



# MITA 2023 Annual Conference

MPSC Presentation

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# Agenda

- Authority
- Background
- Damage Data
- Investigations
- 2022 Enforcement
- Incidents
- Appendix
  - Damage Prevention Statistics

# Authority & Background

# Authority

- State
  - Public Act 174 of 2013
  - Michigan Underground Facility Owners and Operators (Rule 460.11 *et seq.*)
  - Public Act 165 of 1969
  - Michigan Gas Safety Standards (Rules 460.20101 *et seq.*)
- Federal
  - 49 CFR Part 196

# Authority

- MPSC
  - Receive and investigate complaints.
  - Investigate upon the commission's own motion.
  - Collect excavation damage data and make publicly available on the MPSC website.

# Authority – MPSC Strategic Planning

- The MPSC goal to have a greater field presence.
  - Increase time investigating complaints.
  - Site visits to ensure compliance with PA 174 for excavators and facility owners.
  - Provide education to excavators.
  - Investigate damages as they occur.
- Continued posting of excavation damage data.
- **Support Facility Owners and Locators in steps to improve staked on time – performance and timeliness.**
  - **Sharing planned work to help determine staffing levels.**

# Background

- Excavator
  - Provide dig notice 3 business days prior to excavation.
  - Each excavator provides their own dig notice.
  - Check positive response prior to excavation.
  - Request additional assistance if marks destroyed or evidence of unmarked facilities.
  - Conduct excavation activities in a manner to protect facilities.
  - Provide immediate notice if contact or damage a facility.

# Background

- Facility owners and operators
  - Respond to tickets by the start date and time.
    - Mark location of facilities.
    - Provide positive response to the notification system.
  - Respond to additional assistance requests.
    - Damaged marks - 24 hours, business days.
    - Unmarked facilities - 3 business hours.
  - Promptly dispatch personnel on notice of a facility damage.



# Background

- MISS DIG
  - 24/7 receive excavator dig notifications; send to owners/operators.
  - Administer a positive response system.
  - December 2021 a new one call management system was implemented.

# Damage Data

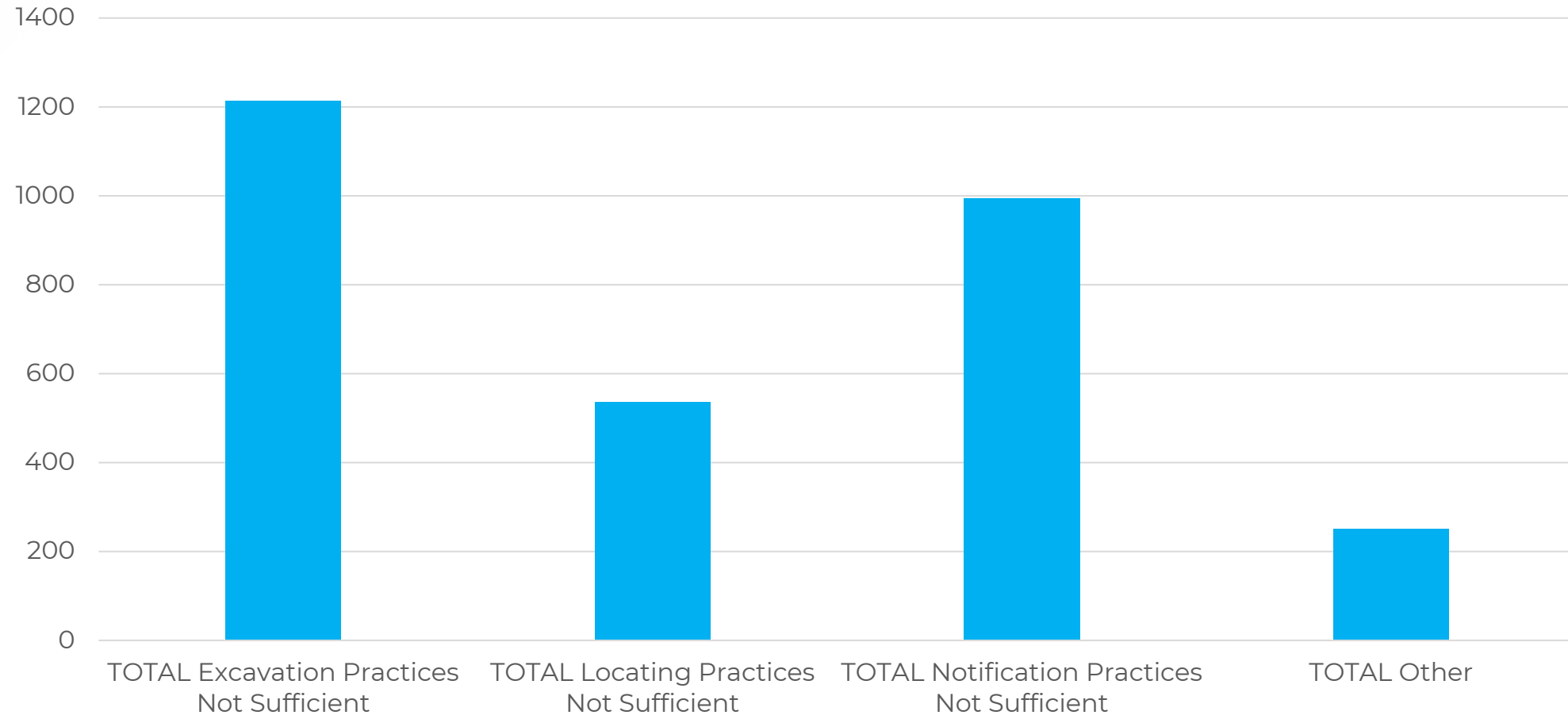
# Damages – Gas Distribution

<b>Michigan</b>	<b>2020</b>	<b>2021</b>
Total Excavation Damages	4,359	4,106
Total Excavation Tickets	1,000,022	970,256
Excavation Damages / 1000 Tickets	4.4	4.2

<b>National</b>	<b>2020</b>	<b>2021</b>
Excavation Damages / 1000 Tickets	2.5	2.4

