Addressing Legacy Sites: EPA Region 5 LUST A3 Project

Organized by the LUST Task Force Tanks Subcommittee

ASTSWMO Annual Meeting
November 9, 2021

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Handouts

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Questions Tool:

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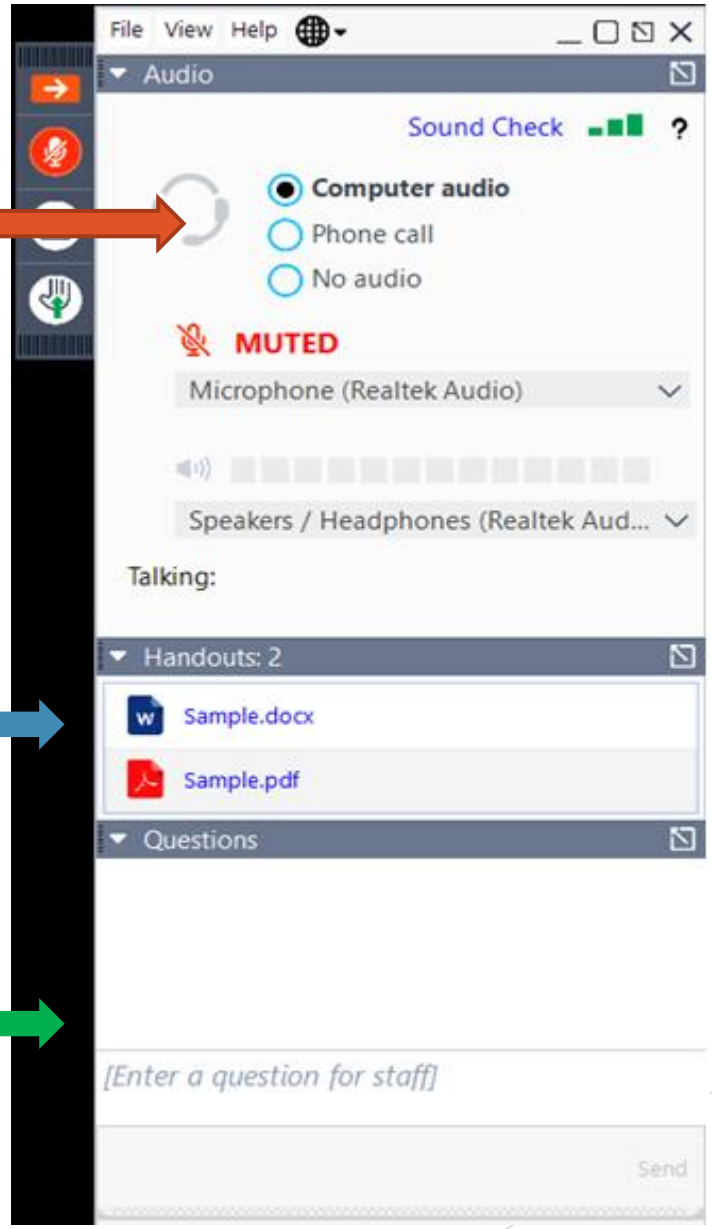


Agenda

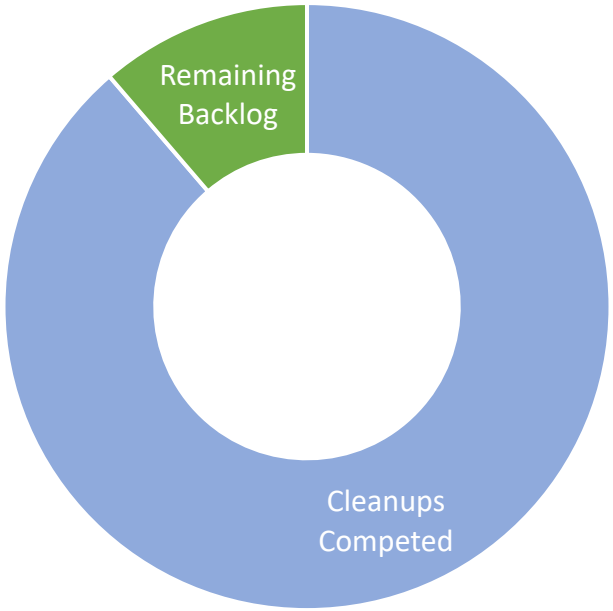
Presenters:

- Will Anderson, US EPA OUST
- Sherry Kamke and Dimitri Acosta, US EPA Region 5
- Josh Mosher, Michigan DEQ
- Greg Dunn, Illinois EPA

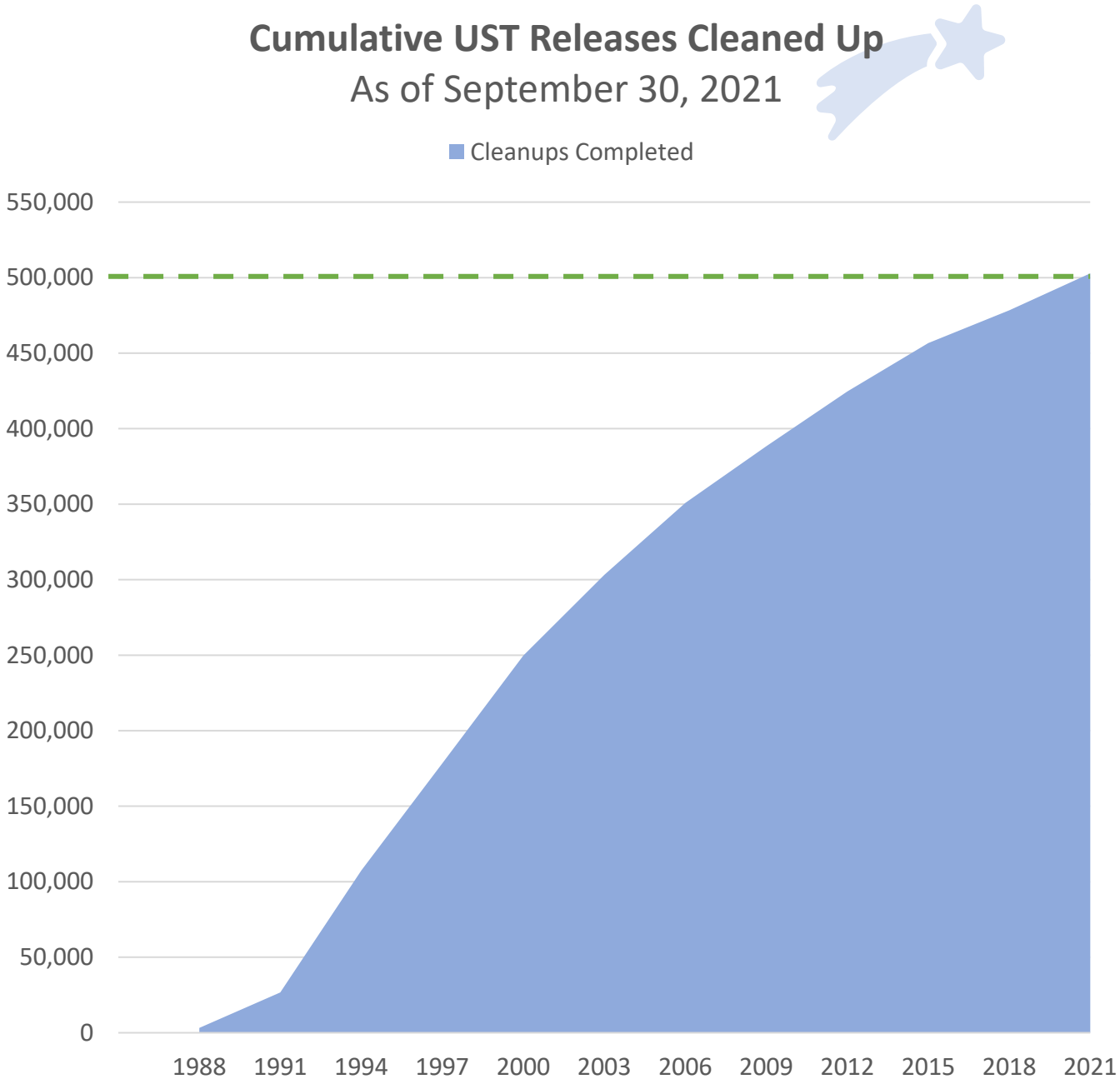
Region 5 Leaking Underground Storage Tank (LUST) Backlog (A3) Projects

EPA OUST, EPA Region 5, &
Michigan EGLE and Illinois EPA

Over **500,000 cleanups completed** means almost 90% of UST releases have been cleaned up



Thank you to our state, tribal, territorial, and industry partners. Reaching this milestone was possible because of your dedication and commitment, and we look forward to continuing to work with you!



