2024 Communications Meeting

Michigan Public Service Commission

Gas Safety & Operations Division

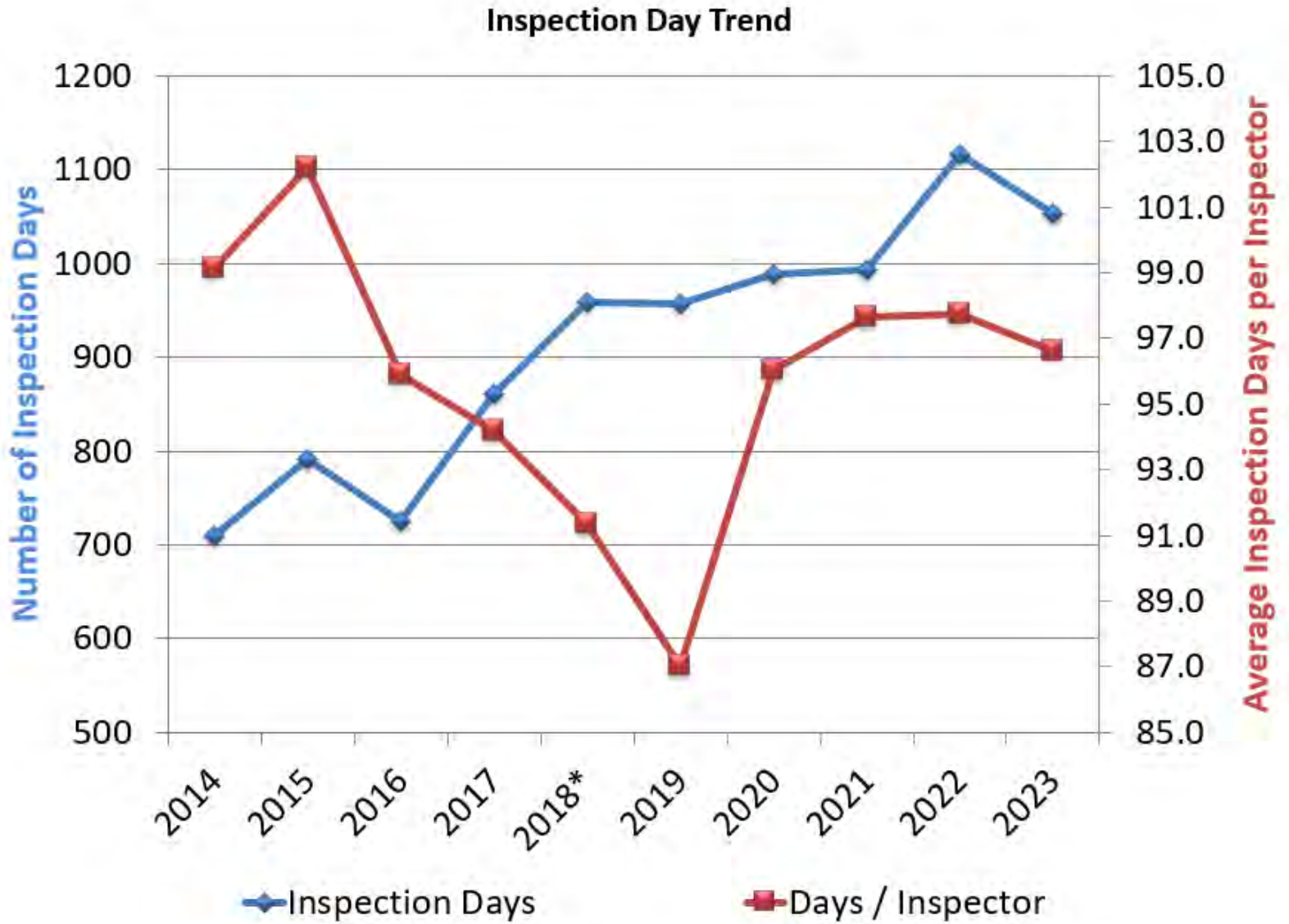
MPSC
MICHIGAN PUBLIC SERVICE COMMISSION

Pipeline Safety Program - Updates

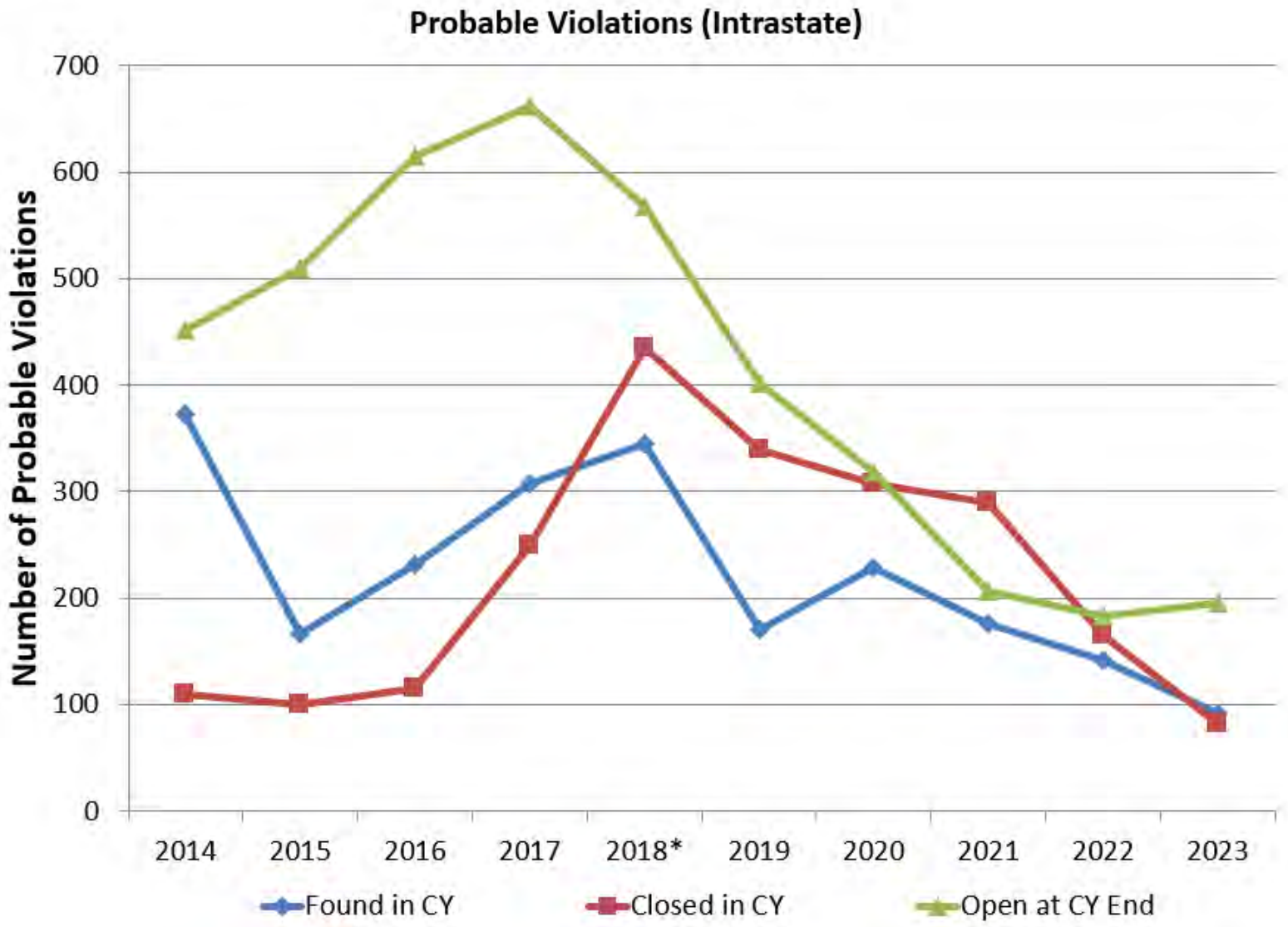
Michigan Public Service Commission

Gas Safety & Operations Division

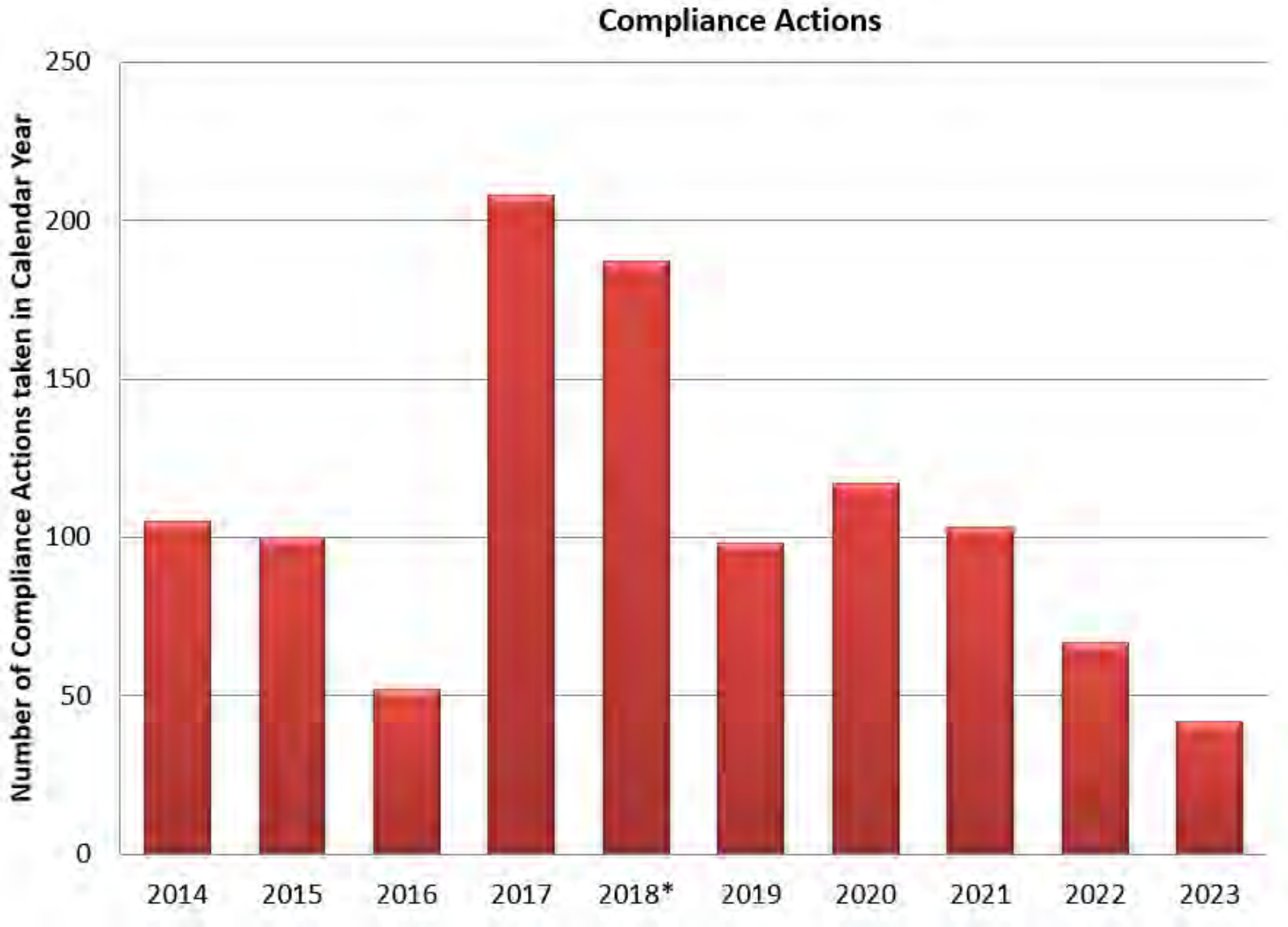
Gas Safety Program Statistics



Gas Safety Program Statistics



Gas Safety Program Statistics



Underground Natural Gas Storage Program - Updates

Michigan Public Service Commission

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Kevin Spence

- Area of Responsibility:
  - IntRAstate storage fields
- Cell: 517-643-7795
- Email: spencek@michigan.gov

Underground Natural Gas Storage Inspection Program

- In 2023, MPSC and EGLE conducted 8 inspections covering 2 operators:
  - Program inspections for 1 operator
  - Records and observations for 8 storage fields
  - Inspections for construction-related activities for 4 storage fields
  - Inspections for observed UNGS tabletop exercises for 1 operators

Underground Natural Gas Storage Inspection Program

- Non-Compliances
  - 0 Probable Violations of 49 CFR 192.12
- Recommendations
  - 19 Recommendations, most notably:
    - Procedures should be revised to reflect the appropriate inspection frequency and detail included, where necessary, for what should be inspected;
    - Procedures should be revised to require function testing of valves for the ability to properly isolate the well;
    - Where well pressures exceed the set threshold or limit, enact measures to mitigate future exceedances;
    - Evaluate and, if applicable, add additional threat and hazard interactions into the risk model and document any exclusions; and
    - Add annular ports to wells which do not currently have the capability for annular pressure monitoring.