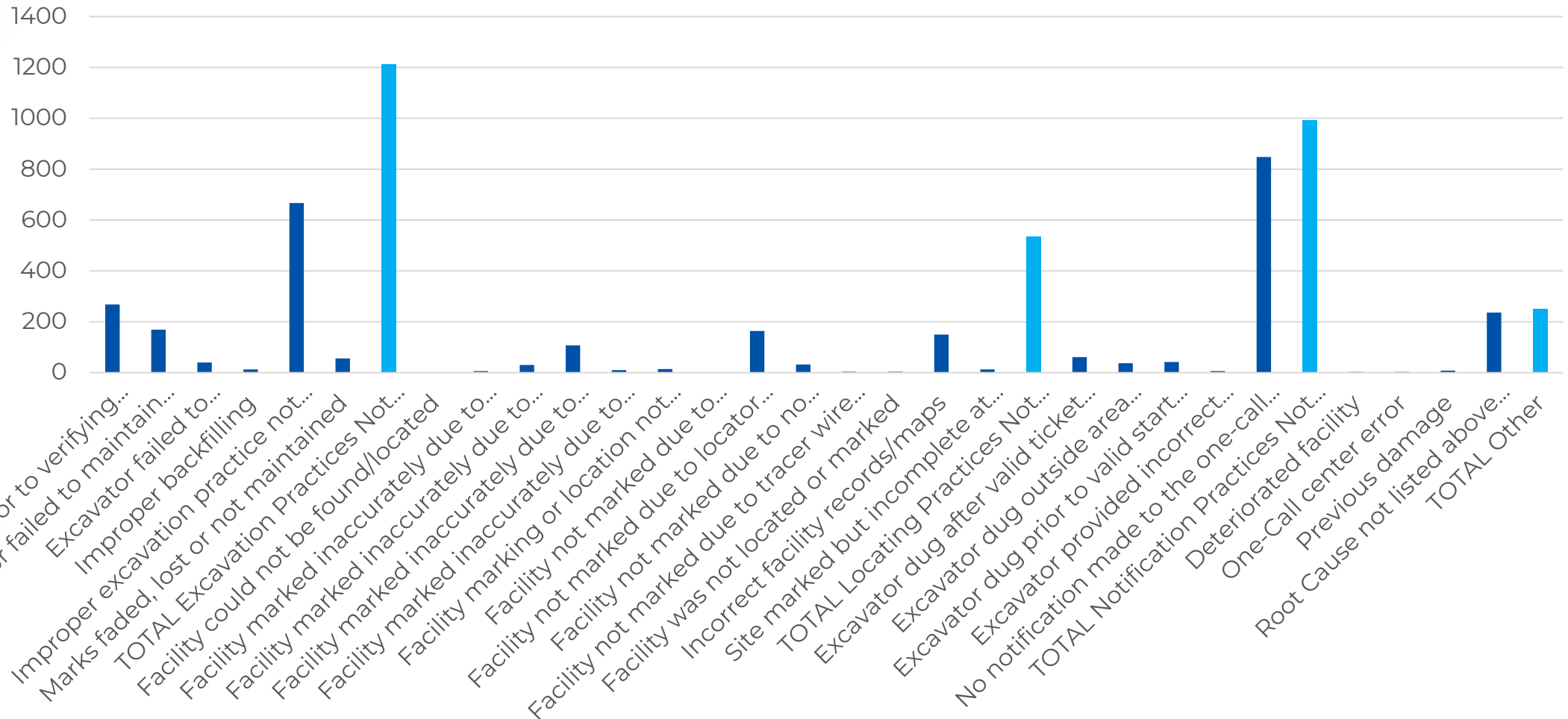
# Damages – Root Cause (Gas Facilities)

2022 Damages by Root Cause  
Through Quarter 3



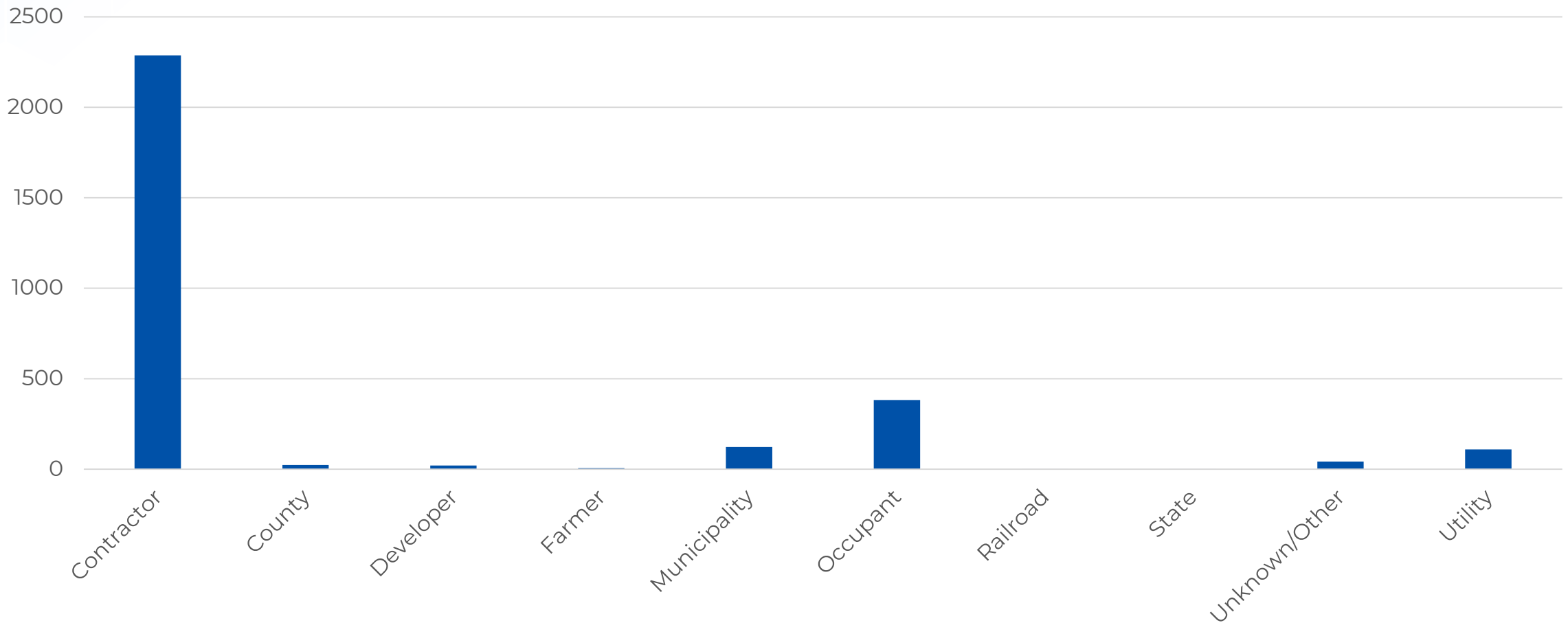
# Damages – Root Cause (Gas Facilities)

2022 Damages by Root Cause  
Through Quarter 3



# Damages – Excavator Type (Gas Facilities)

2022 Damages by Excavator Type  
Through Quarter 3



Source: MPSC Damage Data

# Investigations

# Investigations

- Complaints
  - Formal
  - Informal
- Staff-Initiated PA 174 Inspections
- Onsite Damage Investigations
  - Reported incidents under Public Act 165 of 1969
  - Staff initiated/real time damage notifications
- Data Analysis
  - Late or no positive response
  - Quarterly damage reporting



