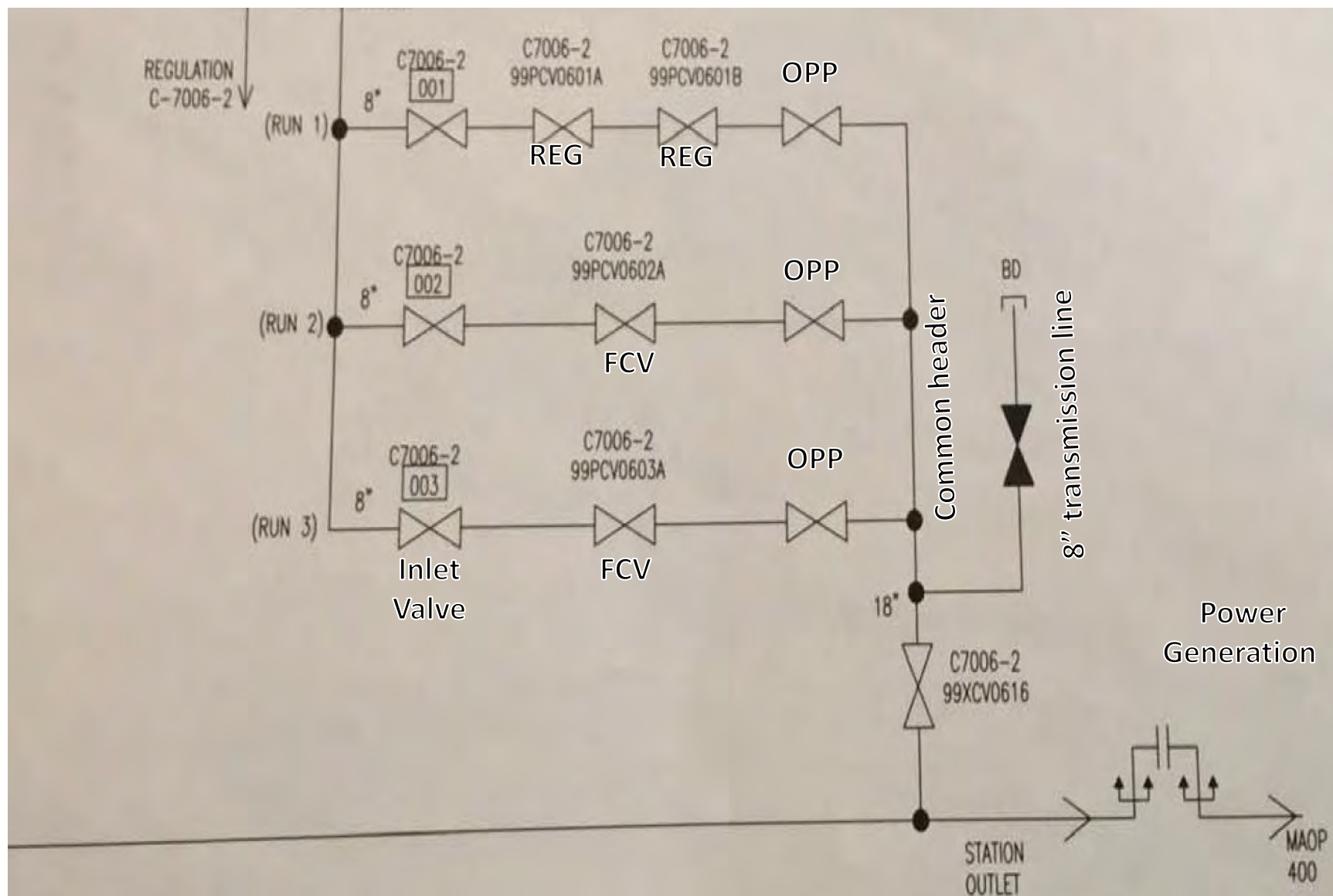
# Significant Incident – 436025

- Type: Overpressure.
- Characteristics:
  - 2.8 miles.
  - Eight-inch steel transmission.
  - Lasted almost six hours.
- Description: Overpressure on one operator caused by backpressure from another operator. 42% exceedance of MAOP. Pressure-control valve failure combined with incorrect operations.

