

Waste Site Cleanup Advisory Committee Meeting

September 23, 2021

- The meeting is being recorded.
The recording will be available on MassDEP's YouTube channel, www.youtube.com/MassDEP/
- Closed Captioning is available – look for the option at the bottom of your screen.
- Advisory Committee members – please mute yourself during presentations to minimize excess noise. You may unmute yourself for questions/discussion.
- During open discussion, audience members may request to be unmuted by raising their hand.
- Please submit questions through the Q&A option. Questions can be upvoted for greater prominence. Q&A questions will be read aloud for discussion. Anonymous questions are ok.
- CHAT should be used for questions about the meeting... technical problems, speaker volume, etc...
- Please be patient during any (possible) technical glitches.



Waste Site Cleanup Advisory Committee Meeting

September 23, 2021

Agenda (*times are always approximate*)

- 9:00 Updates on BWSC operations, PFAS sites
- 9:30 More updates – AEPMM telemetry, MCP amendments, CAM
- 9:45 Discussion about capacity issues and options for soil from disposal sites currently going to landfills (“contaminated” soil, concentrations > RCS-2)
- 10:15 Year-in-review program stats

Other items – Questions - Discussion



Updates

- Operations (COVID, Office, Staffing)
- PFAS Sites
- AEPMM Telemetry
- MCP Amendments
- CAM



MassDEP Operations in FY2022

Focus on Environmental Justice, Equity & Diversity

- **New Mission Statement**

MassDEP's mission is to protect and enhance the Commonwealth's natural resources - air, water, and land - to provide for the health, safety, and welfare of all people, and a clean and safe environment for future generations.

In carrying out this mission MassDEP commits to address and advance environmental justice and equity for all people of the Commonwealth; provide meaningful, inclusive opportunities for people to participate in agency decisions that affect their lives; and ensure a diverse workforce that reflects the communities we serve.

- **New Governor's Council on Environmental Justice**

- **Revised EOEEA Environmental Justice Policy**

- New definition of Environmental Justice Population
- Incorporates provisions of the 2021 Climate Law related to Environmental Justice

- **Requirement to perform Cumulative Impact Analysis**

- for certain categories of Air Permits as required by the 2021 Climate Law
- regulations to be proposed by MassDEP after robust stakeholder process



MassDEP Operations in FY2022

⚠ Notices & Alerts

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! MassDEP's office buildings are currently closed to the public. | Jun. 18, 2021, 12:01 am

Planning for and Implementing Long-Term Hybrid Work Model

- Regional Offices to Re-Open (*as the Pandemic allows... November?*)
- Boston Office to MOVE to 100 Cambridge Street in late Spring 2022
- Paper files becoming electronic - electronic files moving to Cloud
- Purchase & rollout of new technology to support our mission
- EIPASS updating of DEP data systems continues

FUTURE of WORK - MassDEP will (continue to) be an exciting, dynamic place to work with engaging, relevant projects, flexible schedules and a committed, diverse workforce. **APPLY NOW!**



Waste Site Cleanup Operations in FY2022 - PFAS



A tanker truck filled with gasoline crashed on Route 24, Fall River. Fire crews used foam to extinguish the truck fire. (January 27, 2014)

- <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#pfas-and-waste-sites->



Waste Site Cleanup Operations in FY2022 - PFAS

- “Normalizing” PFAS-related site work under the Massachusetts Contingency Plan, 310 CMR 40.0000.
 - Promulgated notification criteria & cleanup standards for soil and groundwater (December 2019)
 - Published PFAS Sampling Guidance (2018, revised 10/2020)
- Provided technical & logistical support to MassDEP PFAS-initiatives, including access to contract labs.
(more on this later)



Waste Site Cleanup Operations in FY2022 - PFAS

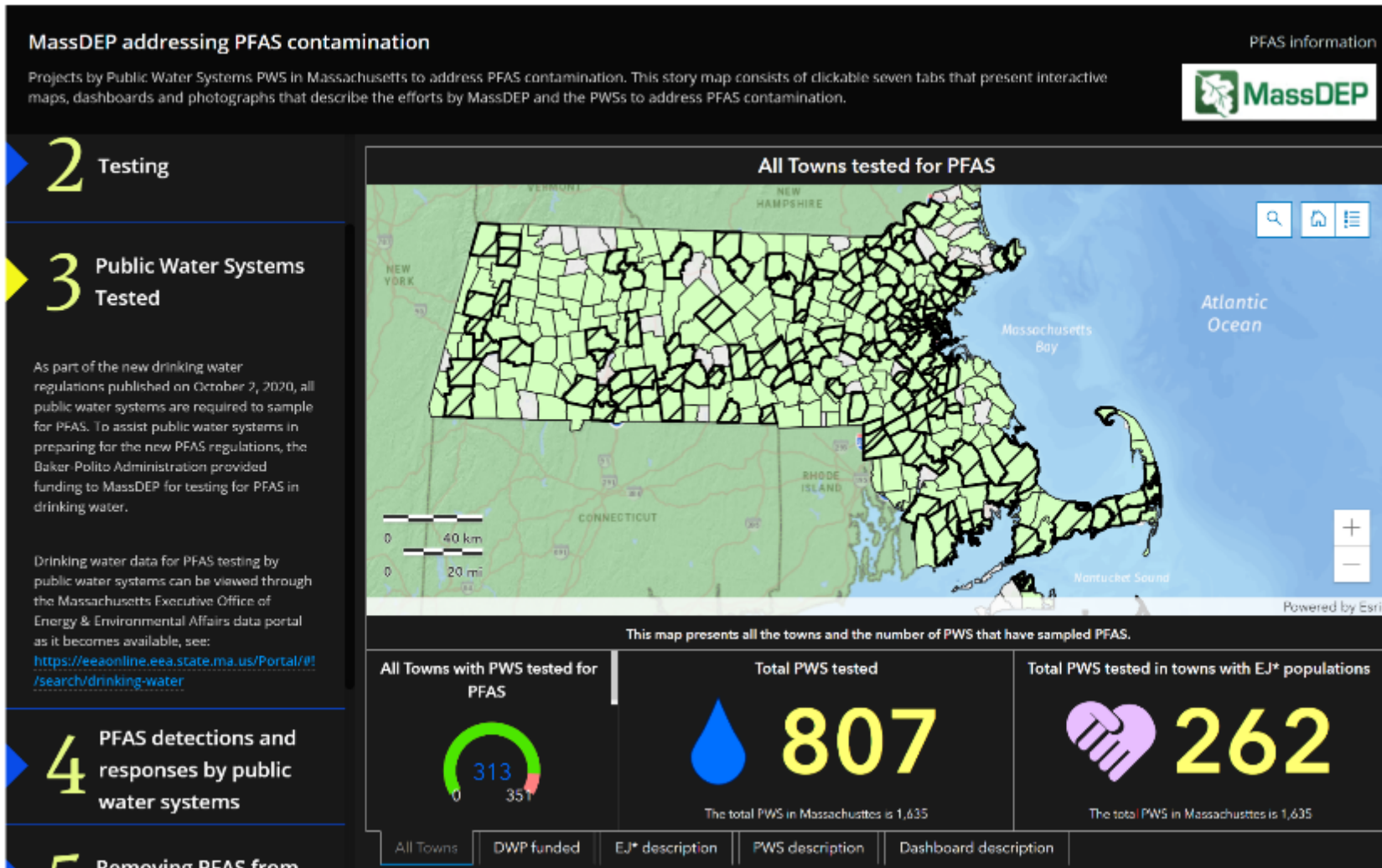
PFAS – Site Discovery & Cleanup

- Sites generally identified either:
 - PWS sampling finds problem, 21E source discovery works backwards to find a source (e.g., Barnstable Fire Training Academy);
 - Known sites start sampling for PFAS and find it (e.g., former Fort Devens); or
 - Property use indicates it is a potential source, *due diligence* sampling identifies PFAS problem (e.g., Martha's Vineyard Airport).
- Predominant sources (so far):
 - AFFF Firefighting Foam
 - Department of Defense (e.g., Joint Base Cape Cod; former Fort Devens; former South Weymouth Naval Air Station)
 - State/Municipal Fire Training & Incident Response (e.g., Massachusetts Firefighting Academy (Stow); Town of Princeton, Revere response to overturned gasoline tanker truck)
 - Airports (Martha's Vineyard, Nantucket, Barnes ANG Base)
 - Commercial/Industrial Sources (Hudson)
 - Unknown (as yet)...



Waste Site Cleanup Operations in FY2022 - PFAS

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#pfas-detected-in-drinking-water-supplies-in-massachusetts->



Sampling to comply with the MMCL.