Underground Natural Gas Storage Inspection Program

- 2024 Program Update
  - Beginning this year the MPSC/EGLE UNGS Program has changed from a Certification to an Agreement Partnership with PHMSA due to insufficient penalties the MPSC is currently authorized to assess.
  - MPSC & EGLE will continue to inspect intRAstate storage fields according to the established 4-year schedule for standard inspections and as availability allows for specialized inspections.
  - Probable non-compliances will no longer be enforced by the MPSC. Instead, all enforcement actions will now be addressed by PHMSA and assessed penalties subject to their regulatory authority.

Underground Natural Gas Storage Inspection Program

- 2024 Planned Program Activity
  - Records and Observation inspection for 2 Operators covering 8 storage fields
  - Continuation of construction inspections for new well drilling, maintenance, abandonment activities, etc. for all operators
  - Continued observation of UNGS tabletop exercise for all operators
  - Participation in pipeline safety Drug & Alcohol inspections for 1 Operator with UNGS units

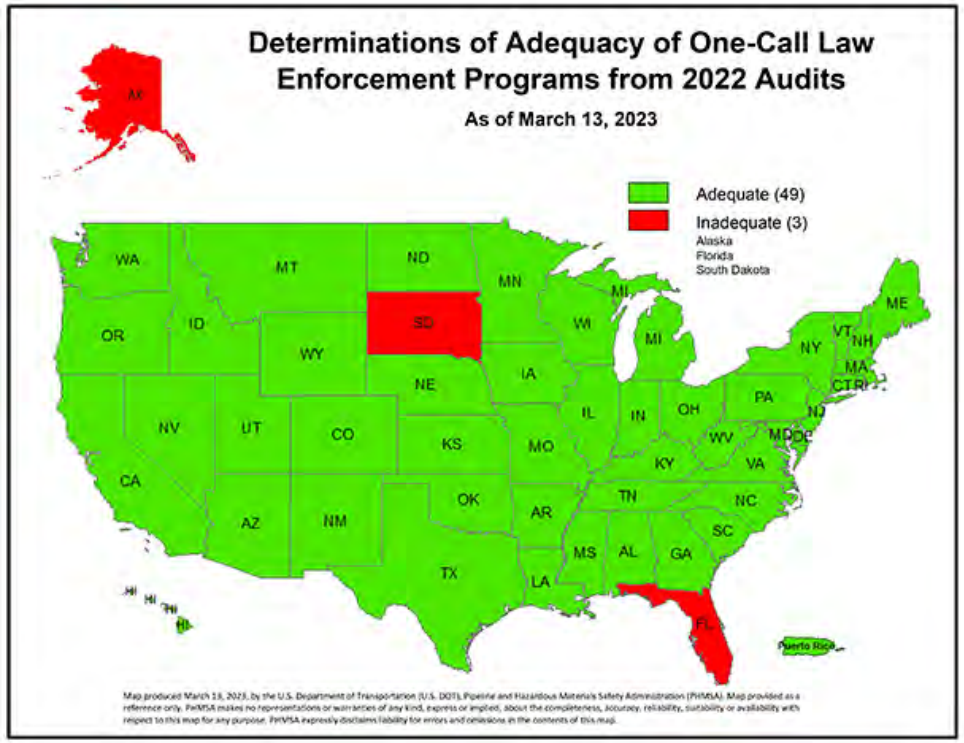
Damage Prevention Program - Updates

Michigan Public Service Commission

Gas Safety & Operations Division

PHMSA Audit

- PHMSA Conducted an Adequacy Evaluation of Michigan's Enforcement of PA 174 for CY2022.
  - Letter received September 18, 2023, deeming the Program adequate.



Source: https://www.phmsa.dot.gov/pipeline/excavator-final-rule/determinations-adequacy