# Investigations

Evidence and Documentation typically requested:

- Facility owner/operator staking records and facility maps.
- Photographs
  - Pre-job walk through, staking and re-stakes, post-damage
  - Timestamped and location shown, preferably
- Correspondence
  - Phone call log and/or notes with facility owners, stakers
- Damage reports
  - Describe what occurred and why
  - Take measurements

# Investigations – Complaints

- Damage Prevention Complaint Form is available on the MPSC website: [www.michigan.gov/MPSC](http://www.michigan.gov/MPSC)
  - Users must use a browser other than Internet Explorer.
- Communications from the MPSC will come from the Operations email account ([LARA-MPSC-Operations@michigan.gov](mailto:LARA-MPSC-Operations@michigan.gov)).
- Attachments can be provided after receiving the complaint submission confirmation email (send to [LARA-MPSC-Operations@michigan.gov](mailto:LARA-MPSC-Operations@michigan.gov)).
  - Replies should contain the case reference (e.g., “ref:\_00Dr08vPn.\_500r04lQ1o:ref”), which will direct to the appropriate database case.

# 2022 Enforcement

# 2022 Enforcement

- Complaints
  - 55 formal complaints filed.
  - 29 filed by excavator regarding locating issues.
- Staff-Initiated
  - 19 inspections.
- Penalties Related to Enforcement

	All DP Violations	Staff-Initiated Inspections	Complaints
Facility Owner & Operators	\$511,000	\$496,000	\$5,000
Excavators	\$12,500	\$1,000	\$11,500

# 2022 Enforcement - Complaints

- PA 174 complaints filed
  - A total of \$16,500 in penalties were assessed in 2022.

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	0	1

# 2022 Enforcement - Complaints

## Frequent Issues

- In 2022, 15 complaints were received against contract locators.
  - Public Act 174 pertains to facility owners and excavators.
- All complaints must have an attempt at resolution prior to filing.
  - 460.17(2): “Before filing a complaint, the complainant shall make a good faith attempt to settle the dispute with the respondent using any reasonable means of resolution acceptable to the involved parties.”
  - Facility owners provide contact information on the one-call ticket.

# 2022 Enforcement – Reportable Incidents

- In 2022, 28 reportable pipeline safety incident cases involving damage prevention were opened.
  - A total of \$37,000 in penalties were assessed in 2022.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	6	5
NOPV	1	3

# 2022 Enforcement – Staff Initiated

- In 2022, Staff-Initiated damage prevention inspections leading to enforcement actions.
  - A total of \$497,000 in penalties were assessed.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	2	25
NOPV	3	
Warning		2



# 2022 Enforcement – Locating Timeliness

Case	Date	Penalty
6532	4/28	\$5,000
7433	10/5	\$55,000
7434	10/5	\$55,000
7435	10/5	\$55,000
7460	10/5	\$5,000
7461	10/5	\$1,500
7430	10/6	\$15,000
7488	10/31	\$10,000
7468	11/1	\$2,000
7474	11/1	\$20,000
7482	11/1	\$3,500
7519	11/14	\$30,000
7607	11/15	\$40,000

Case	Date	Penalty
7609	11/15	\$20,000
7490	11/15	\$5,000
7619	11/15	\$5,000
7618	11/15	\$500
7489	11/15	\$3,000
7647	11/28	\$10,000
7629	11/28	\$500
7623	11/28	\$10,000
7637	11/28	\$10,000
7622	12/1	\$15,000
7675	12/20	\$70,000
7842	12/29	\$50,000

# Best Practices

# Best Practices – Top “10” List

- Create a ticket even if only using soft excavation.
- Check positive response and read all comments prior to digging.
- Each excavator shall provide their own dig notice.
- Prior to digging, walk the job site to see if marks make sense. Are both services and mains marked.
- Work with Facility Owners on how to protect facilities.
- Conduct safe digging training for all field employees.

# Best Practices – Top “10” List

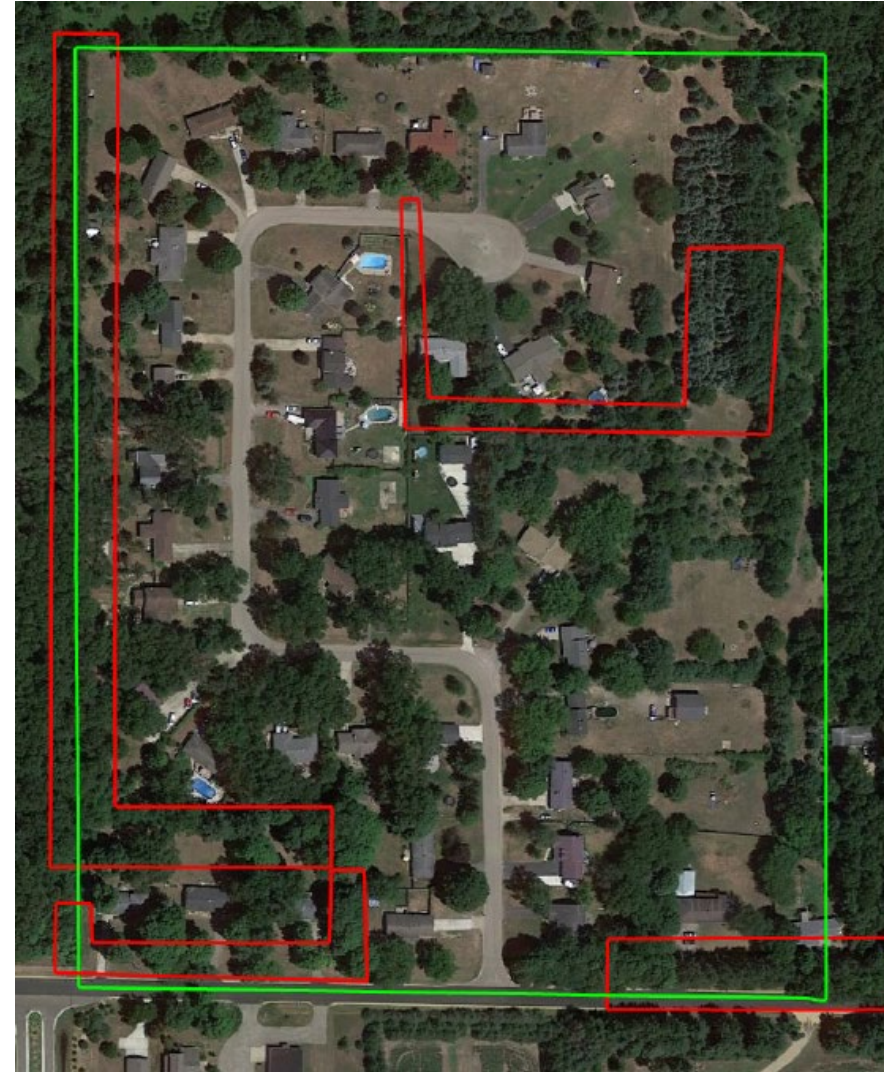
- Use a trained spotter when excavating or boring.
- Facilities do not always maintain a consistent depth and may have appurtenances.
- Use safe trenching techniques. Support trench walls. Support and protect facilities.
- Take care in adequately backfilling to support and protect facilities.
- If you contact or damage a facility, contact the Facility Owner, even if the damage appears minimal. Call 911 first if the damage could endanger life, health or property.