# Significant Incident – 436025



# Significant Incident – 436025



# Significant Incident – 436025

- Operator #1 Violations:
  - 192.603(b): Failure to keep accurate records.
  - 192.605(a): Flow control valves and overpressure protection valves not tested prior to being returned to service on the day of incident.
  - 192.605(b)(5): Failure to have procedures for cycling gas flow.
  - 192.605(c)(1): Failure to have procedures for responding to, investigating, and correcting the cause of an increase in pressure above outside normal operating limits or the operation of any safety device.

# Significant Incident – 436025

- Operator #1 Recommendations:
  - Provide training to ensure individuals performing covered tasks have the necessary knowledge and skills and abilities.
  - Monitor outlet pressures with SCADA alarms or text message notification.
  - Develop AOC procedure to leak survey pipelines that experienced an overpressure.
  - Develop AOC procedure to check variations from normal operation after abnormal operation.
  - Install actuator on existing valve on eight-inch transmission line as redundant OPP.

# Significant Incident – 436025

- Operator #2 Violations:
  - 192.195(a): Lack of OPP installed at regulating station to protect the station from an MAOP exceedance from Operator #1. No verification that Operator #1 facilities are protecting operator #2 piping.
  - 192.605(c)(1)(ii): Operator #2 was aware of overpressure on Operator #1 pipeline but did not communicate with them for three hours. O&M did not contain procedures for an overpressure when the cause may have been another operator.

# Significant Incident – 452125

- Type: Outages.
- Characteristics:
  - 535 outages.
  - Damages of \$41,300 (including relights).
- Description: A contractor was purging an old gas main in preparation for retirement when a slug of nitrogen and air was introduced into the live main. Two potential causes: incorrect operations by introducing the slug of air and nitrogen into the wrong main or equipment failure by an inadequate seal on a stopple fitting.

# Significant Incident – 452125

- Operator Recommendations:
  - Conduct tailgate prior to retirement process that involves all involved parties (not just those who are currently present).
  - Revise pressure control procedure to specify gas blowdown points, nitrogen/air injection points, and nitrogen/air purge points.
  - Revise pressure control procedure when the scope of the project changes.
  - Require Operations to check off the specific pressure control procedure steps upon completion and sign and date the form.

# Significant Incident – 467425

- Type: Natural Force Damage or Equipment Failure.
- Characteristics:
  - Dehydration unit.
  - Damages of \$215,900.
- Description: Still under investigation. Dehydration unit was either struck by lightning or overheated because it was left on after the adjacent storage field was shut-in about one month prior.
- Operator Recommendation: Develop procedures to require a dehydration unit to be shut off once the field is at capacity and shut in.

# Significant Incident – 467425



# Significant Incident – 473025

- Type: Other Outside Force.
- Characteristics:
  - Vehicle damage.
  - Damages of \$51,800.
- Description: A vehicle hit a gas meter service riser causing a threaded joint to separate, leading to ignition.
- Operator Violations:
  - 460.20308(d): Meter was not protected from vehicle damage.

# Significant Incident – 473025



# Significant Non-Compliances

- 192.517(a)(7): Pressure test record did not note leaks and failures and their disposition. 32 psig pressure drop over 5 hours; 1 degree temperature drop.
- 192.557(c): Failure to increase the MAOP when uprating in increments that are equal to 10 psig or 25% of the total pressure increase. Could not produce documentation demonstrating segment had an MAOP of 60 psig.

# Significant Non-Compliances

- 192.619(a): Failure to produce pressure test records necessary to substantiate MAOP of transmission lines.
- 192.619(c): Transmission line considered grandfathered without record of the highest actual operating pressure to which the segment was subjected between 7/1/65-7/1/70. Affidavit dated 2012 not acceptable.