Michigan
LUST Backlog Analysis

- Over 8,000 open LUST sites
- Old State Fund – ended June 1995
- Restarted State Fund in 2016 – new releases covered
- State Fund Analysis doesn't address most LUST sites
- US EPA R5 interest in improving understanding of regional challenges
- Michigan was selected by OUST and R5 management for special emphasis project (A3 project)
- Work started in 2020

Illinois
LUST Backlog Analysis

- Over 5,000 open LUST sites
- Working on LUST backlog through state fund soundness
- US EPA R5 interest in improving understanding of regional challenges
- Illinois was selected by R5 management for special emphasis project (A3 project)
- Work started in 2021

Why the projects were chosen

- Large contribution to national LUST backlog-Top 5 among states
- Opportunity to influence national LUST RAU
- Lack of understanding on characteristics of state LUST backlog

Approach

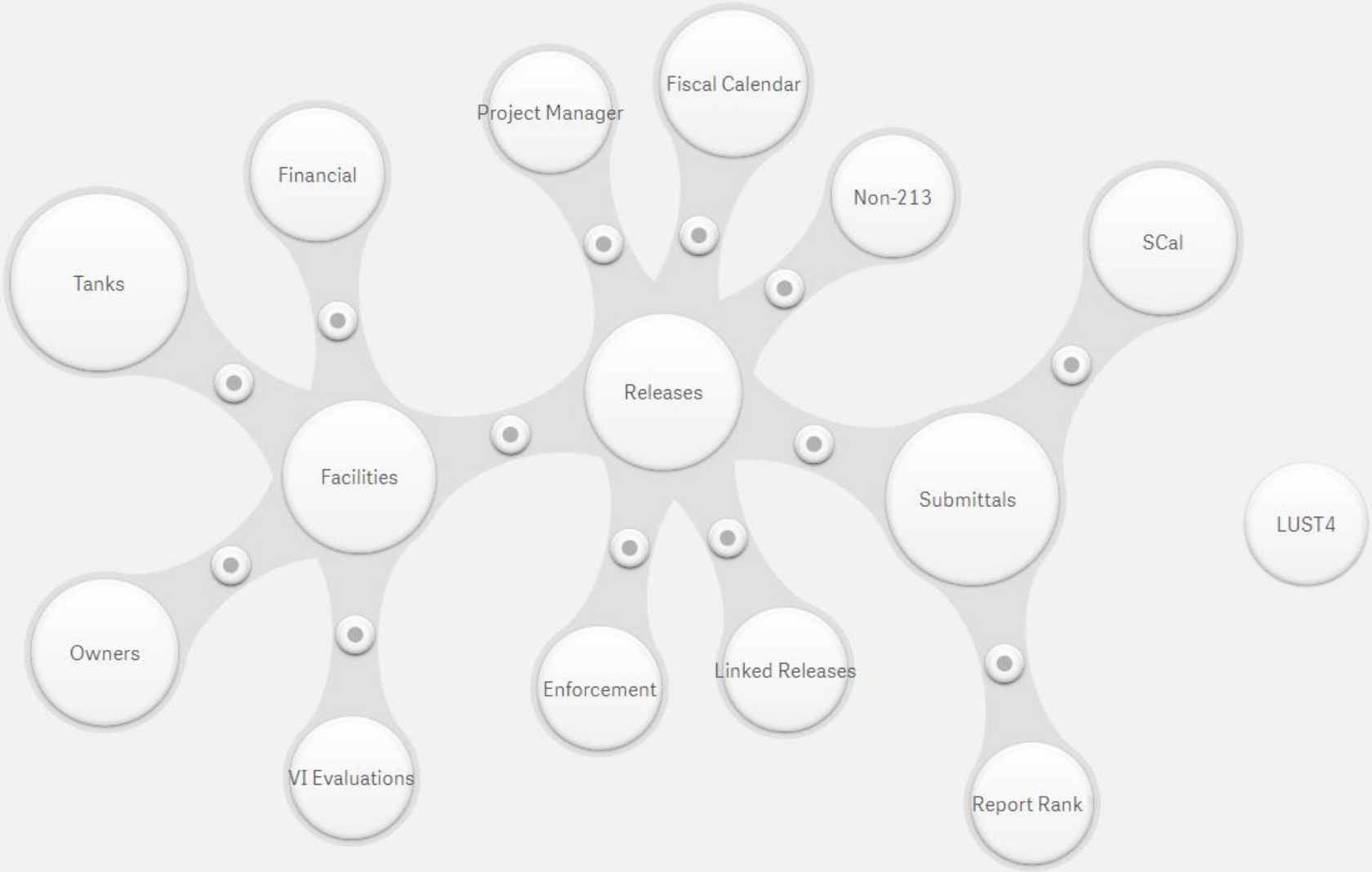
- Discuss need for study with states and get buy-in
- Regular collaboration meetings between EPA and States
- Discuss data, review analysis, and ask questions
- Develop data tools to identify corrective action targets

Central Questions

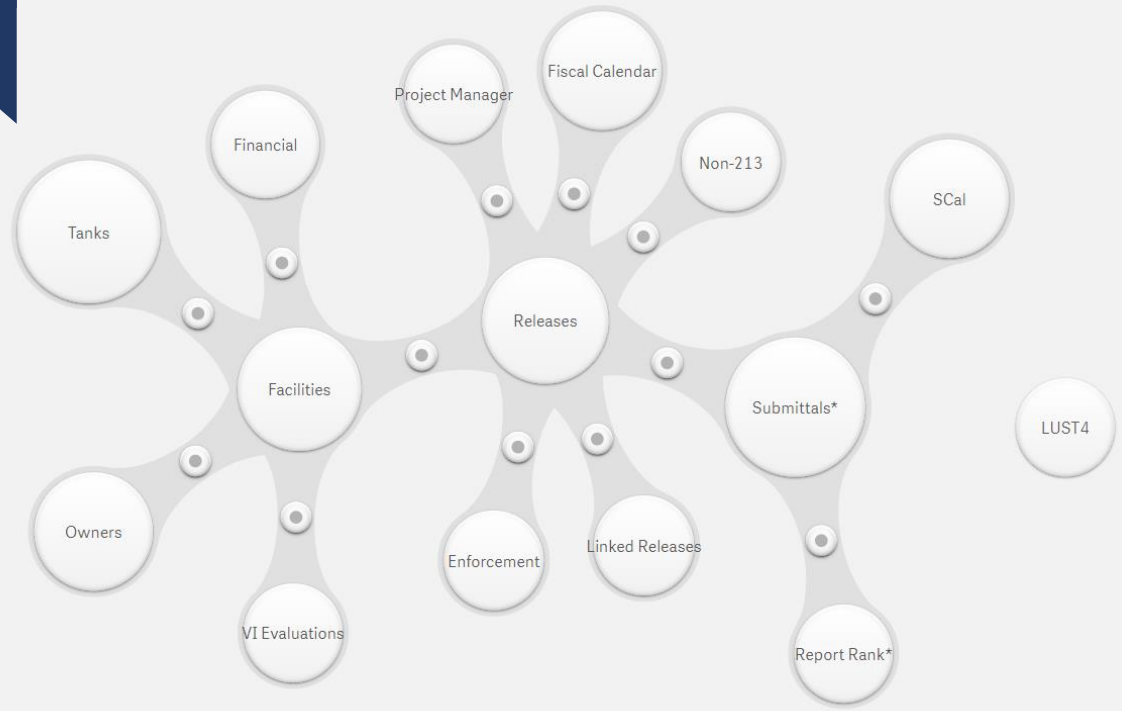
- Why are there stalled sites and what are their characteristics?