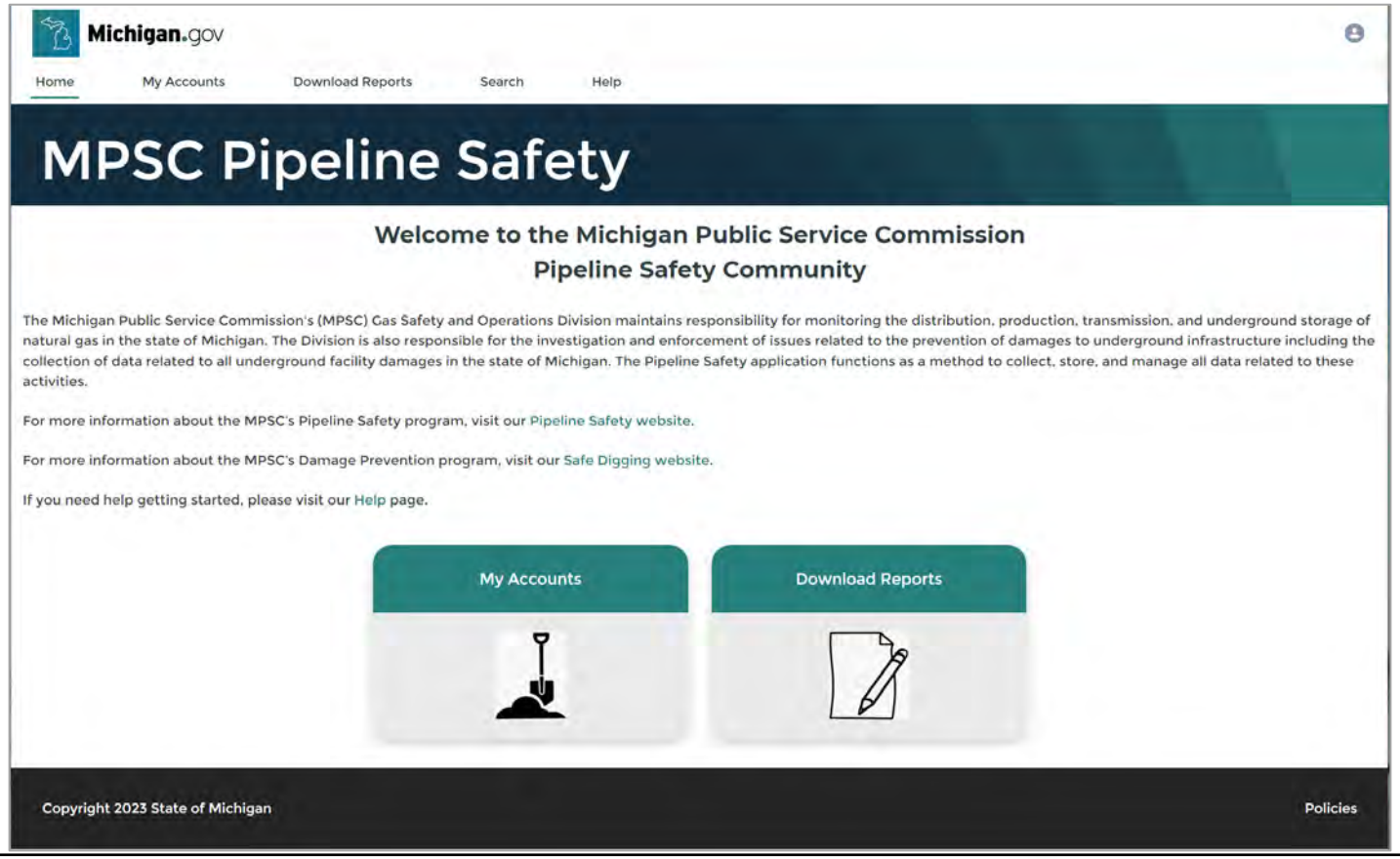
PHMSA Audit

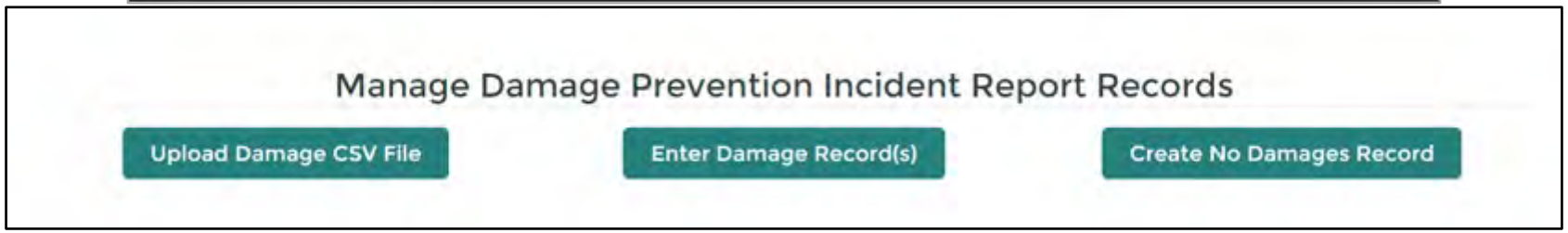
- Areas of focus:
  - Number of damages and efforts to reduce.
  - Locator performance.
    - Mismarking
    - Late marking
  - 1st and 2nd party damages.
  - Hand digging and soft excavation damages.
  - Making enforcement actions publicly available.
  - Data quality.
    - Unknown/Other

Damage Reporting

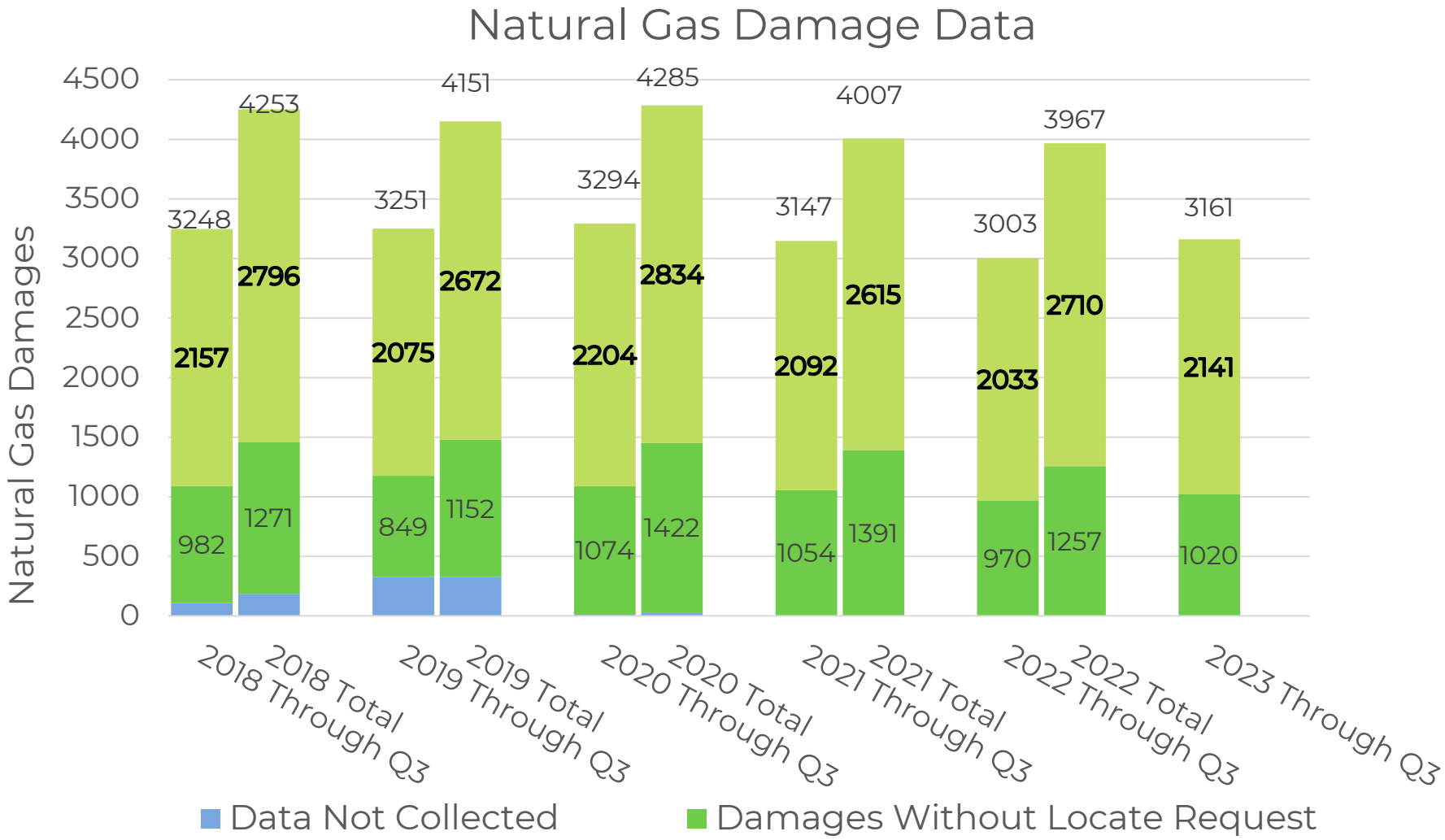
- Current reporting submittals:
  - Utilizes the Operations email account (LARA-MPSC-Operations@michigan.gov).
    - Replies to database emails should contain the case reference (e.g., “ref:_#####:ref”), which will direct to the appropriate database case.
  - Quarterly damage data submittals automatically generate a case.
- Future reporting submittals:
  - Community portal.
  - Facility Owners will submit directly either via upload of a CSV file or inputting directly.
  - Important for FOO to update their data collection to meet the submittal requirements.