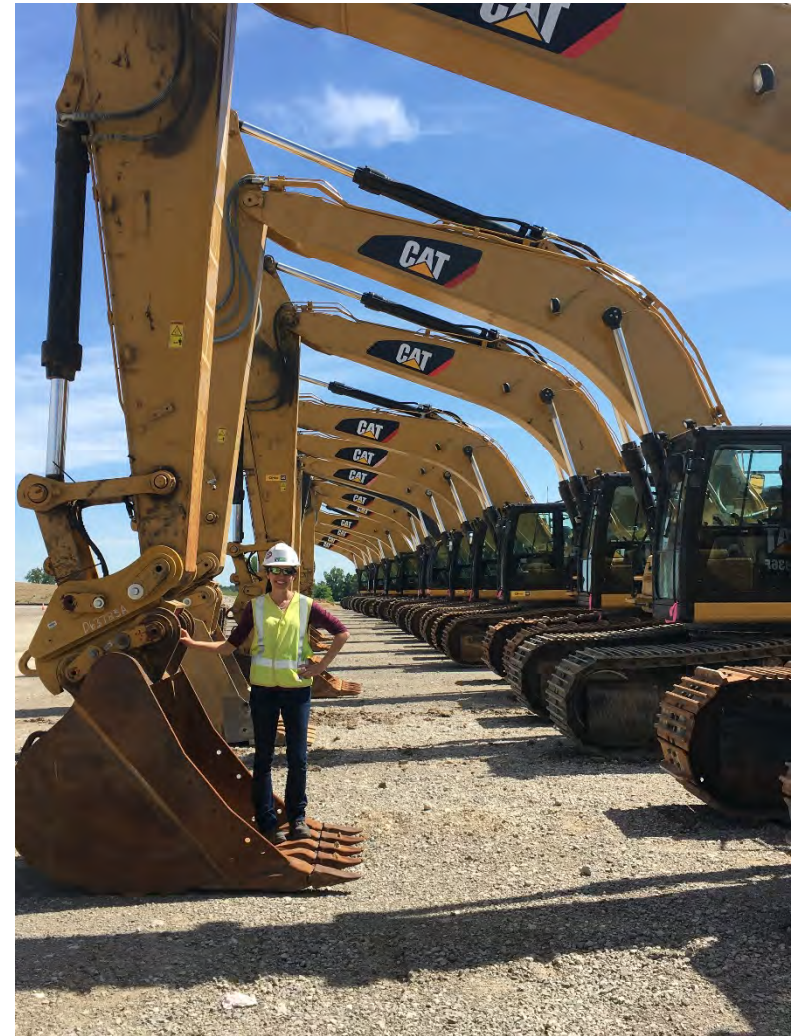
# Significant Non-Compliances

- 192.625(b): Failure to odorize gas in a Class 3 or 4 location. 6.5% of the length of the line downstream from Class 3 location in a Class 1 or 2 location.
- 192.625(f): Failure to conduct periodic sampling with an instrument capable of determining the percent of gas in air at free gas users within storage field.

# Significant Construction



# Significant Construction



# Significant Patrol Findings



# Significant Patrol Findings



- Area of Responsibility:
  - Southeast Michigan.
  - TIMP.
  - DIMP.
- Cell: 517-290-9605
- Email: [friskek@michigan.gov](mailto:friskek@michigan.gov)

# Significant Incident – 439329

- Type: Non-Jurisdictional.
- Characteristics: Fuel Line.
- Description: House explosion attributed to inside fuel line. Data from AMR meter used to support the determination.

2/14: 4,150.78      2/17: 4,171.74

2/15: 4,157.14      2/18: 4,187.28

2/16: 4,163.66      2/19: 4,267.00

- Operator Violations: None.

# Significant Incident – 439329



# Significant Incident – 463129

- Type: Non-Jurisdictional.
- Characteristics: Fuel Line.
- Description: House explosion attributed to inside fuel line. Data from AMI meter used to support the determination.

7/27 (15:00): 0

7/27 (21:00): 204

7/27 (16:00): 0

7/27 (22:00): 204

7/27 (17:00): 2

7/27 (23:00): 204

7/27 (18:00): 0

7/28 (00:00): 204

7/27 (19:00): 58

7/28 (01:00): 192

7/27 (20:00): 206

7/28 (02:00): 0

Operator Violations: None.