# Best Practices – One-Call Tickets

- Polygons – Accurate to work area.
  - **The polygon determines which facility owners and facility operators are notified.**
    - The actual work area must be within the polygon.
    - Recommendation: The drawn polygon should match the work area.
    - Recommendation: The drawn polygon may be drawn larger than the actual work area when necessary.

# Best Practices – One-Call Tickets

- Polygons – Accurate to work area.





# Best Practices – One-Call Tickets

- Polygons – Accurate to work area.

Dig Site and Ticket Details



In addition to polygon, stake north of 1755 Barlow office building between exterior wall and AC units, west end to east end



# Best Practices – One-Call Tickets

- Polygons – Accurate to work area.



[Open Map](#)



**LOCATE ENTIRE LOT AND BOTH SIDES OF THE ROAD.**



# Best Practices – One-Call Tickets

- Scope of work - Include descriptions of work area.
  - The remarks cannot expand the work scope of the ticket beyond the polygon.
  - The remarks may narrow the work scope to a smaller area within the polygon when the polygon cannot be accurately drawn.
  - Recommendation: include accurate descriptions of the work area.
    - Include information such as:
      - which side of road,
      - any crossing locations,
      - size of area and/or from where to where,
      - start and end locations.

# Best Practices – One-Call Tickets

- Scheduling
  - Create tickets based on planned work schedule. Consider breaking larger tickets into multiple smaller tickets with different work start dates.
  - Make use of the 14-day dig start window. The 21-day work window begins at the legal dig start.

# Incidents

# Incidents

- March 13, 2022
- Two-inch steel gas main.
- 60 MAOP.
- House explosion.
- Estimated property damage \$600,000.
- Excavation damage in 2008 damaged coating, leading to a corrosion leak.
- Under investigation.





# Incidents

- August 2, 2022. Near miss.
- Three shallow gas services.
- No damage. Excavator requested help from facility owner on how to protect.



- Facility owner cited 192.614(c)(6) for failing to inspect facilities as frequently as necessary during excavation to verify integrity of the pipeline.



# Incidents

- August 11, 2022
- Four-inch plastic gas main.
- 60 MAOP.
- Sewer work.
- Damage by excavator equipment.
- No ignition or fire.
- 296 customer outages, 9.5 hours.
- 1.29 MMcf gas loss.
- Under investigation.





# Incidents

- September 2, 2022
- 4" steel gas distribution pipeline. 259 psig.
- Agriculture tile installation.
- Pipeline completely severed.
- 1489 customer outage.
- 309 Mcf gas loss.
- Estimated property damage \$250k.
- No one-call ticket covering the damage location
- Under investigation.



# Incidents

- September 8, 2022
- Four-inch plastic gas main.
- 60 MAOP.
- During the bore pullback, the reamer damaged the pipeline.
- Two employees received minor burns.
- Estimated property damage \$526,000.
- 315 Mcf Gas loss.
- Under investigation.





# Incidents

- September 9, 2022.
- Two-inch stub off six-inch steel gas main.
- 329 psig.
- Damaged during road reconstruction, installing drain tile.
- 6.1 MMcf gas loss.
- Estimated property damage \$69,000.
- Under investigation.



# Incidents

- September 30, 2022
- Gas service line.
- Trenching machine to install fiber.
- MISS DIG ticket expired in June.
- Crew potholed but did not locate the service in the pothole and determined safe to continue trenching.
- After gas release, crew turned off equipment. Trencher backfired igniting the natural gas.
- Under investigation.





# Incidents

- November 4, 2022
- Six-inch steel gas main.
- 855-foot bypass installed to prevent outage to 475 customers.
- Excavator requested a remark three days prior. Locator did not mark entire scope of ticket.
- 3.4 MMcf gas loss.
- Under investigation.



# Incidents

## Lessons Learned

- Communication.
- Contact MISS DIG for additional assistance.
  - Destroyed markings; unmarked facility; facility owner contact information.
- Ensure soft excavation is adequate.
  - Parallel excavations; if facility becomes covered hand expose again.
  - Boring, including reaming and pullback.
- When a facility is damaged protect self and others.
  - If it is safe, shut down equipment; do not move equipment; evacuate the area; contact 911 and the facility owner.
- If in doubt, place a ticket.
  - Saw cutting, milling, landscaping, driving stakes.