  (age, risk level, activity level, funding source)
- Can data analysis help group open releases?
- Can groupings inform strategies to address issues?
- Ask states to address key findings by committing to strategies to address issues

Qlik Data Model

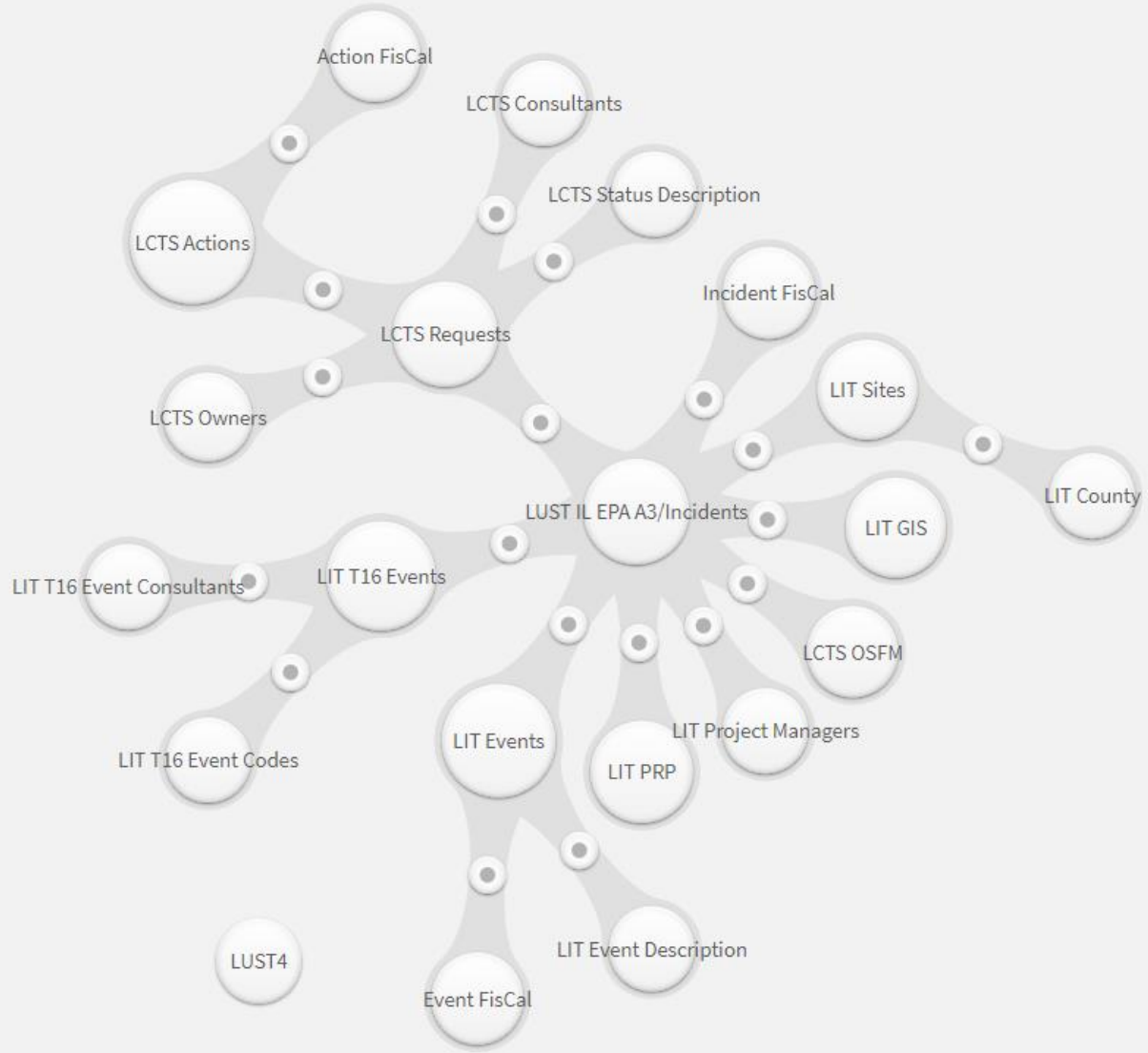


Michigan Analysis vs. Illinois Analysis



MI UST/LUST Universe

IL LUST Universe



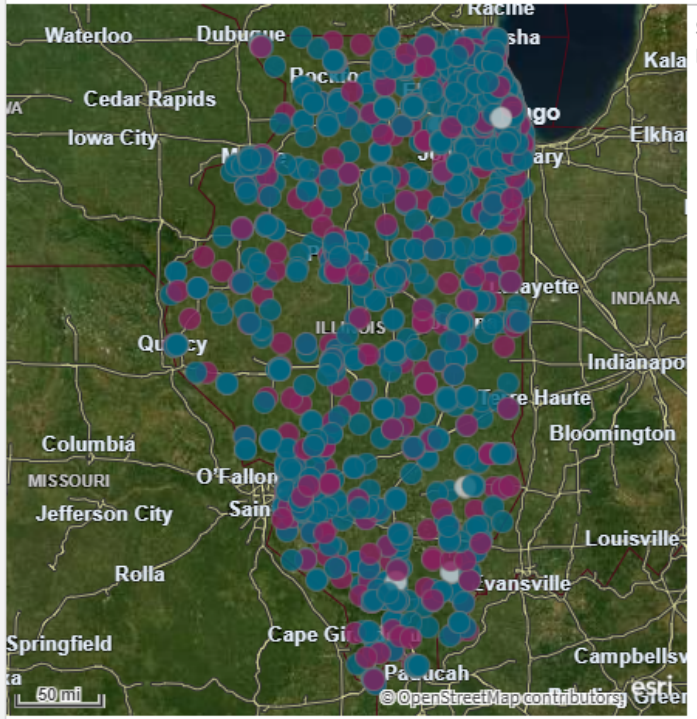
Dataset Comparison

Analysis	Source Tables	Total Records	Tables Loaded	Records Loaded
MI EGLE	25	424,969	16	257,995
IL IEPA	45	1,172,490	32	1,068,086

Capabilities: Geospatial, Timeseries, Aggregation

Leaking UST Incidents

LUST sites in IL *

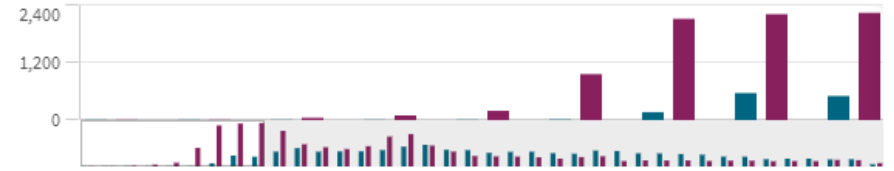


Site Name
Point layer
Leak Status
Closed
Open

* Currently showing a limited data set.

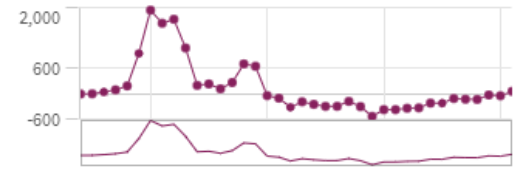
Total Sites	Total Open Sites	Net Backlog Contribut...	Still Open	Non LUST + Sect 57 5G	Pre 74 Exempt	Total Releases	Total Closed	NFA/NFR	SRP/NFR	NFA & SRP	Date Closed Unknown
22,590	4,309	5,375	5,375	3,501	400	26,102	20,727	19,838	929	69	13

New Releases and Closures (NFA/NFR, SRP, Pre 74)

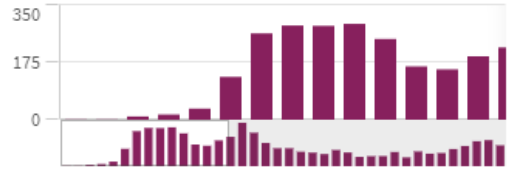


Release Status
Milestones
Incident Closed

Release backlog contribution by fiscal year



Currently open sites by FY date of release



Distribution of sites by number of open rel...

Distribution of total open releases by county

IL LUST4 Summary Report

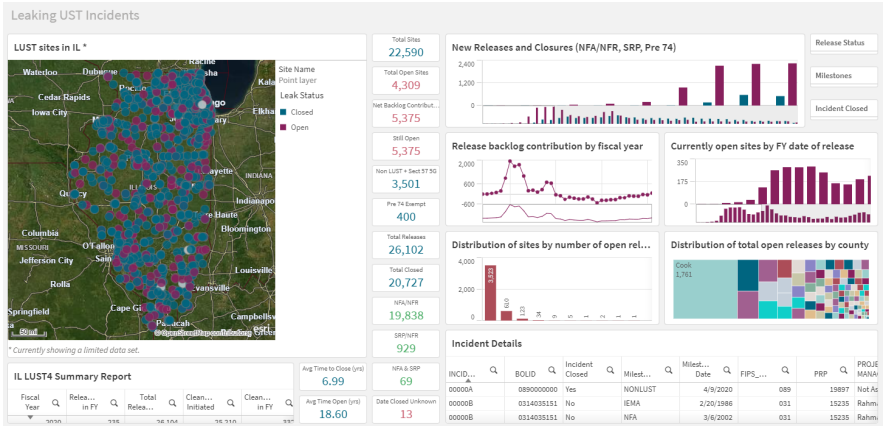
Fiscal Year	Relea... in FY	Total Relea...	Clean... Initiated	Clean... in FY
2020	235	26,104	25,210	33