# Significant Incident – 463129



# AMR VS. AMI (Normal Collection)

## AMR:

- Operator 1: None.
- Operator 2: 62% of system (Hourly data retrieved monthly / retained 40 days).
- Operator 3: x% of system (Monthly data retrieved monthly / retained x years).
- Operator 4: 99.4% of system (Monthly data retrieved monthly / retained for life).

## AMI:

- Operator 1: 0.3% of system (Hourly data retrieved daily / retained 3 years).
- Operator 2: 38% of system (Hourly data retrieved daily / retained 40 days).
- Operator 3: x% of system (Daily data retrieved daily / retained x years).
- Operator 4: None.

# AMR VS. AMI (Upon Request)

## AMR:

- Operator 1: None.
- Operator 2: Hourly data is available for 40 days.
- Operator 3: Hourly data is available for 40 days.
- Operator 4:
  - 41% 40G ERT: Only monthly (current) read available.
  - 59% 100G ERT: Hourly data is available for 45 days.

## AMI:

- Operator 1: Hourly data available for 3 years.
- Operator 2: Hourly data available for 40 days.
- Operator 3: Hourly data is available for 40 days.
- Operator 4: None.

# AMR VS. AMI (Incidents)

- Operator 2 Scenarios:
  - There is a structure fire/explosion and the **AMR** meter is **intact**. *The meter will have 39 days of data in hourly increments prior to the incident. (Extremely useful).*
  - There is a structure fire/explosion and the **AMR** meter is **destroyed**. *Gas usage available in hourly increments prior to the last collection day. (Less useful).*
  - There is a structure fire/explosion and the **AMI** meter is **intact**. *The meter will have 39 days of data in hourly increments prior to the incident. (Extremely useful).*
  - There is a structure fire/explosion and the **AMI** meter is **destroyed**. *Gas usage available in hourly increments prior to 12am the day of the incident. (May be useful).*

# Significant Incident – 451929

- Type: Third-Party Damage.
- Characteristics: N/A.
- Description: An operator accidentally marked a retired service line instead of the live service. Contractor hit the live service.
- Operator Violations:
  - 192.614: Failure to mark facilities.

# Significant Incident – 451929



# Significant Non-Compliances

- 192.481(a): Not having inspected an inside meter since 2013.



# Significant Non-Compliances

- 192.705(a): Not making required observations on patrols.
- 192.706: Not performing leak surveys in certain areas.



# Significant Non-Compliances

- 192.905(b)(1): Not considering compressor stations or construction activity in HCA determinations.



# Brian Gauthier

- Area of Responsibility:
  - Southeast Michigan.
  - Northeast Michigan.
- Office: 313-383-3352
- Cell: 517-930-4968
- Email: [gauthierb2@michigan.gov](mailto:gauthierb2@michigan.gov)

# Significant Incident – 333330

- Type: Natural Force Damage.
- Characteristics:
  - 6.2 inches of rain over six hours.
- Description:
  - 42 areas required response from exposed pipelines varying from ½-inch plastic service to four-inch steel main.

# Significant Incident – 333330



# Significant Incident – 333330



# Significant Incident – 333330



# Significant Incident – 333330



# Significant Incident – 333330



# Significant Non-Compliances

- 460.20308(d): Failure to protect the meter and regulator from corrosion and other damage.
- 460.20314(a): Failure to retain test information – proposed maximum operating pressure of the pipeline.
- 460.20314(b): Failure to retain test information – class location of the pipeline.
- 192.241(a)(1): Failure to perform welding in accordance with the welding procedures.
- 192.303: Failure to construct a transmission line according to comprehensive written specifications or standards.

# Significant Non-Compliances

- 192.357(a): Failure to install the meter and regulator so that stresses are minimized on the associated piping.
- 192.461(a)(1): Failure to properly prepare a surface for coating.
- 192.625(e): Failure to introduce odorant without wide variations in the level of odorant.
- 192.745(a): Failure to maintain (inspect and partially operated) blow-down valves as 'emergency' valves.