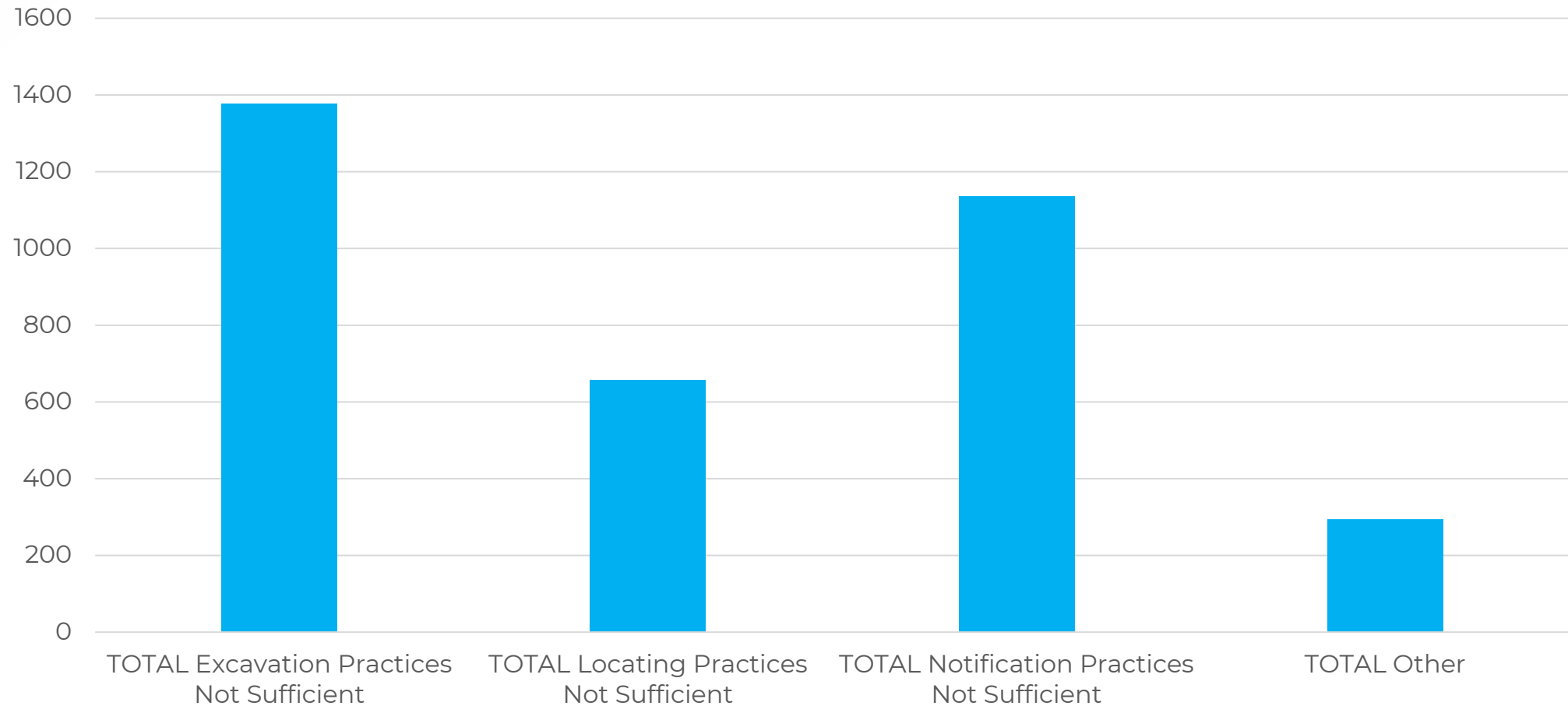


# Feedback & Questions

# Appendix

# Damages - Root Cause (All Facilities)

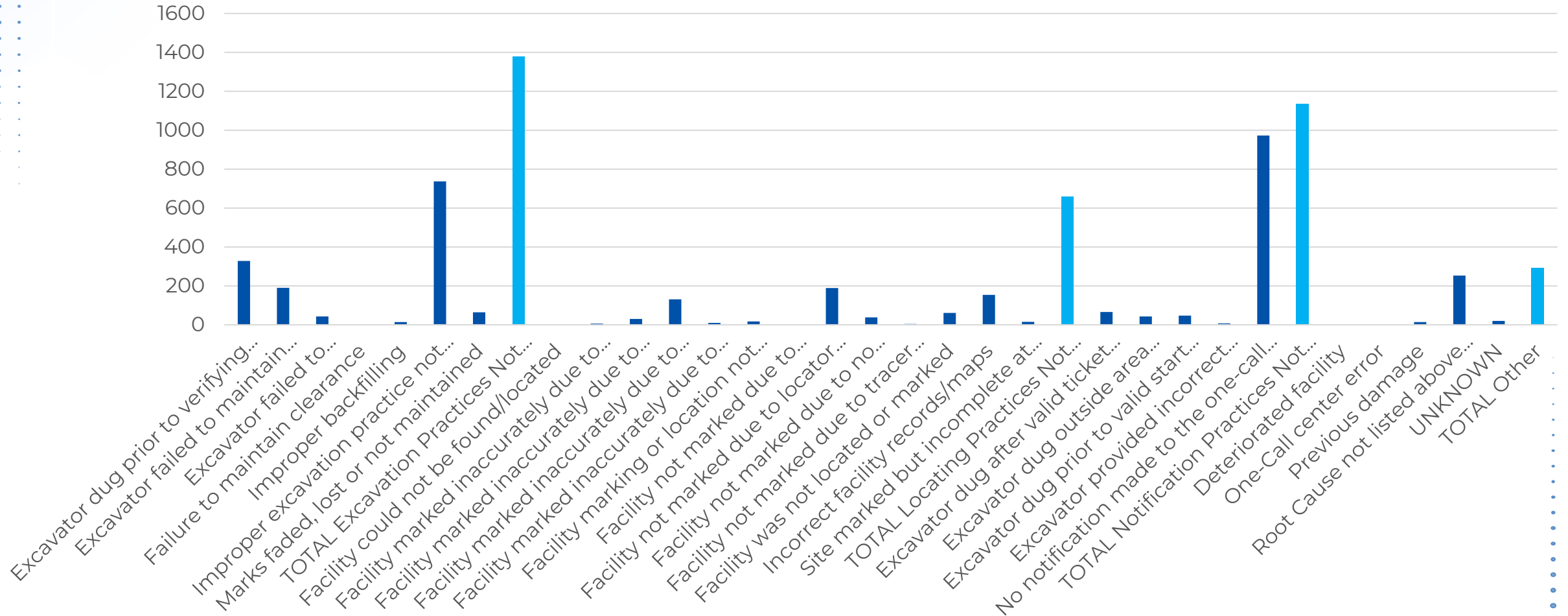
2022 Damages by Root Cause  
Through Quarter 3



Source: MPSC Damage Data

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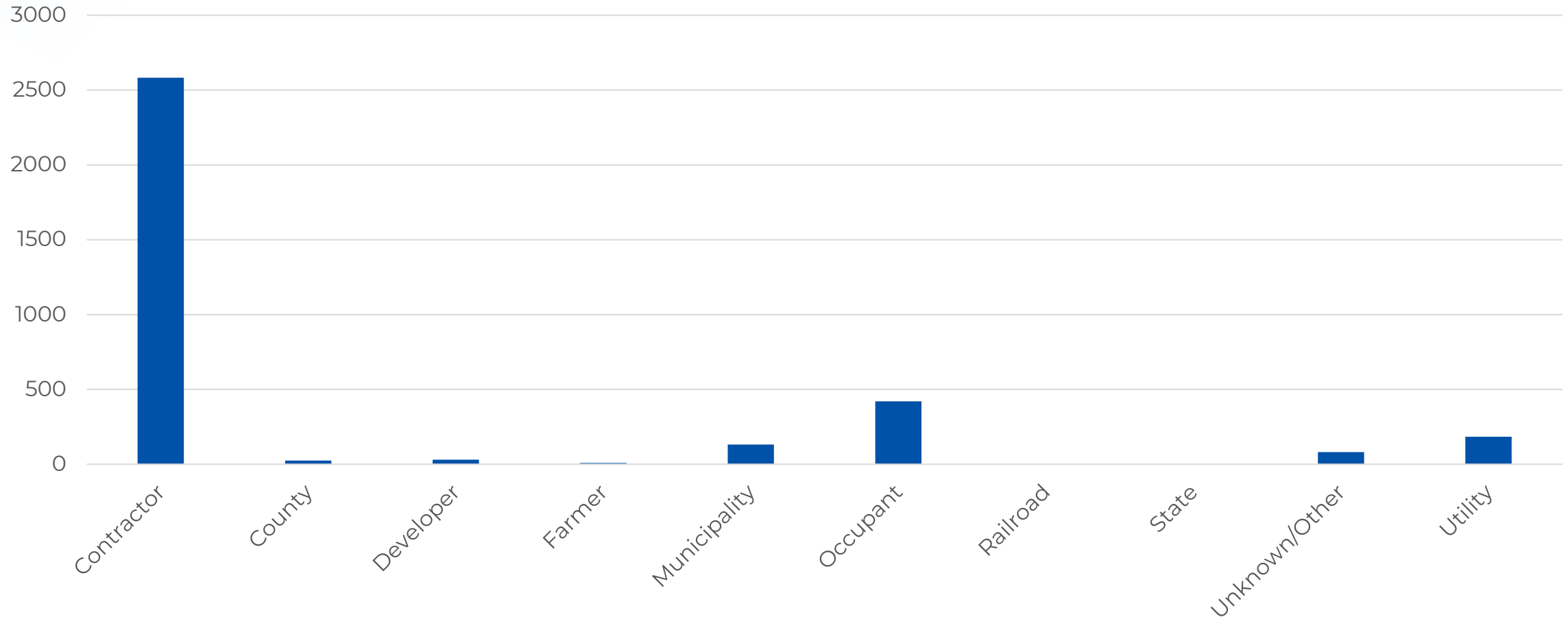
2022 Damages by Root Cause Through Quarter 3