Damage Reporting





Damage Prevention Statistics



Source: MPSC Damage Data

Damage Prevention Statistics

Gas Distribution

Excavation Damages

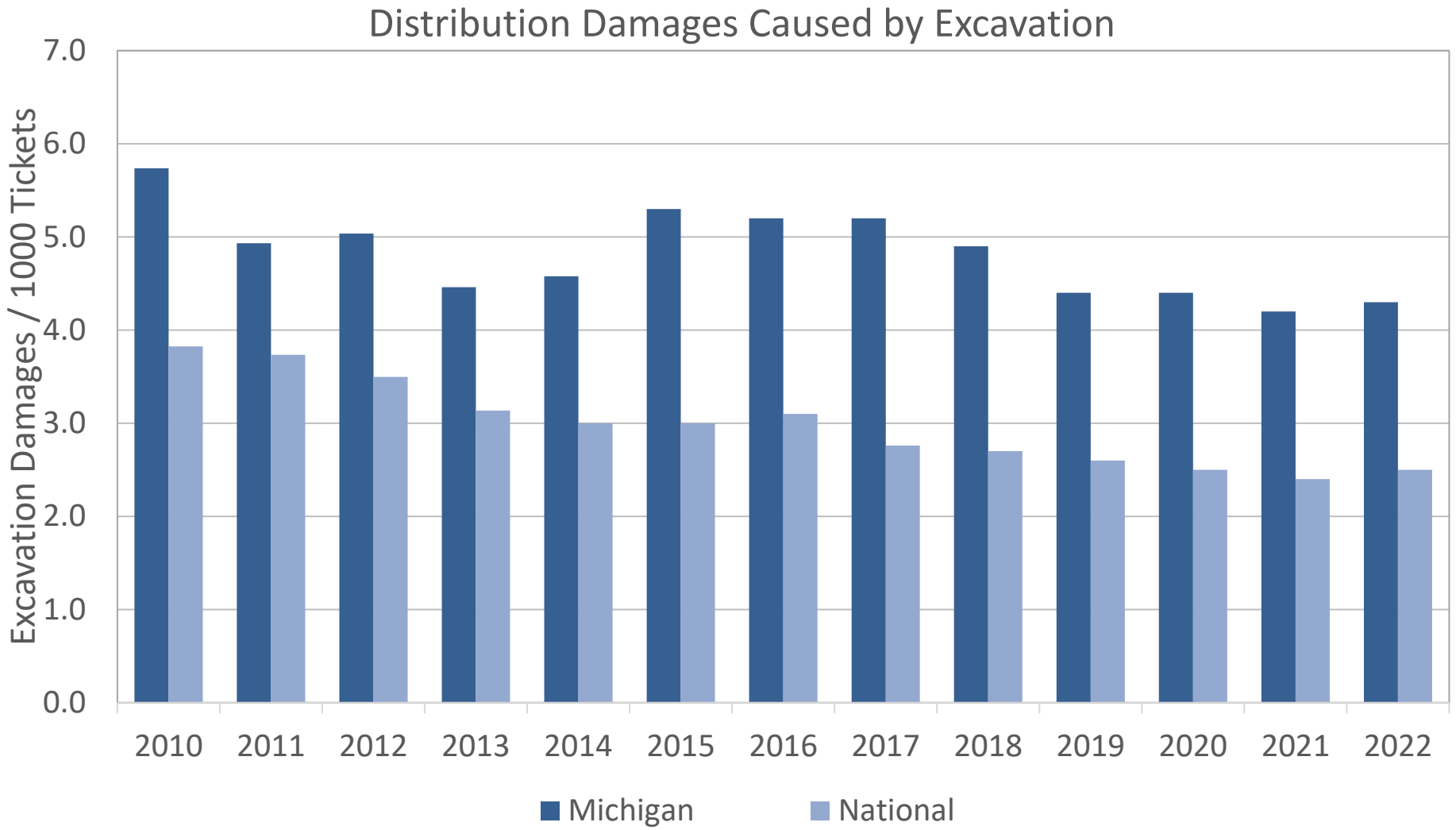
Michigan	2021	2022
Total Excavation Damages	4,106	4,135
Total Excavation Tickets	970,256	955,971
Excavation Damages / 1000 Tickets	4.2	4.3