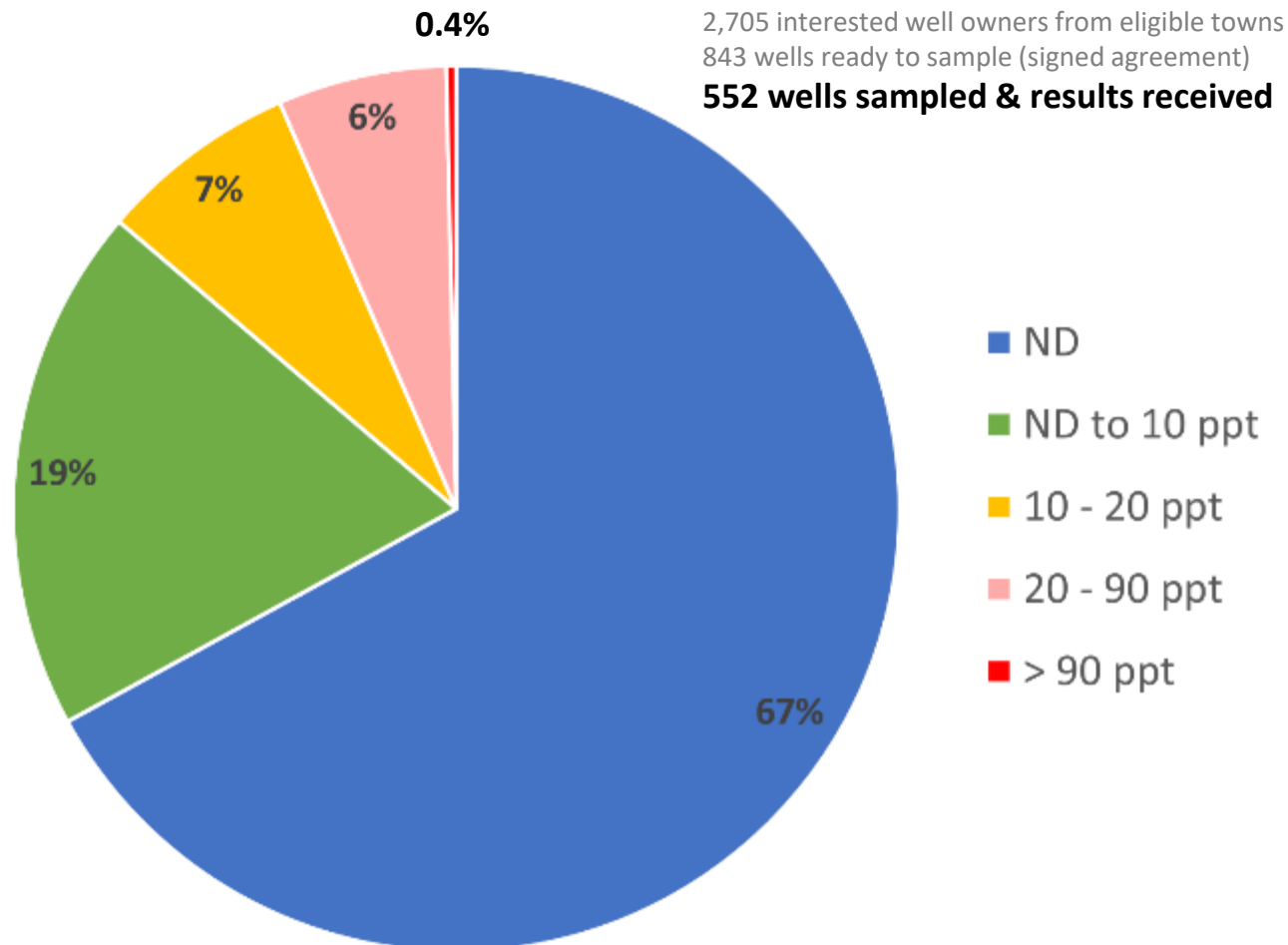
- DEP funding one round of PFAS sampling for each Public Water Supply.
- 97% of customers served by Community PWS have had their water tested. Of the supplies tested...
 - 86% residents had ND
 - 95% residents have <MMCL
- 71 PWS (Community and non-Comm) have had >MMCL at one point
- Waste Site Cleanup focus on source discovery



Waste Site Cleanup Operations in FY2022 - PFAS

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas-in-private-well-drinking-water-supplies-faq#pfas-testing-in-private-wells->

PFAS Private Well Sampling Program Results



Thursday, September 13, 2021 update

To help understand the presence of PFAS in Massachusetts, including concentrations and distribution.

- Over \$1M available for testing
- Focus on 86 Towns primarily (>60%) reliant on private wells
- Working with UMass Amherst & Lowell
- 94% Less Than the MCL
- DEP working with Homeowners with elevated PFAS levels
 - Very case-specific



Waste Site Cleanup Operations in FY2022 - PFAS

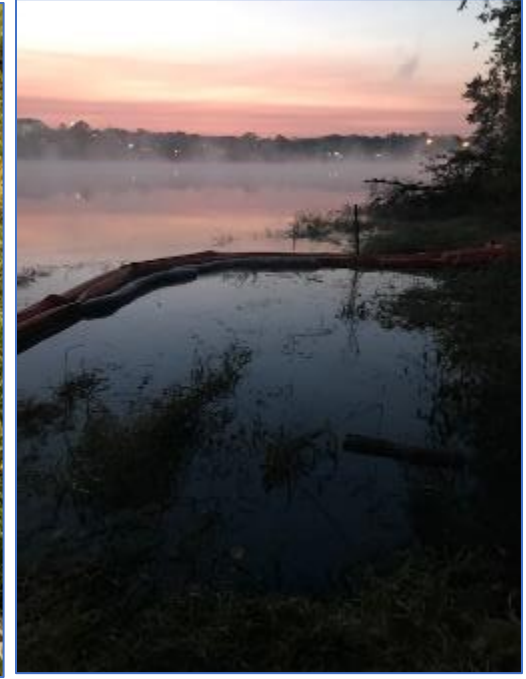
AFFF Takeback Program 2018 - present

- Partnered with the Department of Fire Services (DFS)
- ~200,000lbs from 75+ public safety agencies (~ \$213,000)
- 149,016 pounds (17,531 gallons) removed and disposed
- Partnered with CT DEEP to research
“Fluorine-Free” Foam
- Ongoing work with DFS



Bondi's Island landfill fire, Agawam (WERO)

- Fire began in the mulch at the composting operation and spread to logs & other woody debris
- Limited water supply and other factors resulted in the use of Class A fire fighting foam
- ER staff monitored run-off and determined foam appeared at a discharge point to the Connecticut River
- MassDEP ER contractors boomed the outlet and recovered foam with a vacuum truck until discharge ended.



Waste Site Cleanup Operations in FY2022 - PFAS

PARTICIPATING with Other DEP Programs Looking At:

- PFAS & Wastewater
- PFAS & Residuals
- PFAS & Surface Waters
- PFAS & Pesticides



Waste Site Cleanup Operations in FY2022 - PFAS

The Basic Questions Remain

- What's out there?
- Where did it come from?
- Who is being exposed?
- What can we do about it?

MassDEP is participating in the Legislature's **PFAS Interagency Task Force** efforts to address PFAS in Massachusetts in a thoughtful, consistent and protective way.