# Damages - Excavator Type (All Facilities)

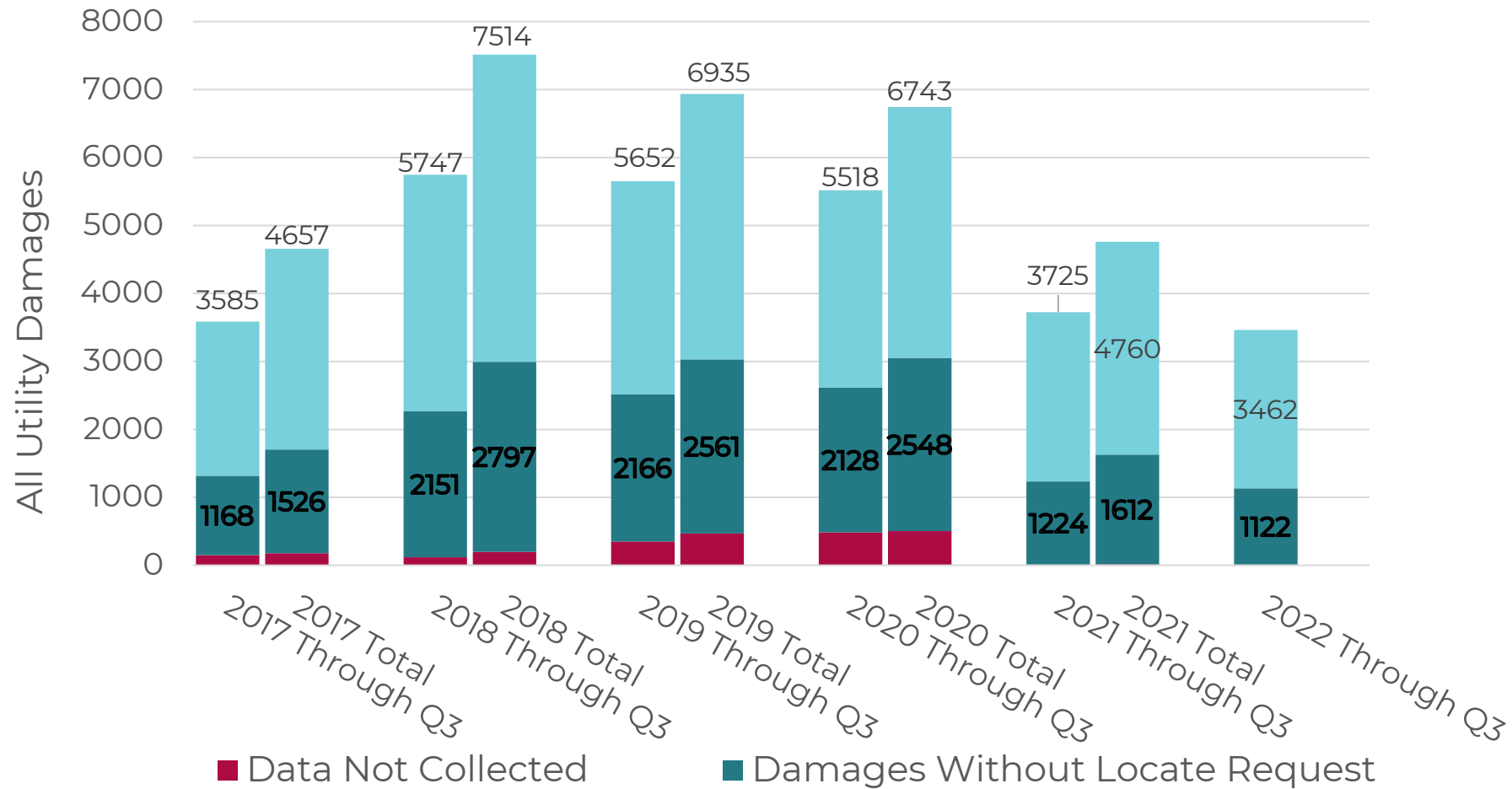
2022 Damages by Excavator Type  
Through Quarter 3