National		
Excavation Damages / 1000 Tickets	2.4	2.5

Source: 2021 & 2022 Annual Distribution Reports. Form PHMSA F7100.1-1

Damage Prevention Statistics

Gas Facility Damages Per 1000 Tickets



Source: 2010-2021 Annual Distribution Reports. Form PHMSA F7100.1-1

Damage Prevention Statistics

Gas Distribution
Excavation Damage Rates

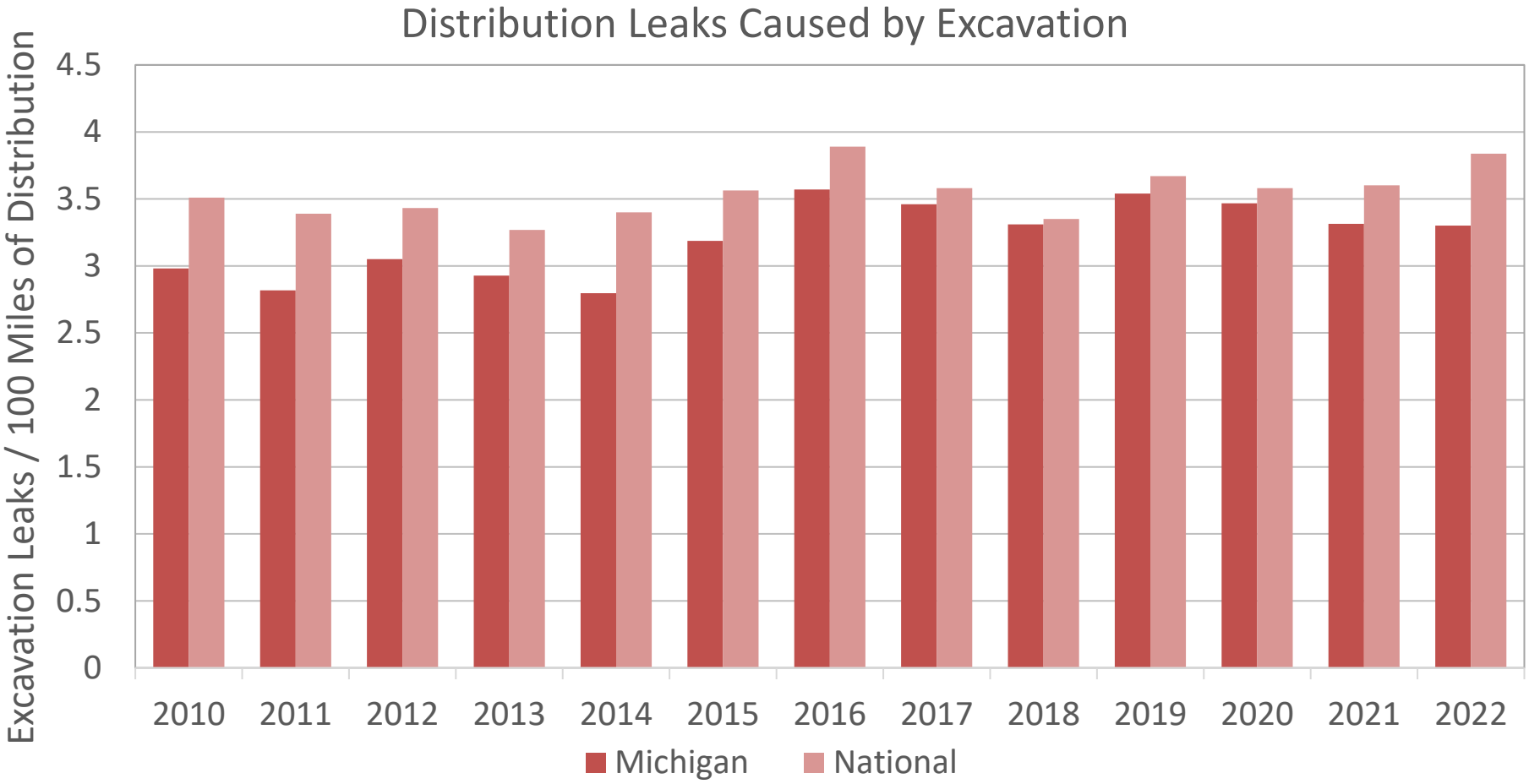
	2020	2021	2022
National	2.6	2.4	2.5
Michigan	4.4	4.2	4.3
Consumers	5.4	4.4	4.8
DTE	3.3	3.9	3.5
MGU	4.5	4.5	4.9
SEMCO	5.0	4.8	5.0

Excavation Damages / 1000 Tickets

Source: Annual Distribution Reports, Form PHMSA F7100.1-1

Damage Prevention Statistics

Gas Distribution



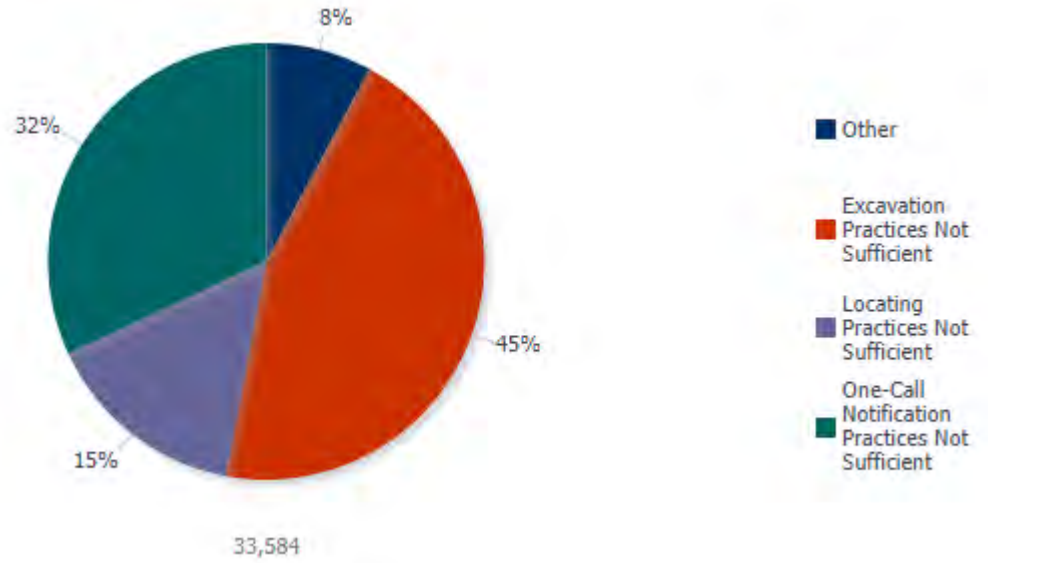
Source: 2010-2022 Annual Distribution Reports. Form PHMSA F7100.1-1