Avg Time to Close (yrs)	Avg Time Open (yrs)
6.99	18.60

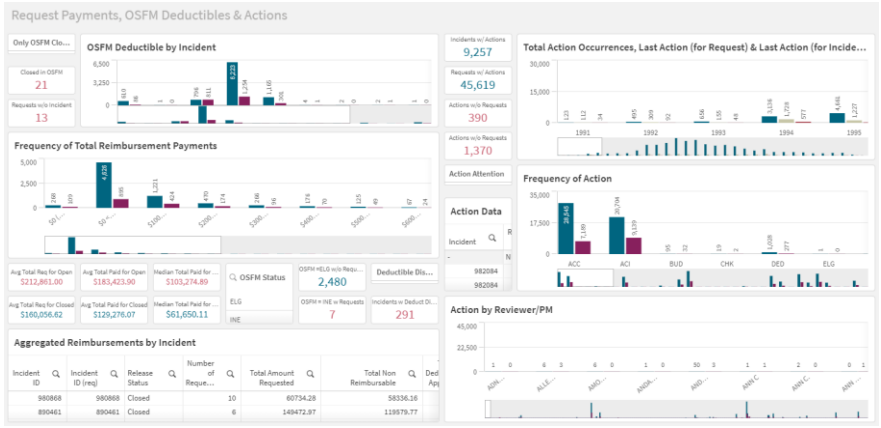
Incident Details

INCID...	BOLID	Incident Closed	Milest...	Milest... Date	FIPS_...	PRP	PROJE MANA
00000A	0890000000	Yes	NONLUST	4/9/2020	089	19897	Not As
00000B	0314035151	No	IEMA	2/20/1986	031	15235	Rahm
00000B	0314035151	No	NFA	3/6/2002	031	15235	Rahm

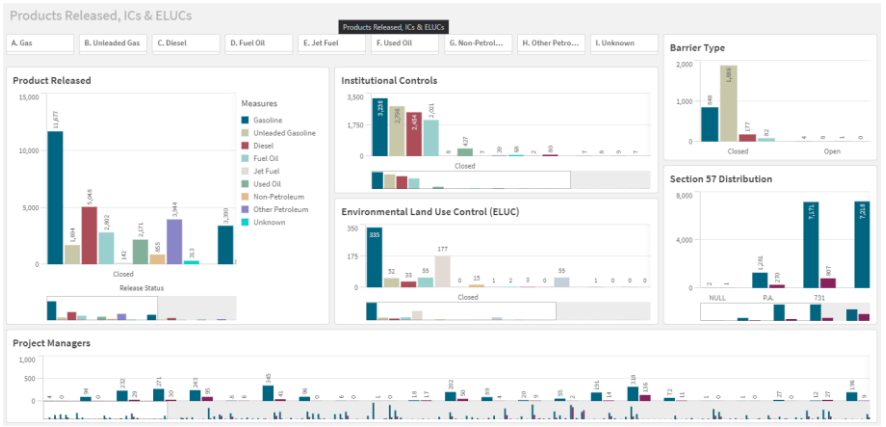
Data Exploration and Cross Examination



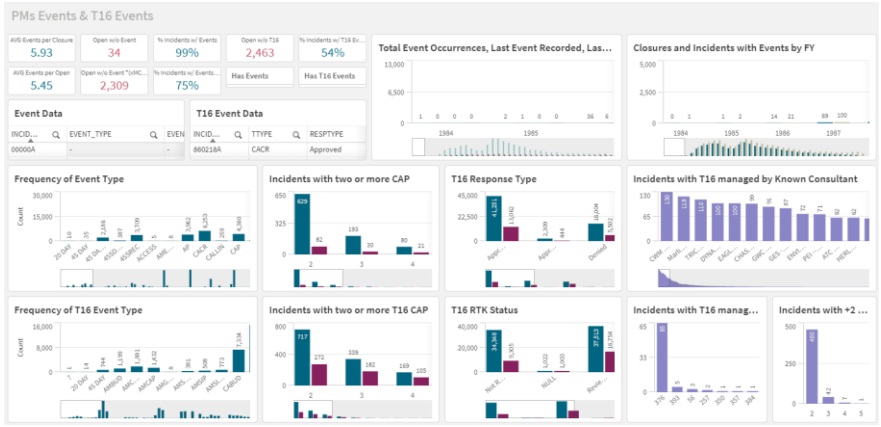
Open Universe and Geospatial Distribution