# Karen Krueger

- Area of Responsibility:
  - Southcentral Michigan.
  - Annual Reports.
- Cell: 517-582-8619
- Email: [kruegerk1@michigan.gov](mailto:kruegerk1@michigan.gov)

# Significant Incident – 451041

- Type: Incorrect Operations.
- Description:
  - House fire occurred during a scheduled meter replacement.
  - Steel riser broke below the lockwing.
- Operator Violations:
  - 192.355(b)(2): Neighboring service regulator vented directly into the ground.
  - 192.357(a): Neighboring meter supported solely on the riser and customer piping.

# Significant Incident – 451041

- Violations (cont.):
  - 192.481(a): Records showed periods exceeding three years for atmospheric inspections for neighboring residences. Additionally, the damaged house supposedly had atmospheric inspections performed during the mobile leak survey.
  - 192.481(b): Records showed atmospheric conditions as “Good” for five neighboring service risers that were in poor condition.

# Significant Incident – 451041

- Violations (cont.):
  - 192.605(a): Procedures to continuously surveil facilities inadequate for taking appropriate action for the corrosion present on meter assemblies.
  - 192.805(h): Records showed atmospheric conditions good for service risers as “Good.” However, risers showed levels of deterioration beyond what should be recognized as good. Additionally, some risers were completely buried up to the lock-wing. These issues were unidentified.

# Significant Incident – 451041



# Significant Incident – 451041



# Significant Incident – 456741

- Type: Third-Party Damage.
- Characteristics:
  - High-pressure service line connected to eight-inch steel distribution main.
- Description:
  - Gas vented for 19.5 hours before main was isolated to complete repair.
- Operator Violations:
  - 192.614(a): Although the excavator was not working under their own one-call ticket, a ticket covering the area was requested by a different contractor and not marked.
  - 192.615(a)(6): Valves were not used to isolate the main and perform repairs, stopple fittings were preferred option. 20 vs 33 customers.

# Significant Incident – 456741



# Significant Incident – 460041

- Type: Third-Party Damage.
- Characteristics:
  - Eight-inch plastic main.
  - 60 psig MAOP.
- Description:
  - Contractor installing shoring for culvert work inside of a road median.
- Operator Violations:
  - Ongoing Investigation.

# Significant Incident – 460041



# Significant Incident – 475241

- Type: Third-Party Damage.
- Characteristics:
  - Eight-inch main.
  - 1963 installation.
  - Buried nine-inches deep.
- Description:
  - Contractor was saw-cutting concrete. Pipelines marked, but not noted as shallow. Contractor was cutting to a depth of ten inches.
- Operator Violations:
  - Ongoing Investigation.

# Significant Incident – 475241



# Significant Non-Compliances

- 192.179(b)(1): Failure to protect valve from tampering.
- 192.225(a):
  - Performed welding with a procedure where the essential variables were out of the scope of the task.
  - Performed welding without any welding procedure.



# Significant Non-Compliances

- 192.305: Failed to self-inspect proper fuse alignment.
- 192.505(a): Failure to test lines over 30% SMYS to establish MAOP. Midway through test the pressure dropped below 1.5x MAOP.