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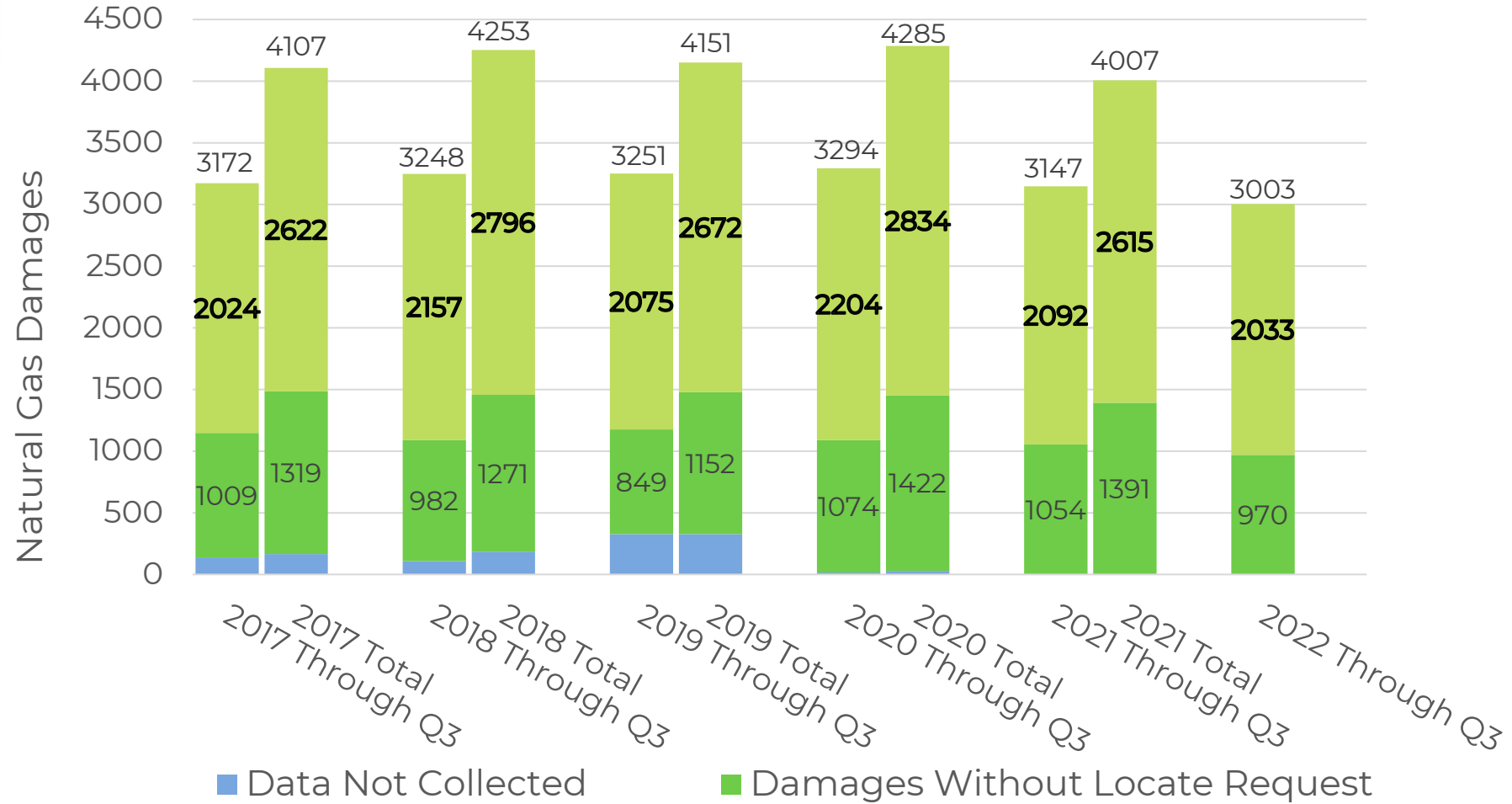
# Damage Prevention Statistics