Financial Reporting



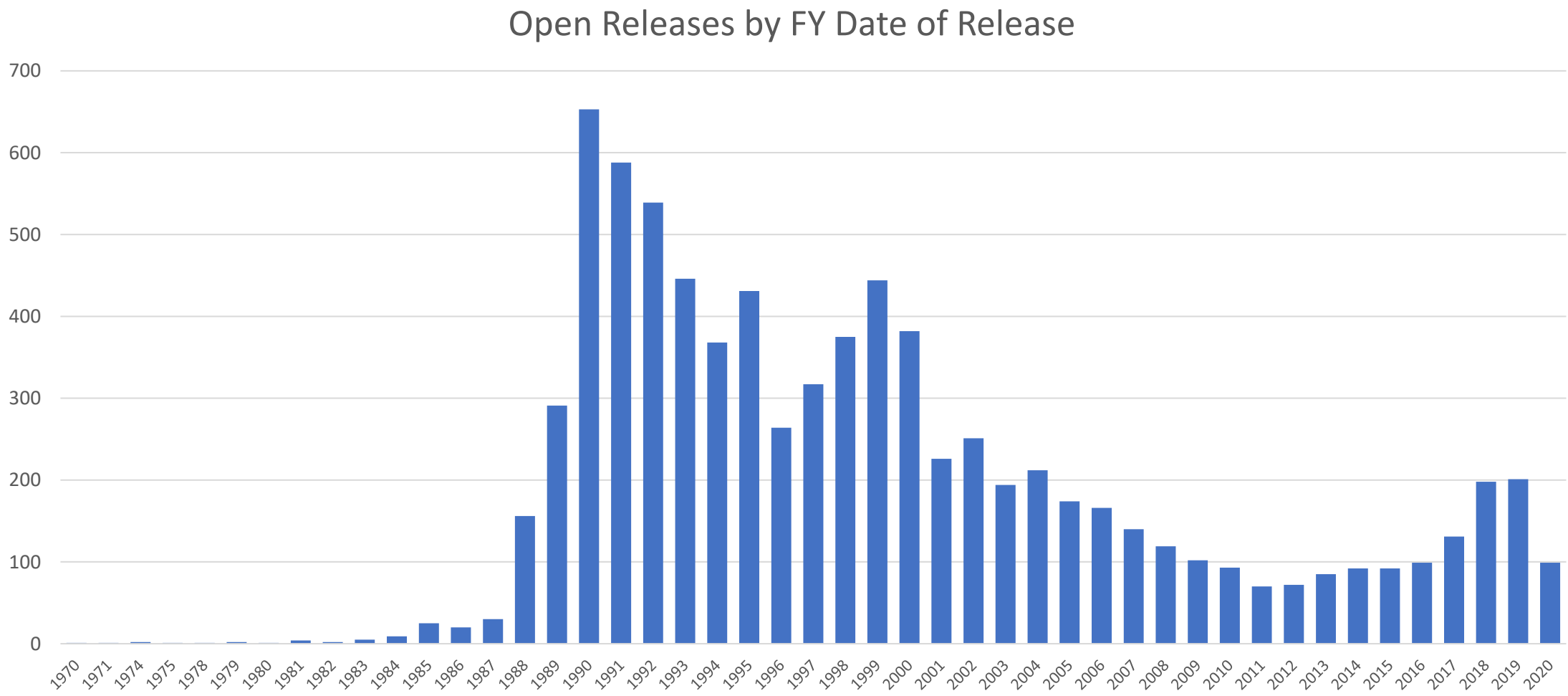
Release details and Remedies in Place



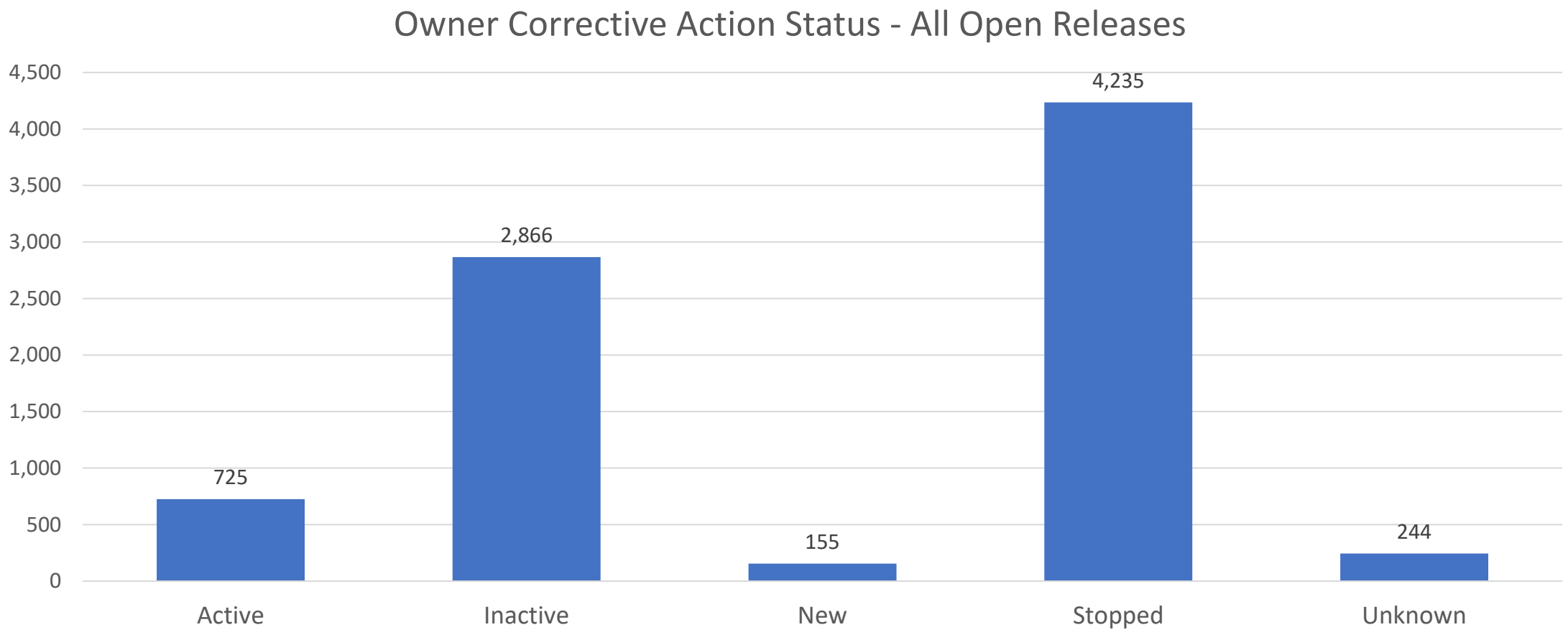
Corrective Action Reporting

Michigan
Key Findings

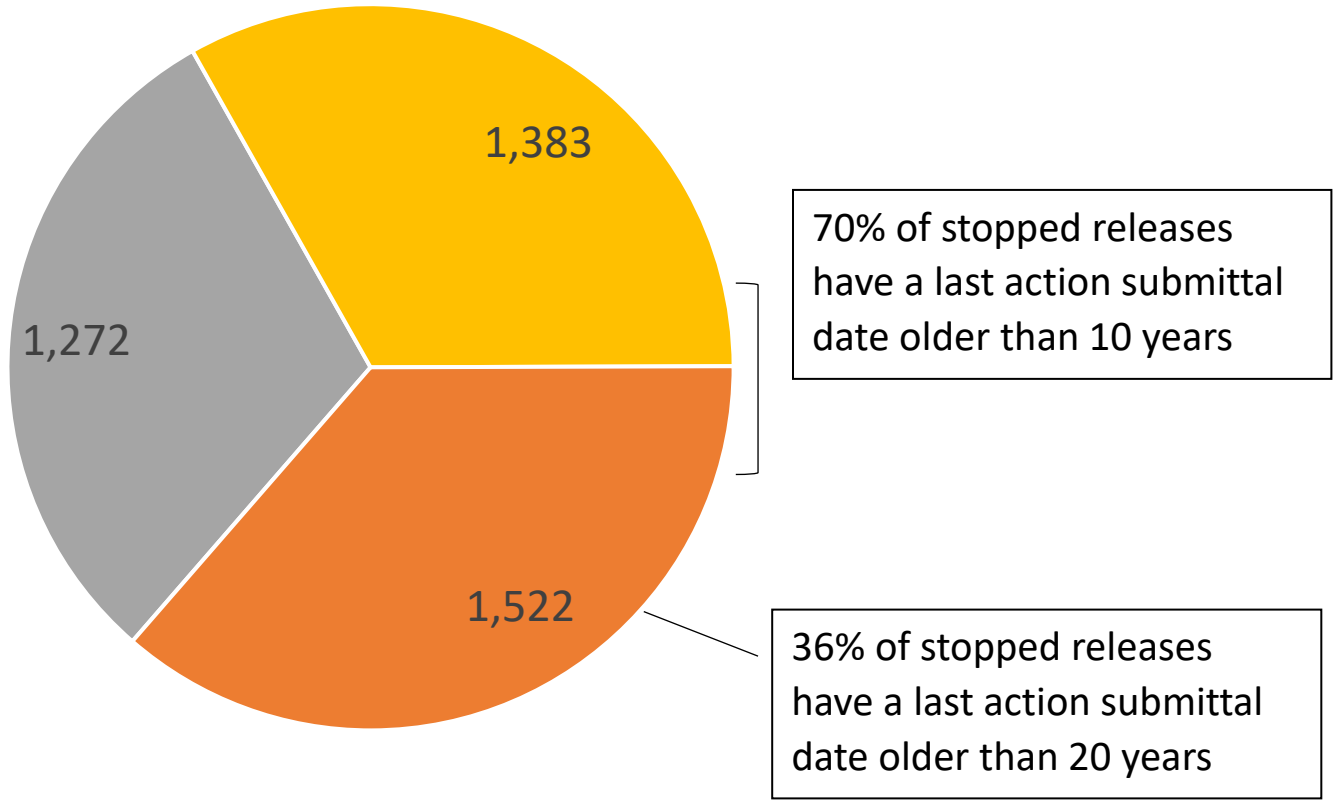
54% of state's LUST backlog is at least 20 years old



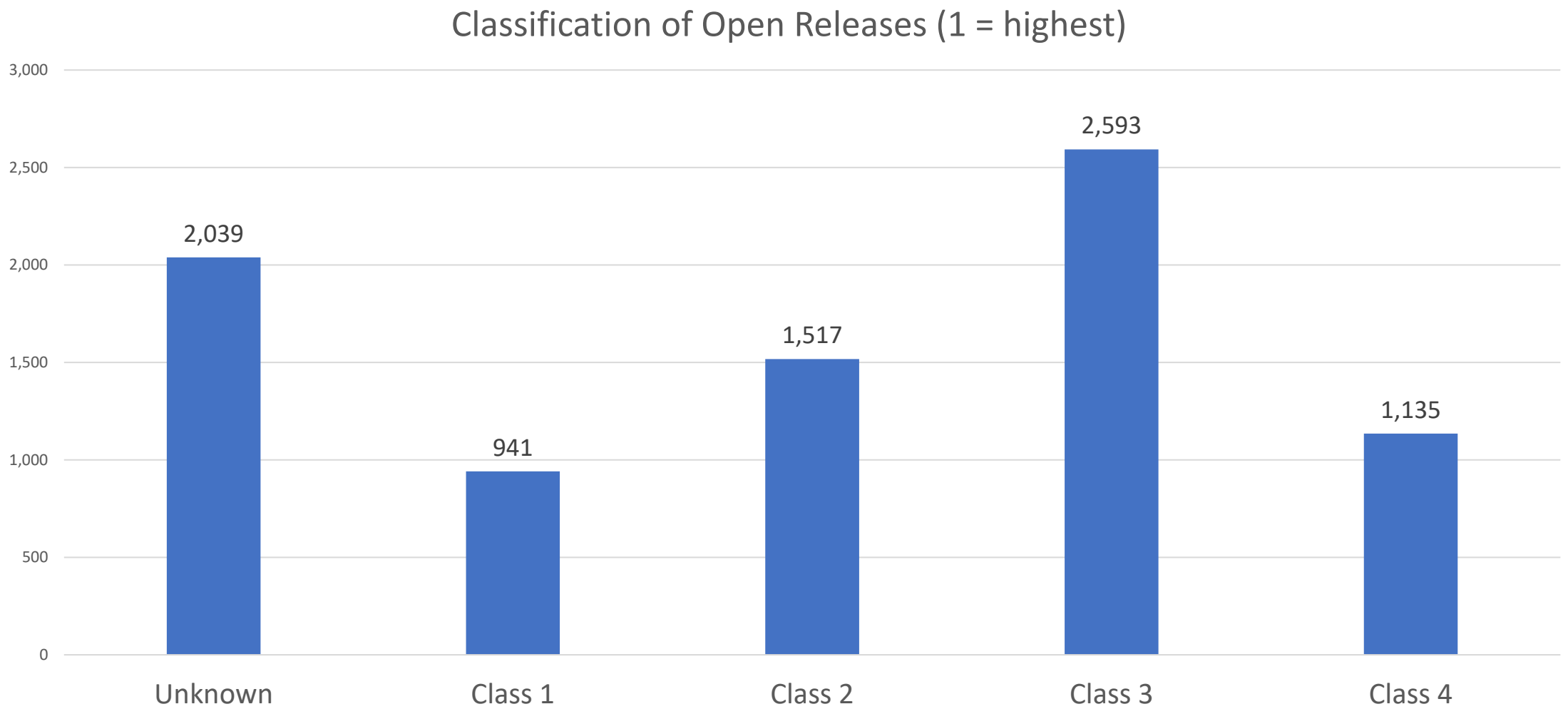
86% of open releases have stalled corrective action