Damage Prevention Statistics

Michigan Gas Distribution Pipeline Excavation Damages by Root Cause

One Call
Down: 116
Locating
Up: 46
Excavation
Up: 81
Other
Up: 18

Total: 4135
Up: 29



Calendar Year	Number of Excavation Tickets	Number of Excavation Damages	Damages per Thousand Tickets	One-Call Notification Practices Not Sufficient	Locating Practices Not Sufficient	Excavation Practices Not Sufficient	Other	One-Call Notification Practices Not Sufficient	Locating Practices Not Sufficient	Excavation Practices Not Sufficient	Other
2022	955,971	4,135	4.3	1,287	710	1,974	164	31%	17%	48%	4%
2021	970,256	4,106	4.2	1,403	664	1,893	146	34%	16%	46%	4%
2020	1,000,022	4,362	4.4	1,446	762	1,941	213	33%	17%	44%	5%
2019	928,529	4,117	4.4	1,362	716	1,556	483	33%	17%	38%	12%
2018	819,538	4,054	4.9	1,177	633	1,954	290	29%	16%	48%	7%
2017	822,578	4,271	5.2	1,238	636	2,108	289	29%	15%	49%	7%
2016	827,516	4,272	5.2	1,361	466	1,999	446	32%	11%	47%	10%
2015	796,641	4,267	5.4	1,451	481	1,727	608	34%	11%	40%	14%

Source: US DOT Pipeline and Hazardous Materials Safety Administration

Complaints

PA 174 Complaints

- A total of $51,500 in penalties were assessed in 2023.

Year	Complaints Received	Issued NOPV with Penalty	Issued NOPV	Warning
2019	47	4	1	2
2020	90	14	8	2
2021	34	17	2	4
2022	55	5	-	1
2023	42	8	4	-

Enforcement Activity

Pipeline Safety Incidents

- In 2023, 21 reportable involving damage prevention were opened.
- A total of $25,500 in penalties were assessed in 2023.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	1	5
NOPV	-	-

Enforcement Activity

Staff-initiated Damage Prevention Inspections

- A total of $330,000 in penalties were assessed in 2023.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	2	15
NOPV	-	-
Warning	1	1

Pipeline Safety - Updates

Michigan Public Service Commission

Gas Safety & Operations Division

Hunter Andrews

- Area of Responsibility:
  - Northeast Michigan
  - Operator Qualification
- Cell: 517-290-9241
- Email: andrewsh2@michigan.gov

Significant Non-Compliances

- 192.241(a)(1) – Failure to conduct visual inspections of welding by an individual qualified by appropriate training and experience to ensure that the welding is performed in accordance with the welding procedure.

Devon Davis

- Area of Responsibility:
  - Western Michigan
- Cell: 517-914-7890
- Email: davisd71@michigan.gov

Significant Incident – 8643

- First Party Damage
- Characteristics
  - 6-inch plastic main, MAOP 60 PSIG.
  - Plastic main installed to run under a river, steel on either side.
  - 6.7 MMCF lost as a result of the incident.
- Description
  - Construction operations were underway to renew the steel main which ran along the street leading to the river with plastic. Planned to tie in new plastic main to the 6-inch plastic main.
  - While excavating the trench at the tie in location, the 6-inch plastic main was damaged by the tooth of the excavator.

Significant Incident – 8643 (Cont.)

- Description (Cont.)
  - Area had been marked.
  - Internal reporting of incident did not follow procedures resulting in significant delays in reporting to MPSC.
- Recommendations
  - Area had been marked.
  - Internal reporting of incident did not follow procedures resulting in significant delays in reporting to MPSC.

Significant Non-Compliances

- 192.467(c) – Metallic casing isolation and adequate corrosion mitigation measures where it is impractical to isolate.
- In accordance with PHMSA Interpretation 192.467 15 published on March 19, 2019:
  - Operators are to perform inspections and tests on the pipeline to determine casing status.
  - Operators must attempt to clear the short, unless it can be shown that attempts to clear the short would be impractical.
  - Where a short on a casing can not be cleared, additional preventative measures must be taken:
    1. Dielectric Fill.
    2. ILI Monitoring.
    3. Increased Interval Leak Survey in conjunction with either 1 or 2.
    4. Remedial measures to maintain MAOP based on remaining strength.
    5. Apply for a Special Permit.

Brian Gauthier

- Area of Responsibility:
  - Southeast Michigan
  - Drug & Alcohol Program Inspections
- Cell: 517-930-4968
- Email: GauthierB2@Michigan.gov

Significant Incident – 8378

- Corrosion (external, localized pitting) Failure & Explosion
- Characteristics
  - Suburban distribution, 10 PSIG main/service, $60K in damages.
  - MMO & entire service renewal for a single-family house.
  - Customer hospitalized overnight & gas worker injured.
- Description
  - Existing service was 1969 plastic & 1952 steel.
  - Service valve inside the home was closed for replacement work.
  - Steel portion of the service was found to be severely corroded.
  - Leaking gas filled crawl space & ignited.
  - Under investigation.

Significant Incident – 8378 (Cont.)

Significant Incident – 8378 (Cont.)

Significant Incident – 9272

- Second Party Damage
- Characteristics
  - Urban distribution, $121K in damages, 4.9 MMCF of gas lost.
  - Cast iron, 12-inch, 1899 main; 4-foot long, CI, 6-inch, 1950 stub.
  - These 10 PSIG pipelines were be being replaced (GRP, PE).
- Description
  - Existence of stub was not known; it was not on maps used.
  - Stub was not marked in the field for the DP ticket process.
  - Contractor's directional drill impacted (indirectly) the stub, causing a crack & gas release.
  - Repair efforts went slowly & resulted in delayed reporting.
  - Replacement used ~ 20 feet of 8-inch HDPE & 2 transition fittings.

Significant Non-Compliances

- 192.357(a) – Failure to install meter/regulator so as to minimize anticipated stresses upon the connecting piping and the meter.

- 192.614 – Failure to carry out your written program to prevent damage to pipelines from excavation activities.