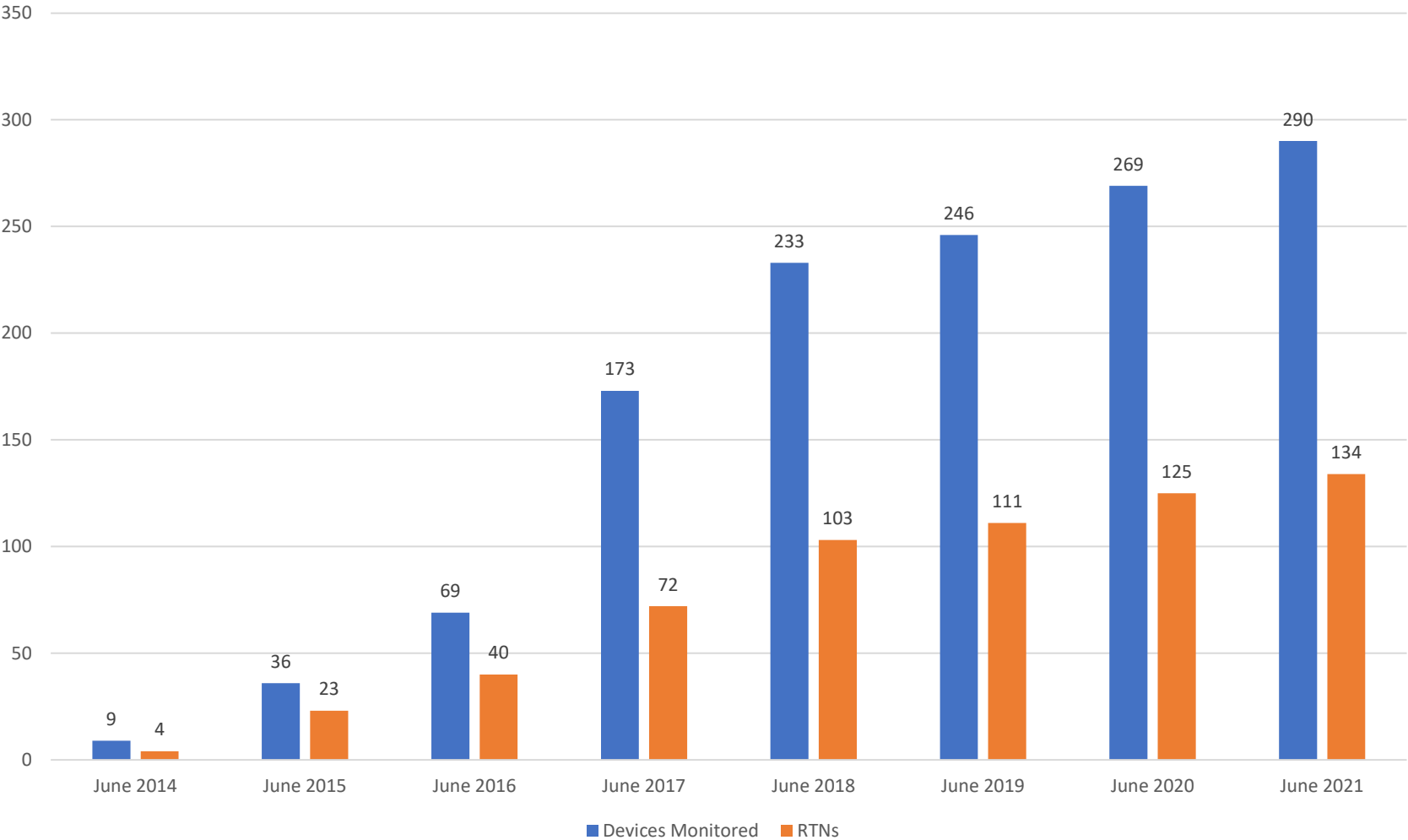
The screenshot shows the official website of the PFAS Interagency Task Force. At the top, it identifies the page as part of 'THE 192ND GENERAL COURT OF THE COMMONWEALTH OF MASSACHUSETTS'. Navigation links include 'Bills & Laws', 'Budget', 'Legislators', 'Hearings & Events', 'Committees & Commissions', and 'State House'. The main heading is 'PFAS INTERAGENCY TASK FORCE'. Below this, there is a search bar and a section for 'UPCOMING HEARINGS' which currently shows 'No Upcoming Hearings'. A table lists past hearings with columns for Date, Time, Topic, Location, Status, and Bills.

| Date | Time | Topic | Location | Status | Bills |
|-------------|----------|--|-----------------|-----------|-------|
| ★ 6/1/2021 | 10:00 AM | PUBLIC HEARING NOTICE Inaugural meeting of the PFAS Interagency Task Force, including a briefing from the Massachusetts Department of Environmental Protection. | Virtual Hearing | Completed | |
| ★ 6/15/2021 | 10:00 AM | PUBLIC HEARING NOTICE Second meeting of the PFAS Interagency Task Force to discuss "What PFAS chemicals are and where they are found" including presentations by the American Chemistry Council, Professor Alicia Timms-Langley (UMass Amherst). | Virtual Hearing | Completed | |

<https://malegislature.gov/Commissions/Detail/556>



Registered AEPMM Telemetry Over Time



AEPMM Certification Letters

- To be sent shortly to property owners with AEPMMs supporting Permanent Solutions (37)



2019 – 2021 MCP Amendments

- Estimated Publication Date: FALL 2021
- STATUS: Started Final Review Process
- TRAINING (DEP Regulatory Credits!) likely Winter 2021-22
- Plus any needed guidance, FAQs, etc.



2019 – 2021 MCP Amendments

- Program Coordination
 - NAULs at Federal Sites
 - UST Sites
 - Radioactive Materials
- GW-1 Areas (Drinking Water)
- Climate Change
- Remedial Additives
- Tier Classification
- Temporary Solution Status Reports
- Post-PS Remedial Actions
- AEPMs
- AULs for LNAPL
- GPS Coordinates
- Improved Communication (Notice)
- Liquified Gasses
- Risk Assessment
 - Gardening Exposures
 - Exposure Point Concentrations
 - Hierarchy of Toxicity
 - Imminent Hazards
 - Other Method 1 Standards
- Waste Deposits



Compendium of Analytical Methods (CAM)

Reminder: Updated CAM protocols take effect November 5, 2021

- WSC-CAM-IIA - Volatile Organic Compounds (VOCs), based on USEPA Method SW-846 8260D
- WSC-CAM-IIB - Semivolatile Organic Compounds (SVOCs), based on USEPA Method SW-846 8270E

[https://www.mass.gov/guides/compendium-of-analytical-methods-cam#-gas-chromatography/mass-spectrometry-\(gc/ms\)-methods-](https://www.mass.gov/guides/compendium-of-analytical-methods-cam#-gas-chromatography/mass-spectrometry-(gc/ms)-methods-)



Discussion

Committee Members?

General Public?



Soil Management Discussion

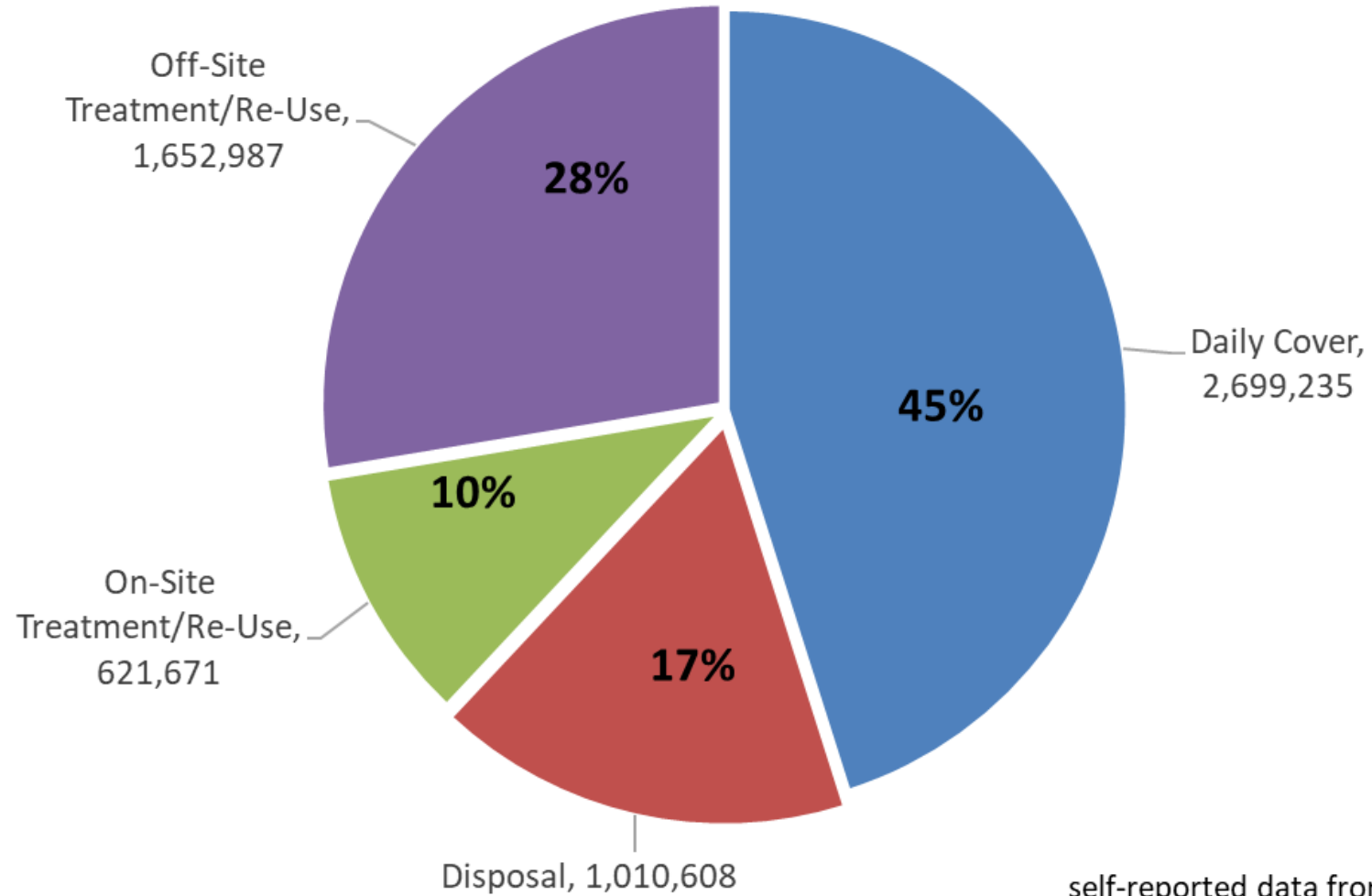
Q: What are the longer-term options for managing contaminated soil in an age of decreasing re-use/disposal capacity at Massachusetts landfills?