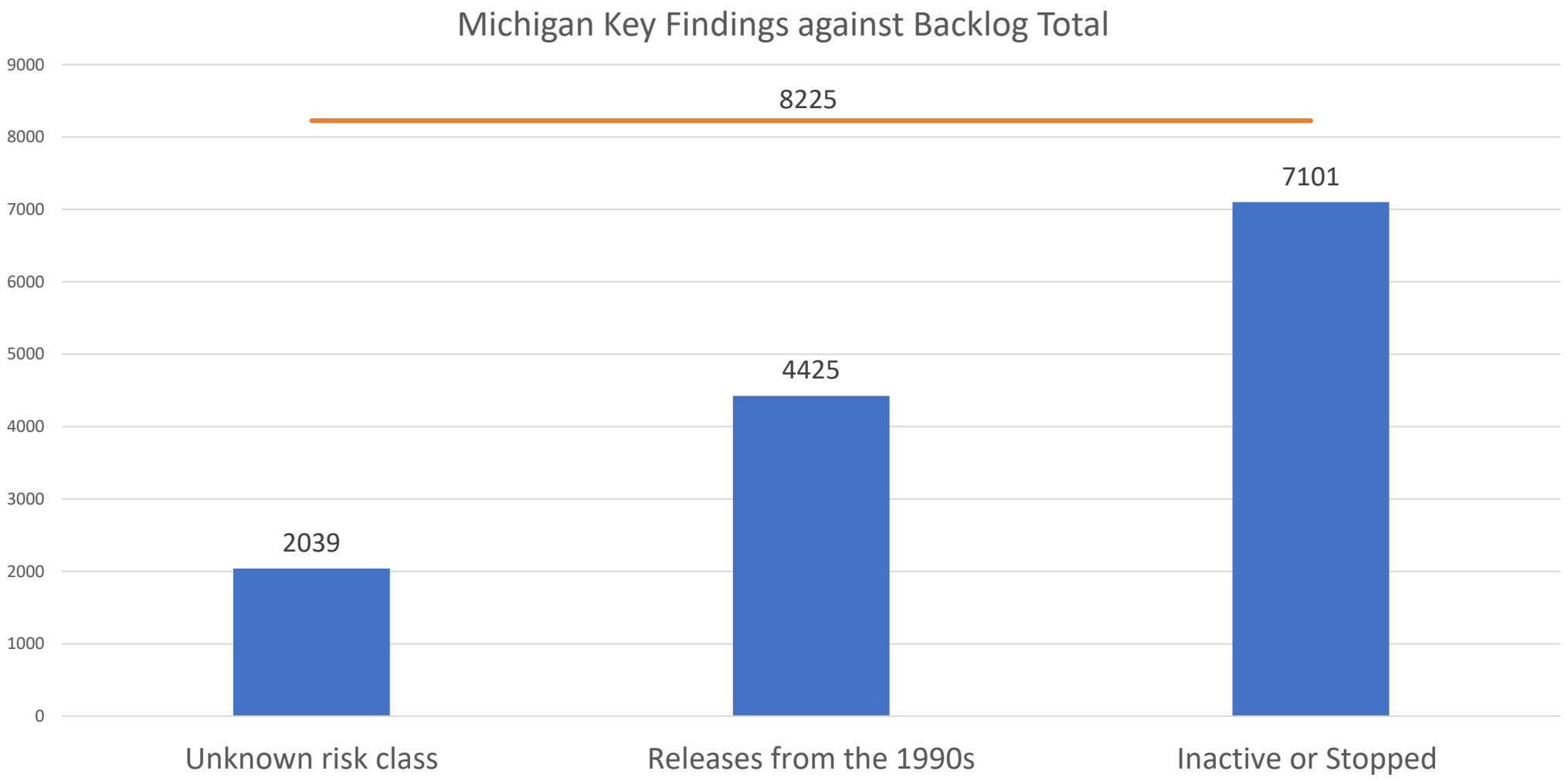
70% Stopped CA Reporting for more than 10 years