All Utility Damage Data



# Damage Prevention Statistics

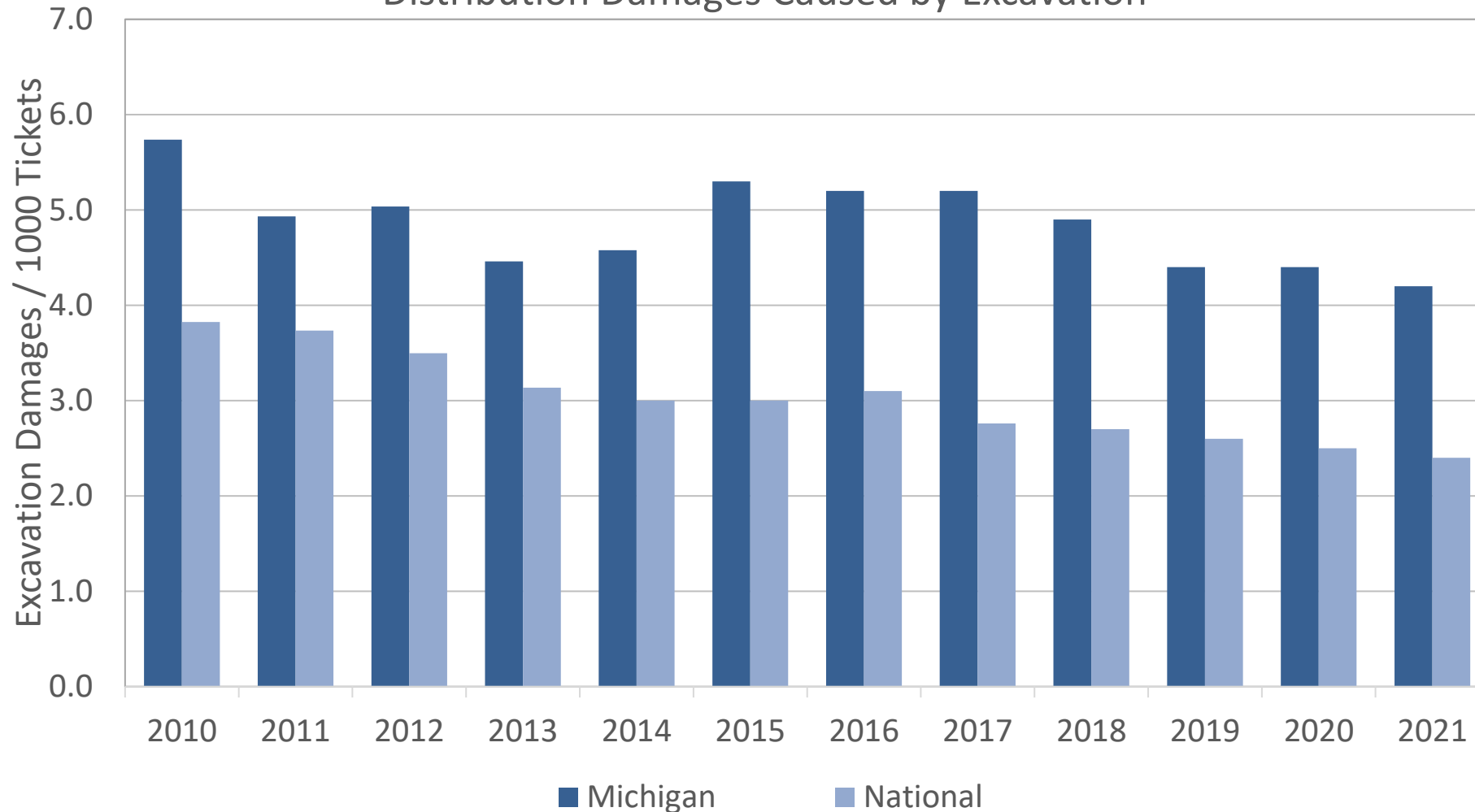
## Natural Gas Damage Data



# Damage Prevention Statistics

## Gas Facility Damages Per 1000 Tickets

### Distribution Damages Caused by Excavation



# Damage Prevention Statistics

## Gas Leaks Per Unit of Infrastructure

### 2021 Michigan Leak Summary

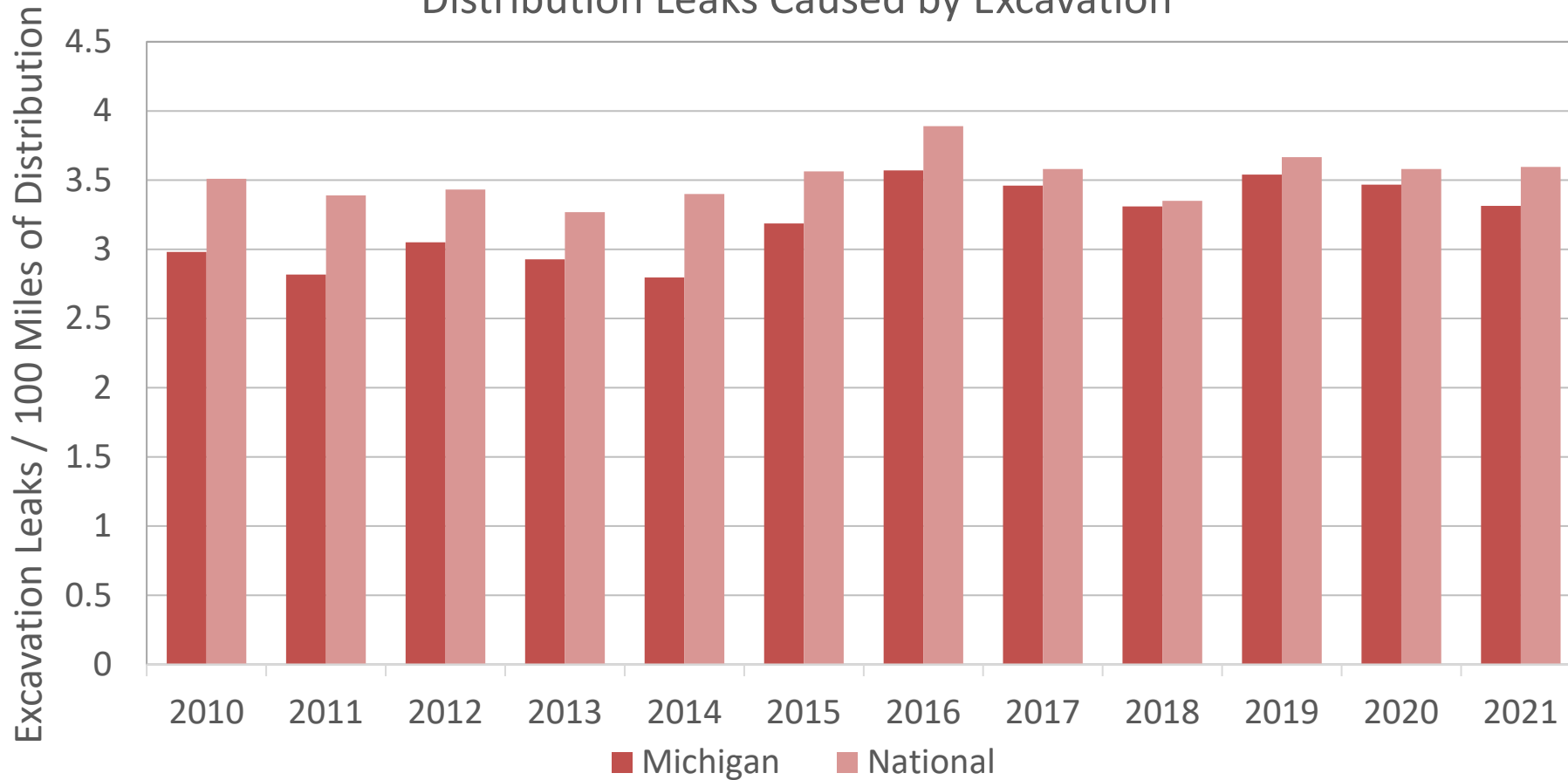
<b>Mains</b>	
Excavation Leaks	506
Leaks / 100 Miles of Main	0.82

<b>Services</b>	
Excavation Leaks	3502
Leaks / 1000 Services	1.04

# Damage Prevention Statistics

## Gas Distribution

### Distribution Leaks Caused by Excavation

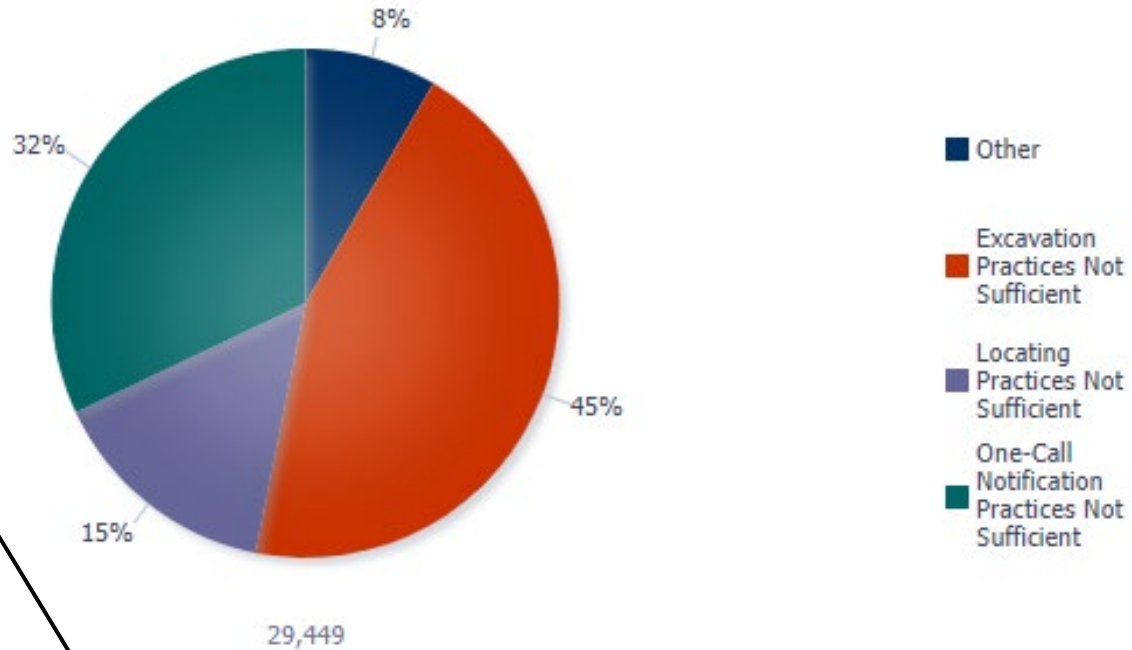


# Damage Prevention Statistics

Michigan Gas Distribution Pipeline Excavation Damages by Root Cause

One Call  
Down: 43  
Locating  
Down: 98  
Excavation  
Down: 48  
Other  
Down: 67

Total: 4106  
Down: 256



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
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%