- “Contaminated Soil” = concentrations of OHM greater than the applicable Reportable Concentration (RCS-1, RCS-2)
(Reclamation Soil Facilities can take “uncontaminated soil”)
- Soil addressed (*for 24 years*) by COMM-97



Soil Management - FY2016-2021

(volume in cubic yards)

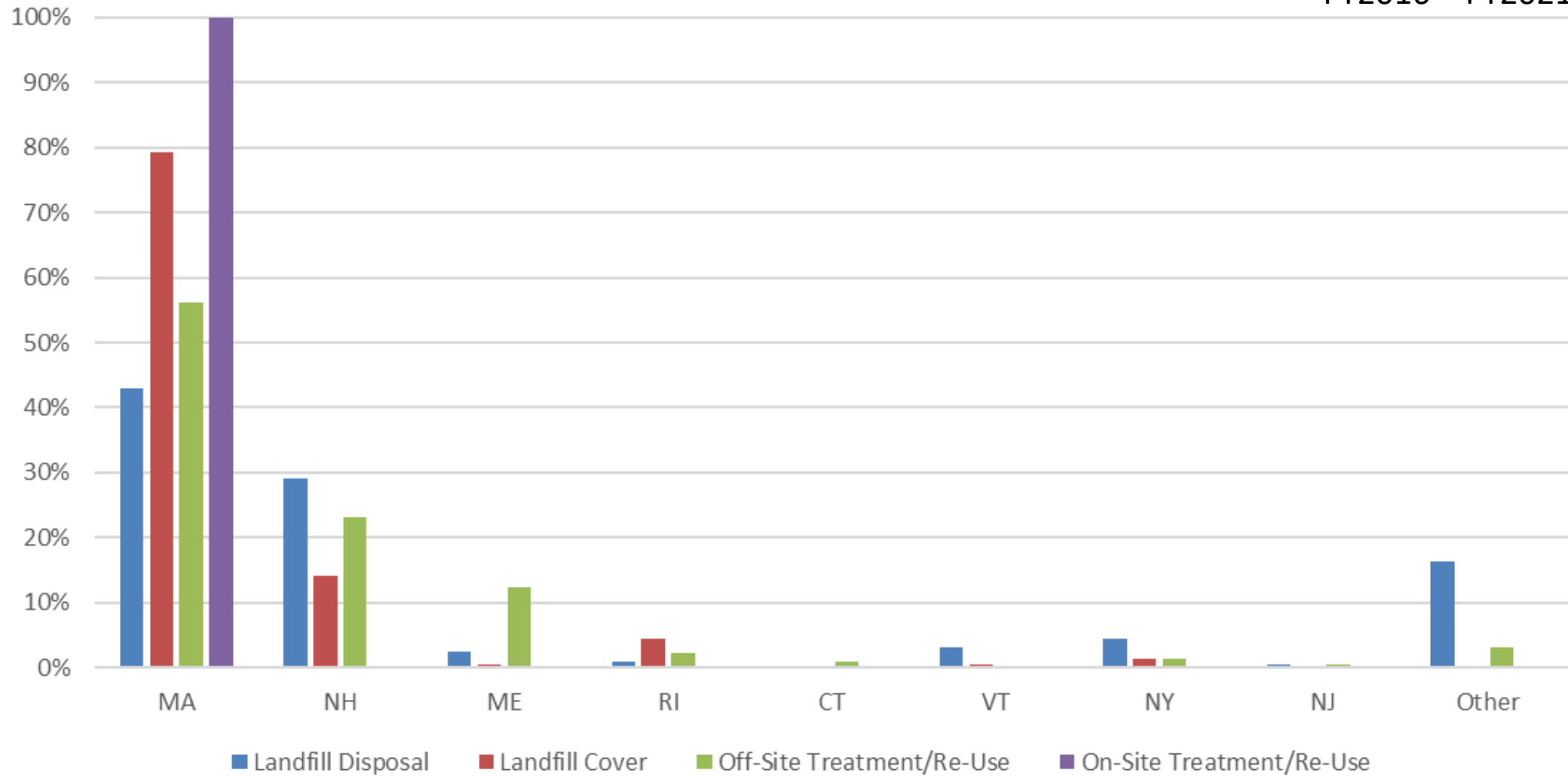


self-reported data from BWSC104



Where Does the Soil Go? % of Sites Managing Soil Through...

FY2016 – FY2021



Self-Reported Data from BWSC104 Submittals



Discussion

Committee Members?

General Public?



Program Statistics

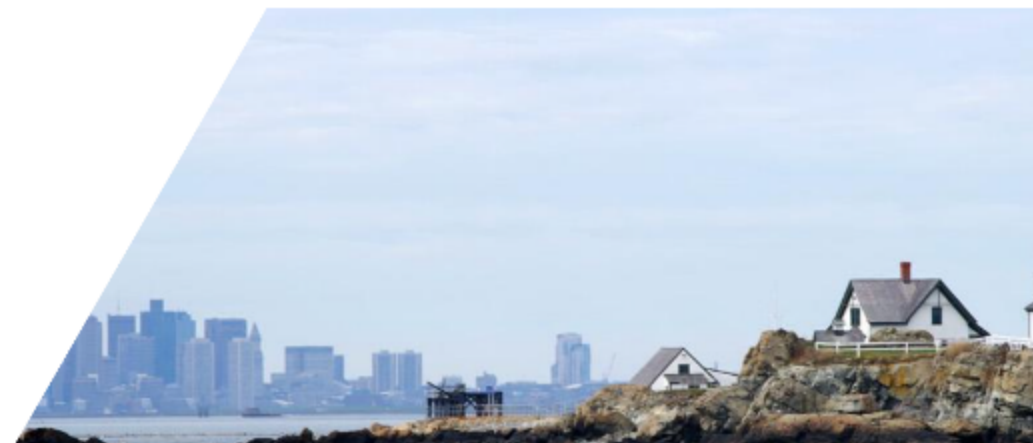


GUIDE

Making Progress Cleaning Up Contaminated Properties

The Massachusetts Contingency Plan was significantly revised effective October 1, 1993 when a new, privatized approach was adopted. Since then, DEP has worked with private sector Licensed Site Professionals (LSPs) to assess and cleanup sites. This page asks and answers questions about the progress of cleanups since 1993.

This information is current through Fiscal Year 2021.

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🔔 **MassDEP's office buildings are currently closed to the public.** | Jun. 18, 2021, 12:01 am

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- ✓ [EEA Data Portal](#)

[Feedback](#)

<https://www.mass.gov/guides/making-progress-cleaning-up-contaminated-properties>



Notifications Come, Closed Sites Go...

| | A | B | C | D | E | F |
|----|---|--------------|-------------|--------------|-------------|--------------|
| 1 | | | | | | |
| 2 | Year-by-Year Distribution of Notifications | | | | | |
| 3 | Fiscal Year | 2-Hour | 72-Hour | 120-Day | "None" | Total |
| 34 | 2015 | 659 | 200 | 390 | | 1249 |
| 35 | 2016 | 670 | 198 | 375 | | 1243 |
| 36 | 2017 | 693 | 212 | 410 | | 1315 |
| 37 | 2018 | 833 | 205 | 356 | | 1394 |
| 38 | 2019 | 808 | 136 | 320 | | 1264 |
| 39 | 2020 | 705 | 141 | 377 | | 1223 |
| 40 | 2021 | 626 | 128 | 330 | | 1084 |
| 41 | Total-to-Date: | 23849 | 9814 | 13388 | 6944 | 53996 |
| 42 | | | | | | |



- Notifications counted since 1985 – “everything”
- “None” category = pre “new” program