Mohammad Giasuddin

- Area of Responsibility:
  - Detroit Metro/ East Michigan
- Cell: 517-914-7901
- Email: giasuddinm@michigan.gov

Significant Incident – 9389

- Compressor Station Thermal oxidizer damage
- Characteristics
  - Compressor Station Dehydration System.
  - 1440 psig MAOP, 1969.
  - Estimated property damage $229,381 and total gas loss 0.81 MCF.
  - No ignition.
- Description
  - Several cracked welds and loose bolts were identified on heat affected equipment within the compressor station.
  - Exhaust pipe slip joint connection to the exhaust stack was found to no longer be inserted into the fitting.
  - Under investigation.

Significant Incident – 9389 (Cont.)

- Description (Cont.)
  - Exhaust pipe slip joint connection to the exhaust stack was found to no longer be inserted into the fitting.
  - Operator identified a concern relative to insufficient bolt torque specifications used during a 2020 repair to the system.
  - Operator has taken action to remediate concern though a refabrication of the super heater vessel failed components.
  - Slip joint insertion was increased to avoid risk of the joint failing.
  - Further analysis is required to support confirmation of the pipe failure modes identified in the field and is presently underway.

Significant Incident – 8510

- Third Party Damage
- Characteristics
  - 2-inch Plastic Main.
  - 60 PSIG, MAOP, 1981.
  - Estimated property damage $157,303 and total gas loss 15.09 MCF.
- Description
  - Mechanical puncture by the third-party contractor while attempting to fix a leaking water line.
  - The gas leak ignited within 5 minutes of the gas main hit and the fire spread to the home.
  - No injuries or fatalities.
  - 26 customers lost service for 48 hours.

Significant Incident – 8510 (Cont.)

Karen Krueger

- Area of Responsibility:
  - South/Central Michigan
  - Incidents
  - Operator Qualifications
- Cell: 517-582-8619
- Email: kruegerk1@michigan.gov

Significant Event – 8107

- Safety Related to Rigging, Lifting and Pipe Handling.
- Characteristics
  - Transmission Valve Site.
- Description
  - While in the process of moving the pipe for weld line-up, the valve assembly rotated and tipped over in the ditch. No injuries.
- Recommendations
  - Factors necessary to notify OSHA or MIOSHA and examination of facilities involved.
- Actions Taken
  - Implemented inspection of equipment schedule, require training and certification for lifting operations, communication plan for lifting tasks and risks associated, collaboration with the operator and regular safety audits.

Significant Event – 8107 (Cont.)

Significant Non-Compliances

- 192.461(a)(1) – Failure to apply each external protective coating on a properly prepared surface.
- 192.461(a)(2) – Failure to apply each external protective coating that is sufficiently ductile to resist cracking.
- 192.461(a)(3) – Failure to apply each external protective coating with sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture.

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Significant Non-Compliances

- 192.479(b) – Failure to provide protection against atmospheric corrosion with a suitable coating material.

- 192.305 – Failure to inspect to ensure that it is constructed in accordance with this part.

- 192.605(a) – Failure to prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

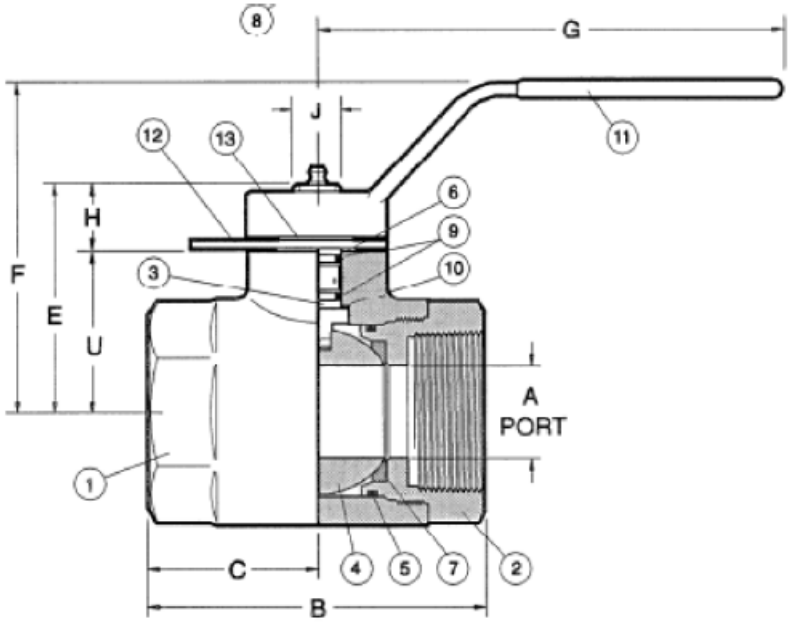
Jotham Povich

- Area of Responsibility:
  - Northwest Michigan
  - Gathering
- Cell: 231-357-8816
- Email: povichj1@michigan.gov

Significant Incident – 7978

- Equipment Failure
- Characteristics
  - 2-inch 2-part ball valve on dump line near storage well
  - Operating at 1200 psig
  - 7.8 MMcf gas loss; $190,000 in damages and environmental cleanup
- Description
  - Employees at nearby station heard release and responded to the site.
  - 2-part valve found separated.
  - Metallurgical analyses indicated the ball valve separated due to the expansion of the female threaded section of the ball valve.
  - Still under investigation. Operator reviewing similar valves in the system that are subject to the same environmental conditions.

Significant Incident – 7978 (Cont.)



Derrick Schimming

- Area of Responsibility:
  - Southwest Michigan
  - Control Room Management
- Cell: 517-282-5989
- Email: schimmingd@michigan.gov

Significant Incident – 8248

- Pipeline Rupture
- Characteristics
  - 6-inch Steel, installed in 1950.
  - MAOP 400 PSIG, operating at 380 PSIG.
  - 4,438 Customers lost; 4.9 MMCF Gas Loss; $3.9 Million in repair cost.
- Description
  - Gas leak found in a river during a large storm event.
  - The pipe continued to leak and lead to a full separation rupture.
  - Operator installed a temporary bypass and replaced the pipe under the river.
  - The operator attempted actions to try to prevent the loss of the customers.
  - Still under investigation.

Significant Incident – 8248 (Cont.)

Significant Incident – 8248 (Cont.)