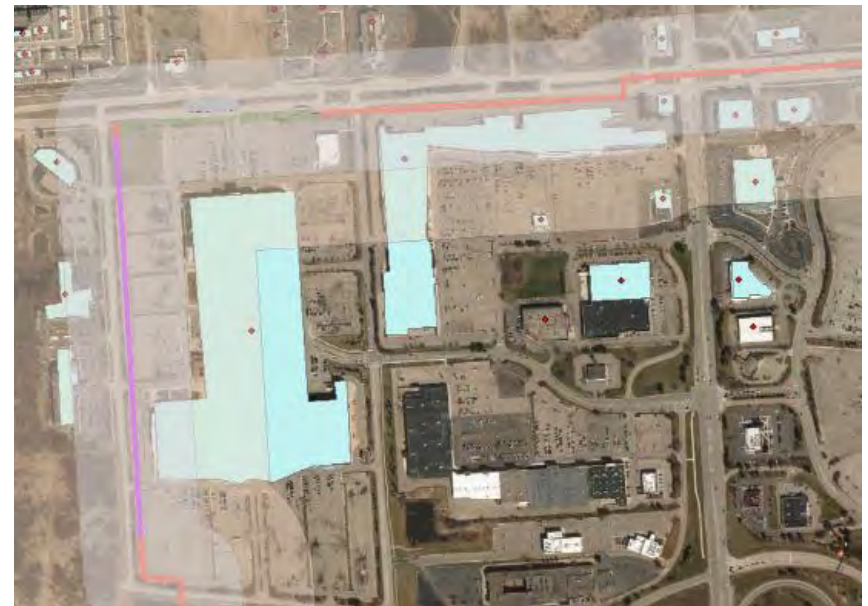




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# Significant Non-Compliances

- 192.605(b)(1):
  - Operator's software calculated class location by designating dots in the center of building.
  - Operator's software calculated class location ended at each valve site or line transition without continuing the sliding mile.



# Significant Non-Compliances

- 192.727(b): Failure to disconnect each pipeline abandoned in place from all sources of gas.
- 192.805(h): Employee reading the wrong curve on a conversion chart during odorization reads.

# Kristen Lawless

- Area of Responsibility:
  - Central Michigan.
  - Damage Prevention.
- Cell: 517-331-6554
- Email: [lawlessk@michigan.gov](mailto:lawlessk@michigan.gov)

# Significant Incident – 461543

- Type: Third-Party Damage.
- Characteristics:
  - Two-inch plastic main.
- Description: Excavator had hand-exposed the facilities, but re-covered them. No restake request.
- Excavator Violations: MCL 460.725(5): Failure to determine the precise location of facilities before using power tools in the caution zone.

# Significant Incident – 461543



# Significant Incident – 475429

- Type: Third-Party Damage.
- Characteristics:
  - Four-inch steel main.
  - 19 commercial outages.
- Description:
  - Horizontal directional drill punctured a main under a river.
- Operator Violations:
  - Ongoing investigation.

# Significant Incident – 475429



# Significant Incident – 476043

- Type: Third-Party Damage.
- Characteristics:
  - Four-inch plastic main.
- Description:
  - Excavator was digging using an auger under an expired ticket and had not requested a restake.
- Operator Violations:
  - Ongoing investigation.
- Excavator Violations:
  - Ongoing investigation.

# Significant Incident – 476043



# Significant Non-Compliances

- MCL 460.725(1): Failure to provide dig notice at least 72 hours but not more than 14 calendar days before the start of excavation.
  - Excavator failed to call in a dig ticket or did not call ticket in with the appropriate amount of notice.
- 192.614(a): Operator failed to locate facilities by the dig start.
- Warning Letter: Removing above grade structures and damage by hand tools.

# Eleanor Mundorf

- Area of Responsibility:
  - Southeast Michigan.
  - Operator Qualifications.
  - Inspection Forms.
- Office: 734-429-9901
- Cell: 517-899-4436
- Email: [mundorfe@michigan.gov](mailto:mundorfe@michigan.gov)

# Significant Incident – 473634

- Type: Third-Party Damage.
- Characteristics:
  - Six-inch plastic main.
  - Operating at 45 psig.
  - Two-way feed.
  - Located in Huron River.
- Description:
  - Contractor installing new bridge footings damaged the buried main. Two-way feed, main able to be cut-and-capped on each side of the river.
  - Instructions on Form PHMSA F 7100.1, Part D, 2. “Estimated Cost to Operator” states in part that “when estimating the cost of repairs to company facilities, the standard shall be the cost necessary to safely restore property to its predefined level of service.”
    - Actual costs to stop the flow of gas less than \$50,000; the costs to return the main to a predefined level of service \$150,000.
- Operator Violations: Ongoing Investigation.

# Significant Non-Compliances

- 192.179(c): Failure to have a blowdown valve on each section of pipeline.
- 192.203(b)(7): Buried stainless steel line found exposed within a shallow hole in an area subject to foot traffic.
- 192.225(b): Welds with low cap that did not meet welding procedures.
- 192.503(a)(1): Failure to test a service line after a section was replaced.
- 192.505(b): Failure to test a metering station in a Class 1 location to Class 3.