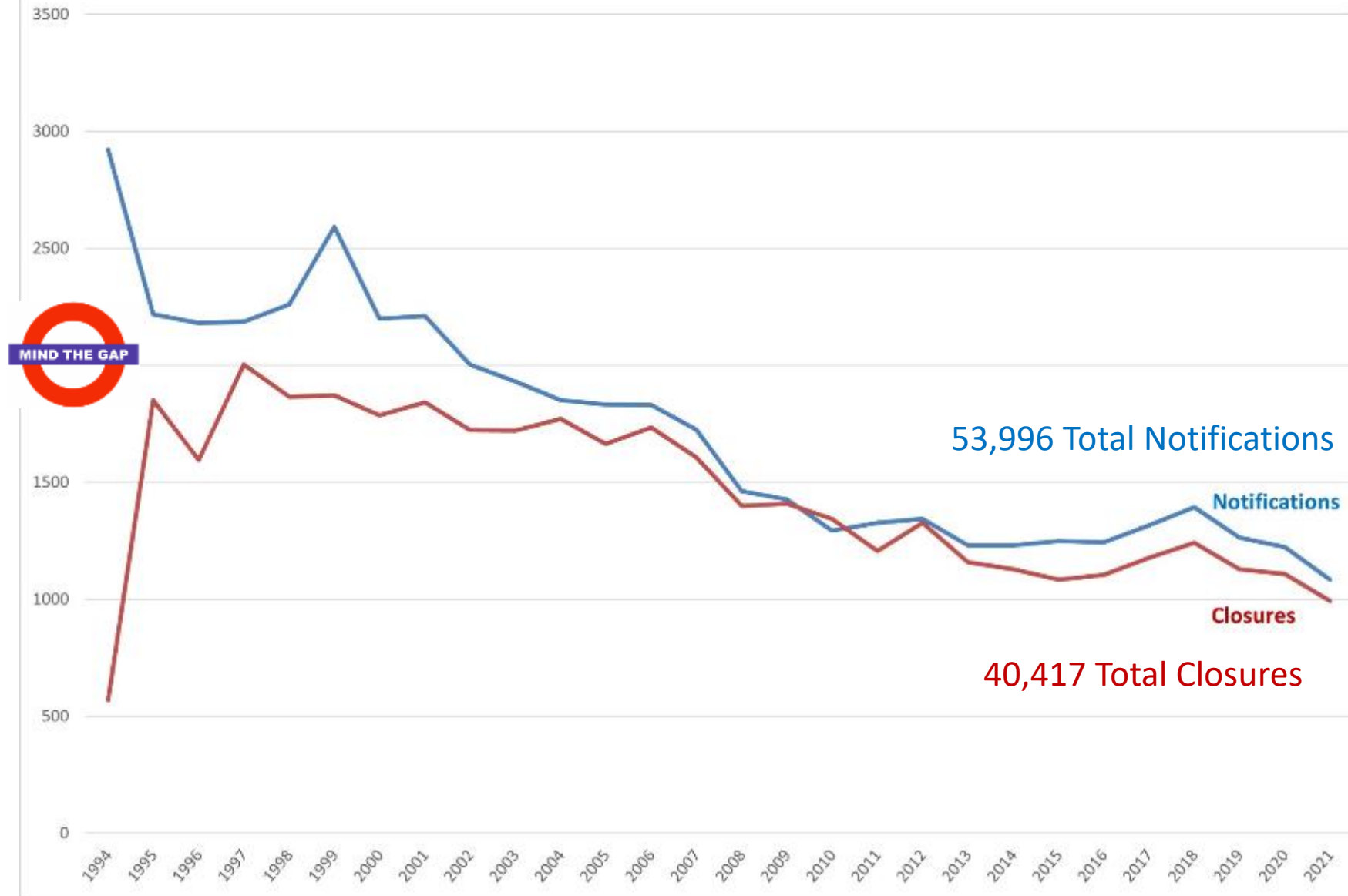
- “Cleaned Up” Sites counted since FY1994 - The “new” program
- Does not include RAO-P
- “Cleaned Up” Sites counts only Primary RTNs (if two RTNs are covered by a Permeant/Temporary Solution only the primary/parent RTN is counted).
- For RAOs filed prior to 2014 the following applies per 310 CMR 40.1055
 - Class A-1, A-2, and B-1 are considered Permanent Solutions with No Conditions
 - Class A-3, A-4, B-2 and B-3 are considered Permanent Solutions with Conditions
 - Class C-1 and C-2 are considered Temporary Solutions



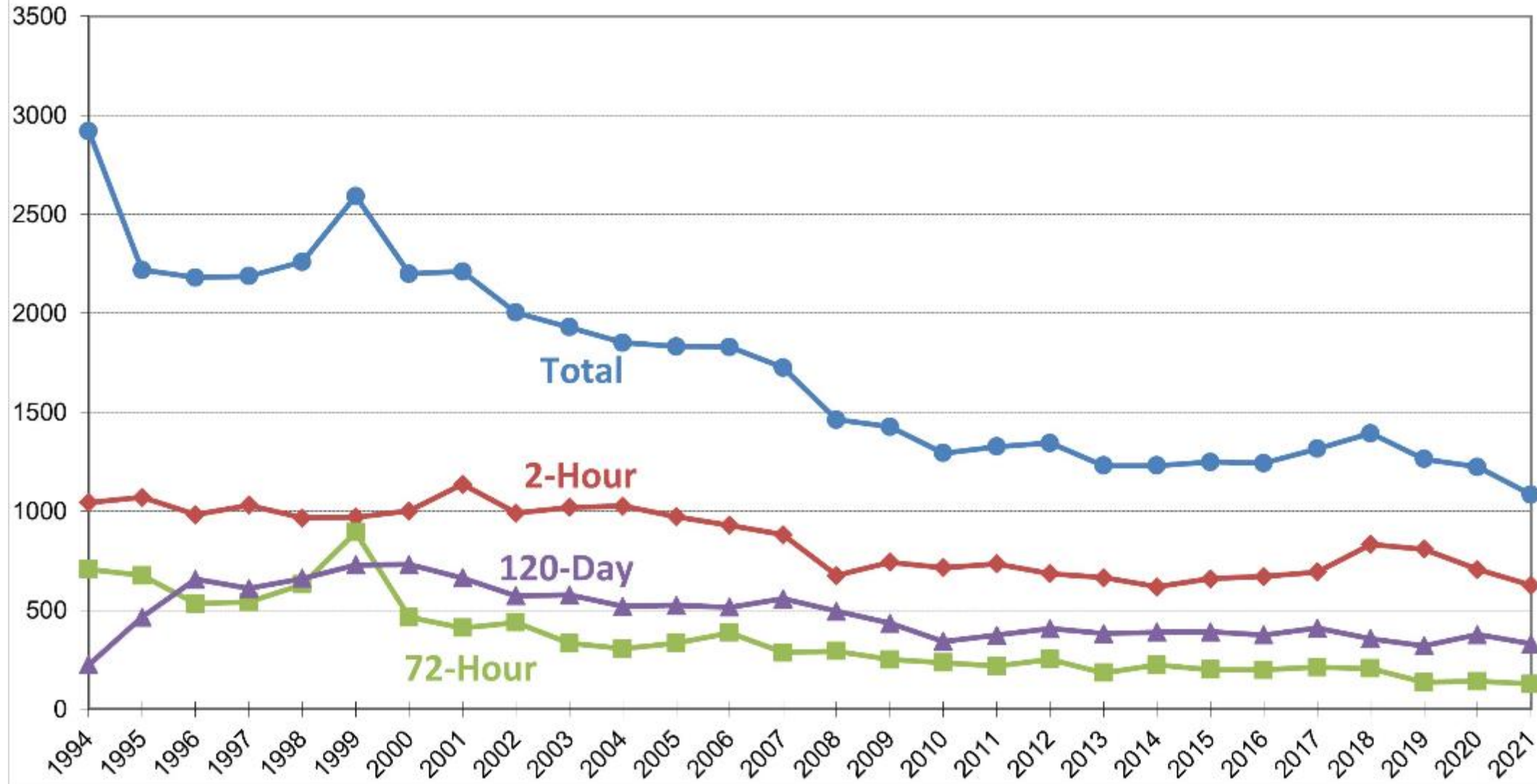
| | A | B | C | D | E |
|----|--|-------------------|------------------|-------------------|--------------|
| 1 | | | | | |
| 2 | Year-by-Year Distribution of Sites Cleaned Up^a | | | | |
| 3 | Fiscal Year | PSNC ^b | PSC ^b | TMPS ^b | Grand Total |
| 25 | 2015 | 902 | 141 | 41 | 1084 |
| 26 | 2016 | 910 | 159 | 36 | 1105 |
| 27 | 2017 | 950 | 188 | 39 | 1177 |
| 28 | 2018 | 1034 | 158 | 49 | 1241 |
| 29 | 2019 | 952 | 139 | 37 | 1128 |
| 30 | 2020 | 925 | 150 | 34 | 1109 |
| 31 | 2021 | 791 | 159 | 43 | 993 |
| 32 | Grand Total | 36163 | 3361 | 893 | 40417 |
| 33 | | | | | |
| 34 | | | | | |