25% of open releases are of Unknown Risk

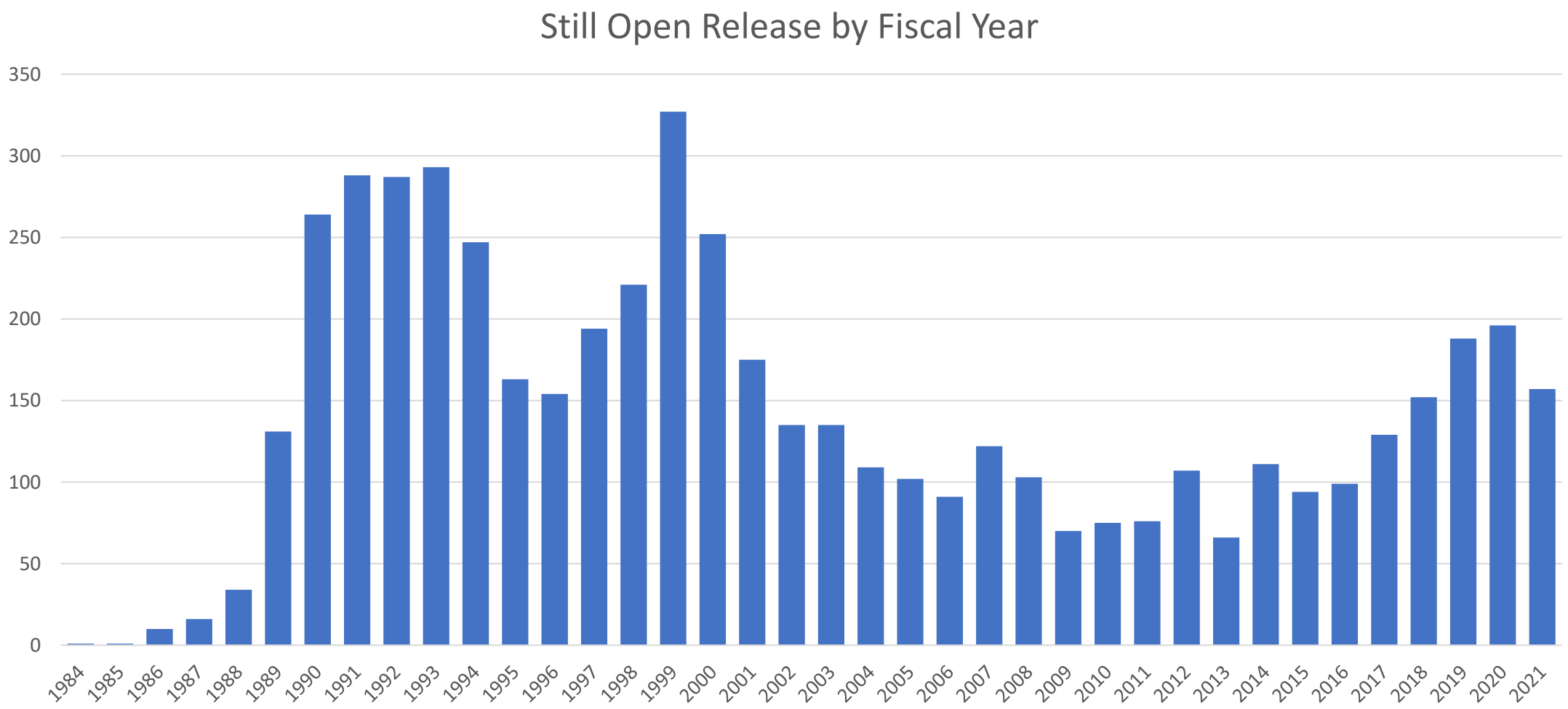


Michigan’s Open Universe Targets

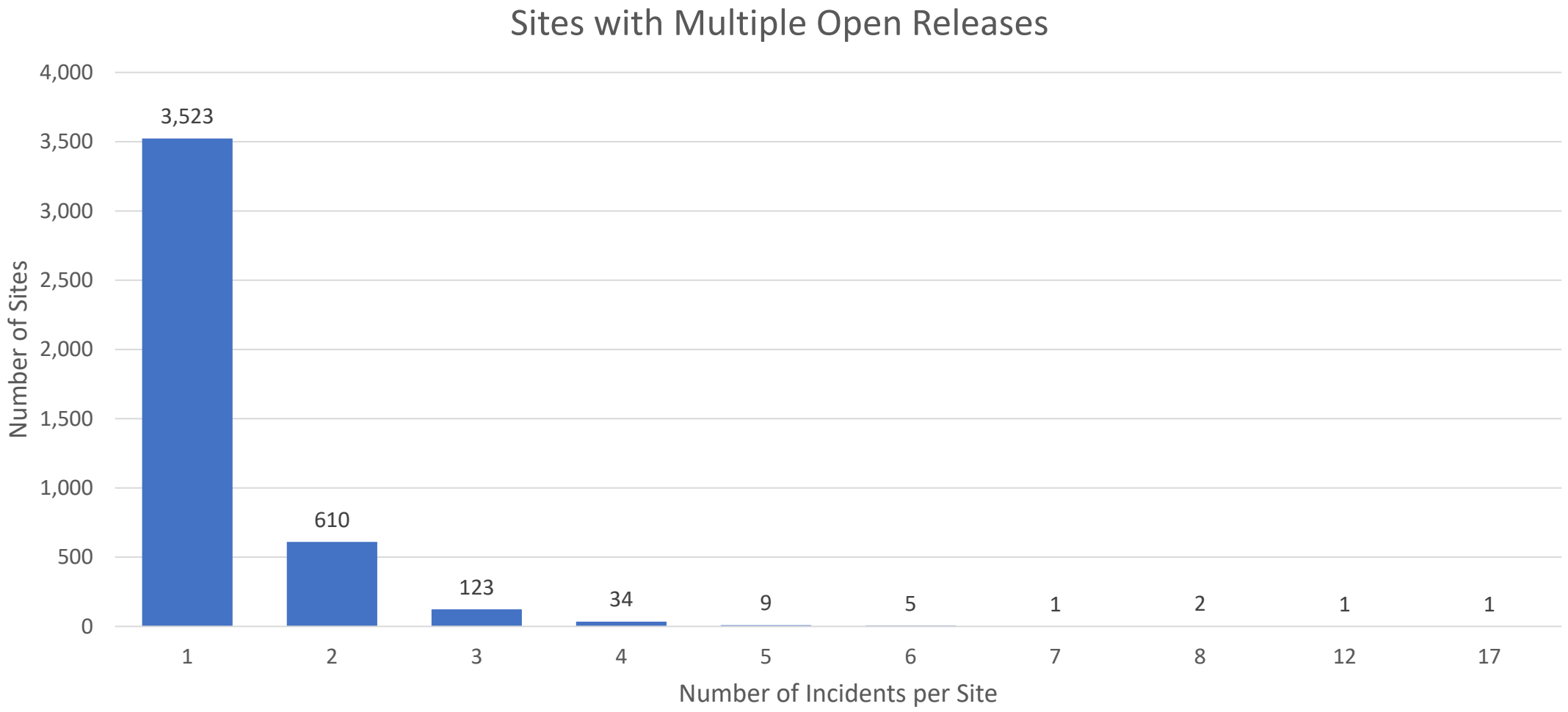


Illinois
Key Findings

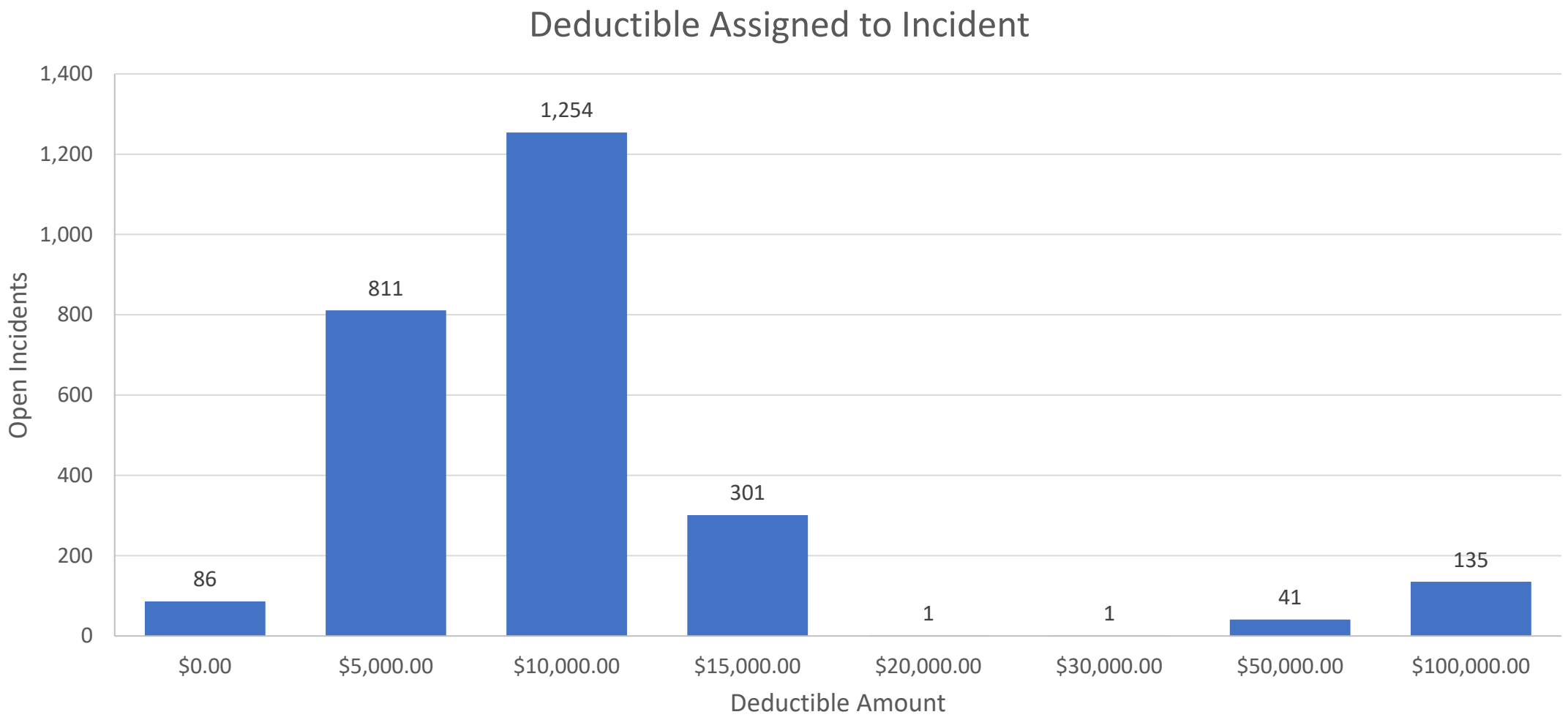
Distribution of Open Incidents in Illinois



Illinois sites with multiple open releases



Open releases in Illinois with state fund deductibles



Questions?

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MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

LUST Sites Backlog Evaluation and Strategy

Joshua Mosher, Acting Director
Remediation and Redevelopment Division
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Program Overview

- Underground Storage Tank Regulations (Part 211)
  - Administered by State Fire Marshal, Licensing and Regulatory Affairs
    - Registration of USTs
    - Financial responsibility
    - USTs inspections
    - Release reporting

Program Overview

- Leaking Underground Storage Tanks (Part 213)
  - Incorporates RBCA ASTM standards
  - Tier 1 RBSLs same as state environmental remediation cleanup criteria
  - Owner/Operator Requirements
    - Release reporting (24 hours)
    - Initial actions (immediate)
    - Initial Assessment Report (180 days)
    - Final Assessment Report w/ corrective action plan (365 days)
    - Closure Report upon completion of corrective actions

Program Overview

- Underground Storage Tank Corrective Action Funding (Part 215)
  - Environmental protection regulatory fee
    - 1 cent per gallon of refined petroleum sold for resale in the state
    - Generates over $50M per year
  - Underground Storage Tank Cleanup Fund
    - Receives the first $20M
  - Refined Petroleum Fund
    - Receives the balance, approximately $30M to $35M

Program Overview

- Underground Storage Tank Cleanup Fund
  - Administered by MI Underground Storage Tank Authority within EGLE
  - Provides financial responsibility to UST Owners
  - Provides reimbursement for corrective actions to address releases
- Refined Petroleum Fund
  - $5M to product inspection (weight & measures, fuel quality)
  - $3M for UST inspections
  - Remainder ($20M plus) to perform correction actions by EGLE RRD, including up to $5M for brownfield grants and loans at LUST sites