# Significant Non-Compliances

- 192.605(a):
  - Failure to have a functioning gas detector where a combustible atmosphere may exist.
  - Failure to validate a valve is not leaking during annual valve inspection.
  - Failure to take further actions as required when odorant levels found to be at zero.
- 192.705:
  - Operator did not patrol a shut-in line for four years.
  - Operator lowered the operating pressure to the point where SMYS was below 20%. However, the MAOP remained above 20% SMYS.

# Significant Non-Compliances

- 192.706:
  - Operator did not leak-survey a shut-in line for over two years.
  - Operator lowered the operating pressure to the point where SYMS was below 20%. However, the MAOP remained above 20% SYMS.
- 192.709(c): Failure to maintain records of blowdown valve inspections.

# Significant Non-Compliances

- 460.20313: Failure to maintain a pressure test for a minimum of 30 minutes for a short segment.
- 460.20501: Emergency valve with two different valve designations; physical designation plate on valve differed from emergency plans.

# Jeff Quirante

- Area of Responsibility:
  - Damage Prevention.
- Office: 517-284-8282
- Email: [quirantej@michigan.gov](mailto:quirantej@michigan.gov)

# Damage Complaints

- 133 complaints filed since PA 174 became effective on April 1, 2014.
  - 30 complaints filed in 2018.
  - 1 complaints filed in 2019.
- 22 complaints warranted investigation under PA 174.
  - 2 were issued warning letters.
  - 5 were issued with civil fines.
  - 8 times where the complainant could not provide more information/evidence or resolved by both parties
  - 7 are still pending for more information.
- Damage prevention complaint form is available at <http://michigan.gov/mpsc>

# Excavation Damage Incidents

- In 2018, there were 42 damages reported under Rule 460.20503 that were subject to investigation for violations of PA 174.
  - 13 were issued warning letters.
  - 29 were issued with civil fines.

# Significant Non-Compliances

- MCL 460.725(1): Excavator not providing a dig notice at least 72 hours in advance of excavation.
- MCL 460.725(5): Excavator did not use soft excavation at intervals reasonably necessary to establish the precise location of facility.
- MCL 460.727(1): Operator not responding to a ticket by the start date and time of the excavation; not marking facilities in the area of proposed excavation or blasting in a manner that permits the excavator to employ soft excavation to establish the precise location of the facilities.

# PHMSA Audit

- PHMSA Conducted an Adequacy Evaluation of Michigan's Enforcement of PA 174 on October 10, 2018.
- Result was "Adequate" (Verbally).
- Official Results Pending.

- Authority to Stop Excavation.
  - Increase Field Presence.
  - Cease and Desist.
- Website Presence Improvements.
  - Damage Citations Posted on Website
  - Frequent Offenders.
  - Assessed Civil Fines.
- Consider Ways to Improve/Investigate Locator Performance.
- High Number of Tickets “Late Notification – 999”
- Investigate High Number of:
  - Second-Party Damages.
  - Hand-Digging Damages.
  - Damages with Tickets.

# Derrick Schimming

- Area of Responsibility:
  - Southwestern Michigan.
  - Central Michigan.
- Cell: 517-282-5989
- Email: [schimmingd@michigan.gov](mailto:schimmingd@michigan.gov)

# Significant Incident – 476342

- Type: Third-Party Damage.
- Characteristics:
  - Two-inch steel main.
  - Six-inch steel main.
  - Cost \$40,400.
- Description:
  - Excavator hooked a two-inch steel main pulling it from the ground. Gas blowing for ten hours. Two-inch main connected to six-inch main by a compression coupling.
- Operator Violations: Ongoing Investigation.

# Significant Incident – 476342



# Significant Incident – 472242

- Type: Third-Party Damage.
- Characteristics:
  - 5/8-inch service line.
  - Less than \$1000 damages.
- Description:
  - A contractor was installing a fence without notifying the one-call center. PD and FD shut down the neighboring rail tracks, causing Amtrak delays.
- Operator Violations: None.

# Significant Non-Compliances

- 192.507(b): Operator failed to perform leak tests between 100 psig and 20% SMYS for line pressure-tested to at least 20% SMYS.