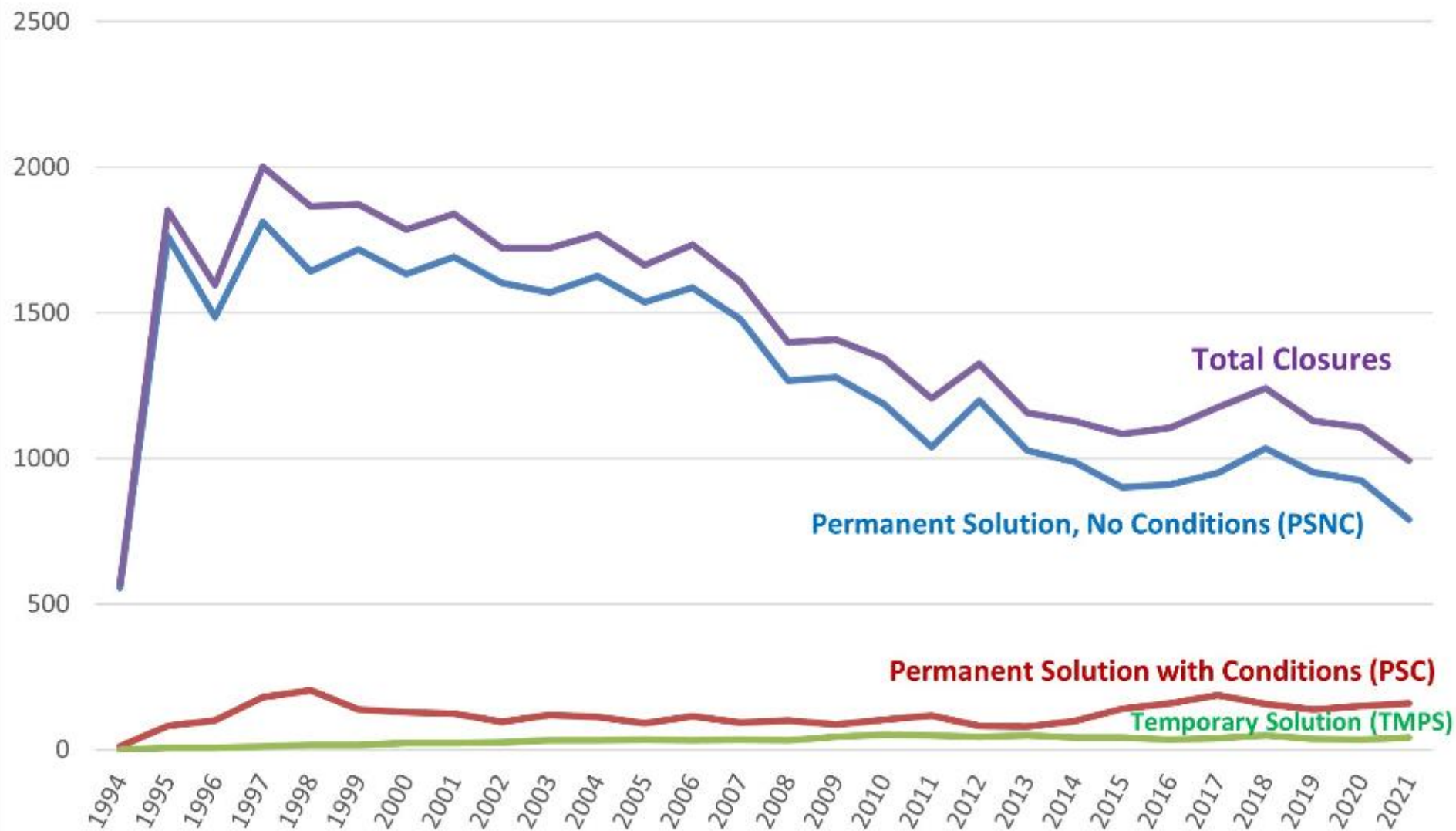
Total Notifications and Closures (Fiscal Year)



Releases by Notification Category FY94-FY21



Site Cleanup & Closures by Category (Fiscal Year)



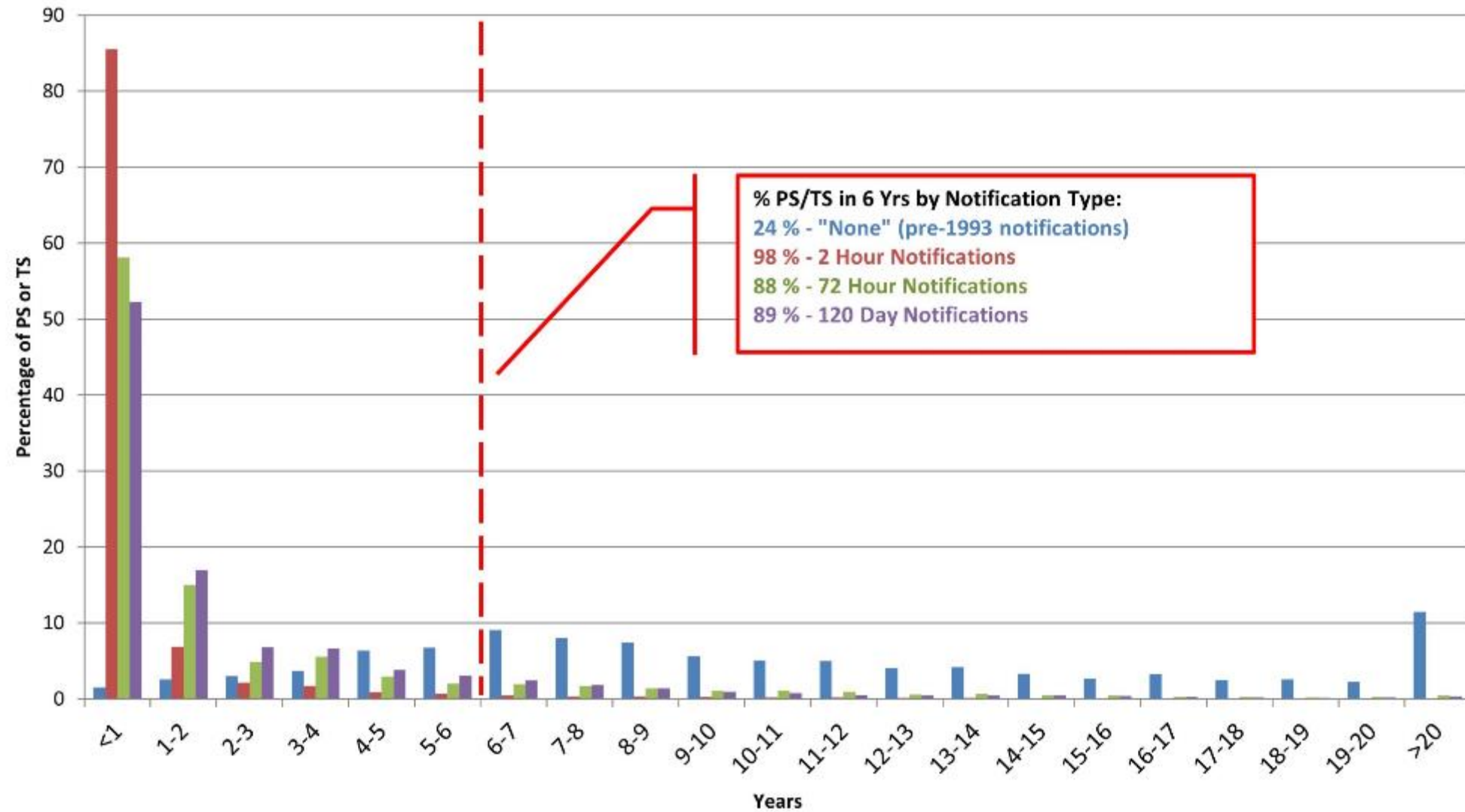
Permanent Solutions That Were Brownfield-Related FY2016-FY2021