Initial Conclusions

- Over half of all open releases over 20 years old
- Many stalled or inactive sites (>80%)
- Sizeable portion with unknown risks (25%)

Areas of Focus

- Stalled/Inactive sites
- Sites with unknown owner/operator status (orphan?)
- Sites with unknown risk
- Multiple release sites

Goal and Strategies

- Goal: Reduce backlog of 8000 plus open releases by 25% over 5 years (FY'22 – FY'26)
  - Program clarity
  - Better risk classification
  - Consultant review of Part 213 implementation consistent with RBCA
  - Pilot projects to enhance triage of sites and increase use of contractors for closure
  - Engaged with petroleum industry regarding evaluation of historic site data collection to enhance data driven decision making
  - IT Improvements

Program Clarity

- Consistent expectations for staff and regulated community
  - Dozens of retirements and personnel changes (loss of hundreds of years combined experience)
  - Updated 24 internal procedures
  - Conducted 44 staff trainings
  - Updated or created 12 external guidance documents and checklists to assist in meeting program requirements
  - Conducted 13 external webinars and training events

Classification System

- Many sites from the 1990s that are still open were recorded as high risk or unknown
- Do not have good information on how accurate the classification is today
- New procedure for risk classification provides more direction and a worksheet to help consultants and staff correctly classify the risk
- Developed new risk worksheet that will be required with entry of new report submittals

Program Review

- Contracted with RBCA consultant
  - Identify any obstacles to program implementation and make recommendations to achieve goals for closures
    - Review regulations, program guidance, policy and procedures
    - Process map program
    - Perform site reviews
    - Identify roadblocks, pinch points, implementation issues

Old and Stalled Sites

- Triage
  - Increase use of statewide program
  - Hire contractors to perform limited site data collection as determined by state
  - State evaluates data and categorizes sites (Close? Further work?)
- Pilot Studies
  - Hire contractors to perform file reviews (26 out of 81 reviews started)
  - Contractor determines data collection needs
  - Contractor provides corrective action work plan necessary for closure
- Hire contractors to perform as full-service site project managers under EGLE oversight

Triage

- 1,497 releases have been evaluated under the program since 2013.
- 508 of those releases have been closed (34%)
- 989 of the releases in the triage program remain open and require further work.

- 12% of Michigan's backlog (currently open releases) are included in the triage program (989/8,225). 60% of those releases occurred between 1990-1999 (590/989).

- Most (65%) open releases in the triage program are considered to have risk present but not immediate (639/989). Only 16% of triage releases are considered to have risk present and immediate (161), 54% of which are from the 1990s.

Stakeholder Engagement

- Consolidation of site investigation data from state-funded and owner/operator corrective actions
- Evaluation of data to determine trends and common risks drivers
- Data driven to make better risk decisions
- Program improvements
  - PVI
  - Presence of NAPL

IT Improvements

- Database consolidation
- Improve release inventory information
- Classification system
- Electronic submittals

Questions?

Michigan Department of

Environment, Great Lakes, and Energy

800-662-9278

Michigan.gov/egle

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EGLE

ILLINOIS BACKLOG (A3) PROJECT

GREG DUNN, ILLINOIS EPA
NOVEMBER 9, 2021

ILLINOIS LEAKING UST PROGRAM OVERVIEW

- Tax of $0.011 per gallon is deposited into the Underground Storage Tank Fund
- Fund is used by Illinois EPA, Office of the State Fire Marshal, Illinois Department of Revenue, and Office of the Comptroller to administer activities related to the UST Fund
- Only money appropriated by the legislature can be used to reimburse claims, pay for salaries or contractual services
- Appropriation required each year and money does not carry over
- Currently $40.1 million is allocated only for reimbursements
- Since 1989, Illinois EPA has paid over $1.3 billion for eligible costs submitted in reimbursement claims
- Fund expires in 2025, which will need to be renewed

ILLINOIS LEAKING UST PROGRAM OVERVIEW

- Incident is reported to the Illinois Emergency Management Agency (IEMA)
- Eligibility to access the UST fund is determined by OSFM
- Owner/operator hires a consultant to complete work under the Illinois EPA Leaking UST regulations
- $5,000 deductible is required for all new releases and is deducted from first reimbursement claim for eligible expenses
- Consultant submits all the required reports and reimbursement claims to Illinois EPA for review - $1.5 million cap per site
- Progress of site determined by owner/operator and consultant

ILLINOIS LEAKING UST PROGRAM OVERVIEW

- UST Fund began in 1989 to assist owners/operators in paying for investigation and remediation of leaking USTs
- Regulations adopted in 1994 (Part 732) and updated in 2006 (Part 734)
- The updated regulations require comparison of concentrations detected at the site to industrial/commercial, use of a local groundwater ordinance if applicable, use of an on-site groundwater use restriction, and the use of site-specific remediation objectives.
- Reimbursement for eligible costs only (must be reasonable)

ILLINOIS STATISTICS

- 18,392 tanks in service (per OSFM) and 34% are 30 years or older
- 29,898* incidents at 22,748 sites
- 24,702* incidents closed at 19,937 sites
- 5,196 incidents open at 2,811 sites
- Average number of new incidents per year is 357 for last 10 years (438 this FFY)
- Conclusion – Large number of new releases each year with a large backlog

* - includes all types of releases not just Federally Regulated Fund Eligible (FRFE)

INITIAL CONCLUSIONS FROM US EPA ANALYSIS

- Almost 50% of the open incidents are from the 1990's
- 181 sites with 3 or more incidents – covering a total of 647 open incidents
- 13 consultants have 1,162 open incidents out of the 5,197 (22%)
- 19 owner/operators with more than 10 open incidents covering 320 open incidents
- 2,463 incidents or 54% of open incidents have not submitted any required reports per the regulations
- One company had over 300 open incidents

AREAS OF FOCUS

- Sites where no information was submitted
- Owner/operators with excessive amount of open incidents
- Consultants with a significant number of open incidents
- Sites where no information has been received for over 10 years
- Sites with many open incidents
- Sites with denied Corrective Action Completion Reports (closure reports)

STRATEGIES DEVELOPED BY ILLINOIS EPA PRIOR TO A3

- Review all open incidents
- Review all sites with denied Corrective Action Completion Reports (300 incidents)
- Review and send information request letters to oldest incidents
- Review files to determine if sites could be closed quickly – paperwork exercise or limited sampling
- Review other program sites (Site Remediation Program or Federal Site Remediation Section) to determine if closure occurred and not relayed to Leaking UST Section
- Establish an Abandoned Tank Program

PROGRESS OF STRATEGIES

- Determined to send Information request letters to 2,180 incidents by 12/31/21
  - 8 staff volunteered for the Backlog Diminution Team (BDT)
  - As of October 31, 2021, 1,523 incidents a received letter and 307 were closed (20%)
  - During last 10 weeks of FFY 21, 313 letters mailed, 61 were closed (19.5%)
- Identified 14 sites to work on with our Office of Site Evaluation to complete limited sampling, 8 have already been sampled
- 2 of those sites received No Further Remediation Letters, one close to closure
- Removed abandoned tanks at two locations, preparing to remove tanks at two more locations

PROGRESS OF STRATEGIES

- Using information so far from data review of Illinois EPA and OSFM databases by US EPA
  - 11 incidents at Scott Air Force Base – closed out 3 after discussion with base personnel
  - 17 open incidents at Great Lakes Naval Training Center – December meeting
  - 6 open incidents identified for the East St. Louis School District – EJ area
  - 3 open incidents at Springfield Public Works – less than 1 mile from IEPA office
  - Identified 54 sites for contractor to review and determine next steps

CONCLUSIONS IN ILLINOIS

- Simple queries can be completed by Illinois EPA staff
- Illinois EPA does not have the staff to complete complex queries
- Illinois EPA does not have the staff to complete "deep dives" into the data
- Combining OSFM and Illinois EPA data provided some anomalies to address
- Aided in a database cleanup
- Additional findings expected when full data review is completed

OVERALL CONCLUSIONS

- Real benefit to completing specific backlog studies
- Recommend obtaining management support since State resources are required
- Data analysis for MI and IL used Qlik (data analysis and visualization tool)
- Often download query information into Excel
- Other tools could be very useful as well
- Team recommends State and EPA collaboratively look at the data incrementally
- Again, real benefit to study and contact any of the presenters if you have questions

QUESTIONS?

Contact Information

- Illinois EPA - Greg Dunn – Greg.Dunn@Illinois.gov – 217-785-2359
- Michigan EGLE – Josh Mosher – Mosherj1@Michigan.gov – 517-284-5134
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Thank you!

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For contacts and information about the Tanks Subcommittee visit: https://astswmo.org/tanks/

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