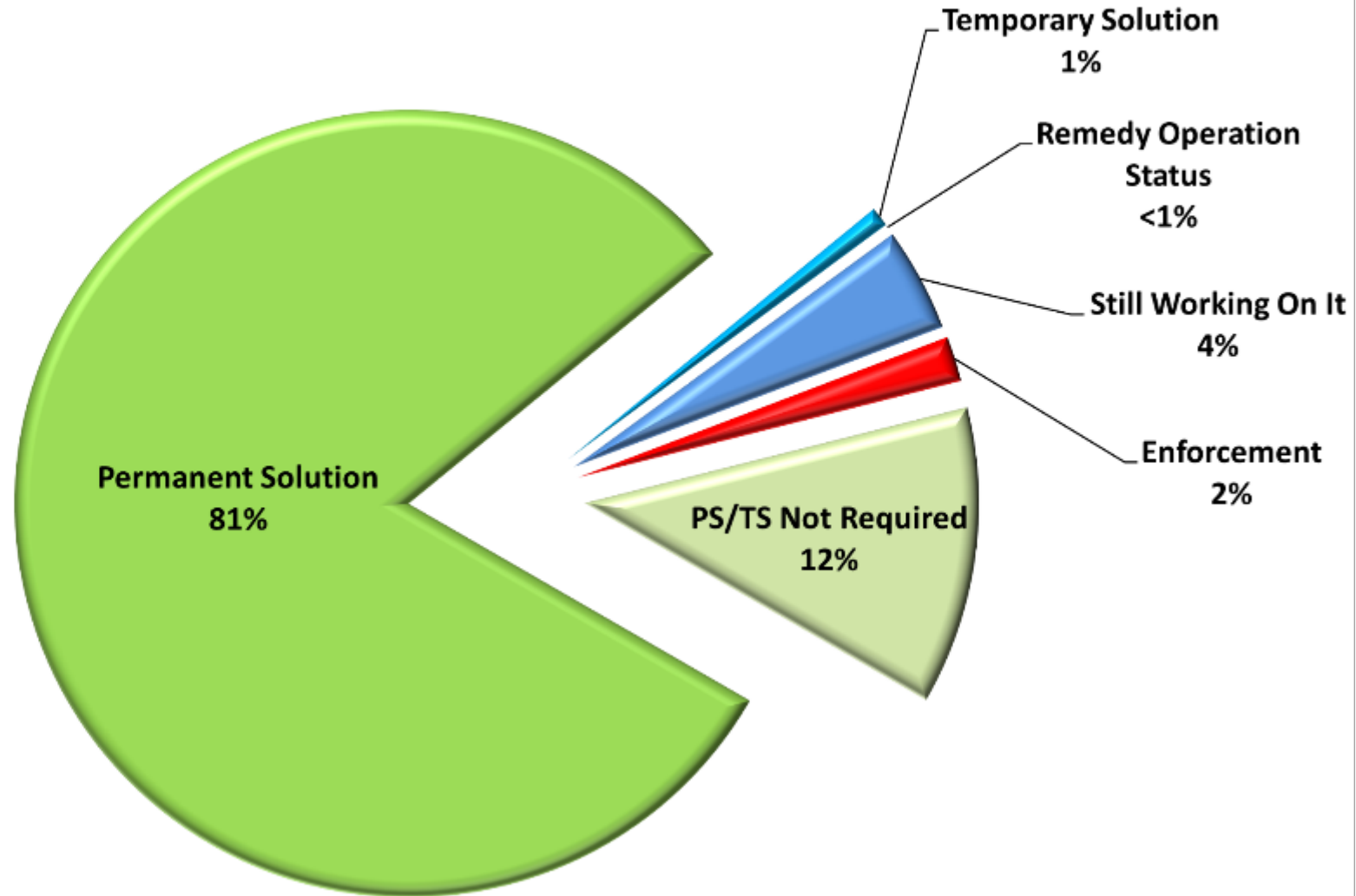
Data from BWSC-104 filings – *self-reported*



Time-to-Permanent or Temporary Solution, by Notification Category (through 6/30/2021)



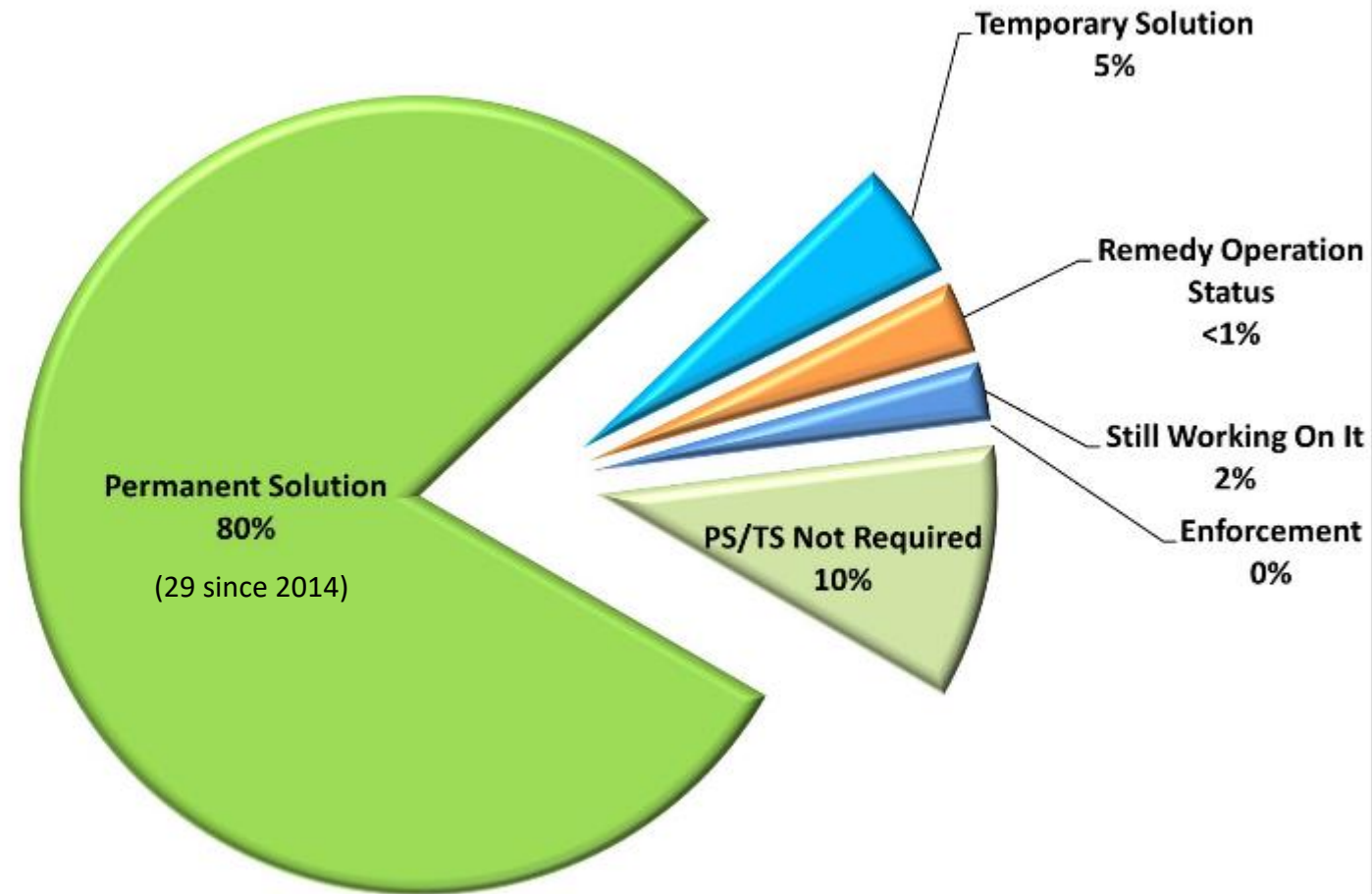
FY15 Notifications (most recent 6-yr period): Where Are They Now?



N= 1249



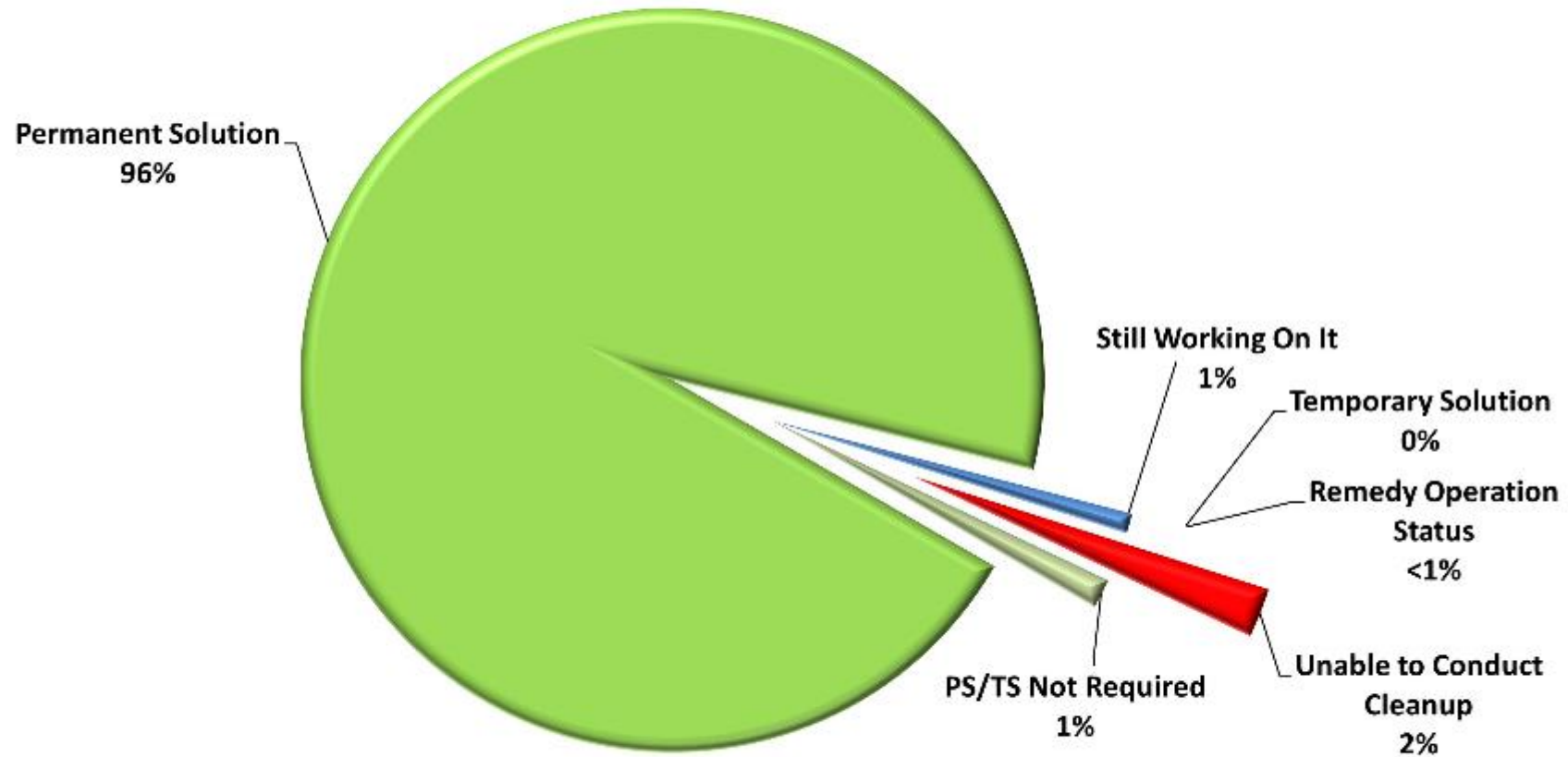
FY1991 Notifications (most recent 30-yr period): Where Are They Now?



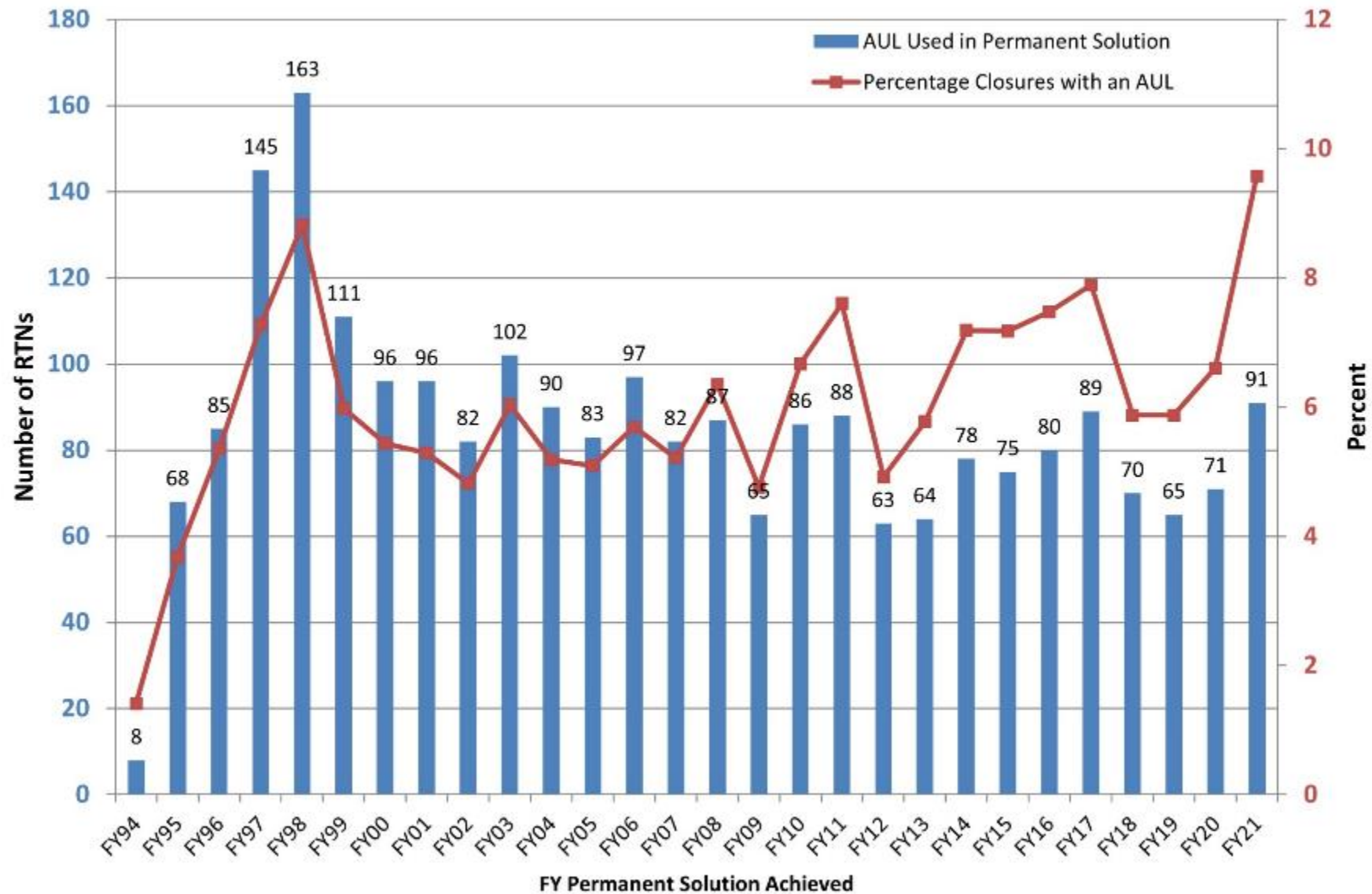
N=624



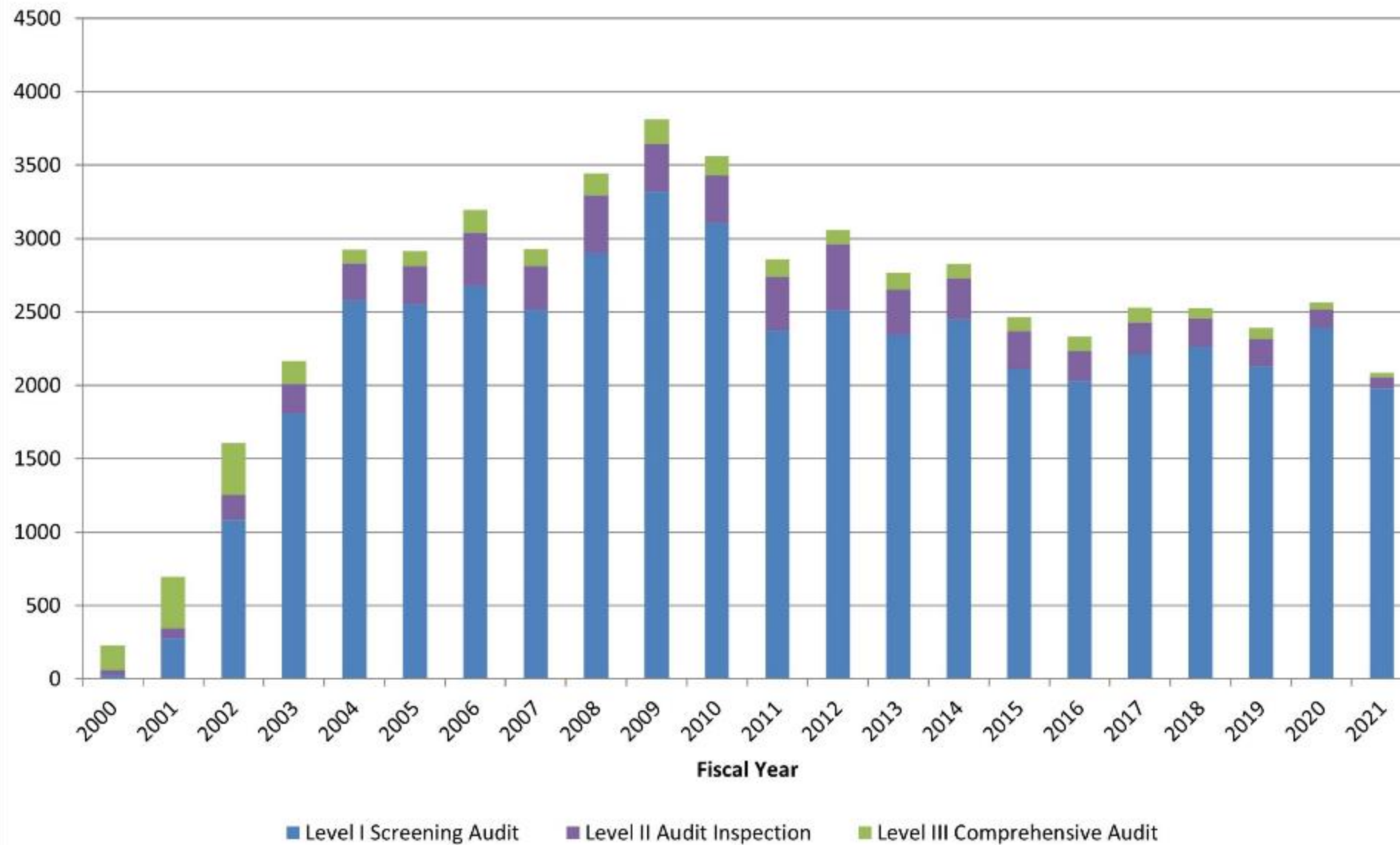
Homeowner Fuel Oil Notifications (1993-2015): Where Are They Now?



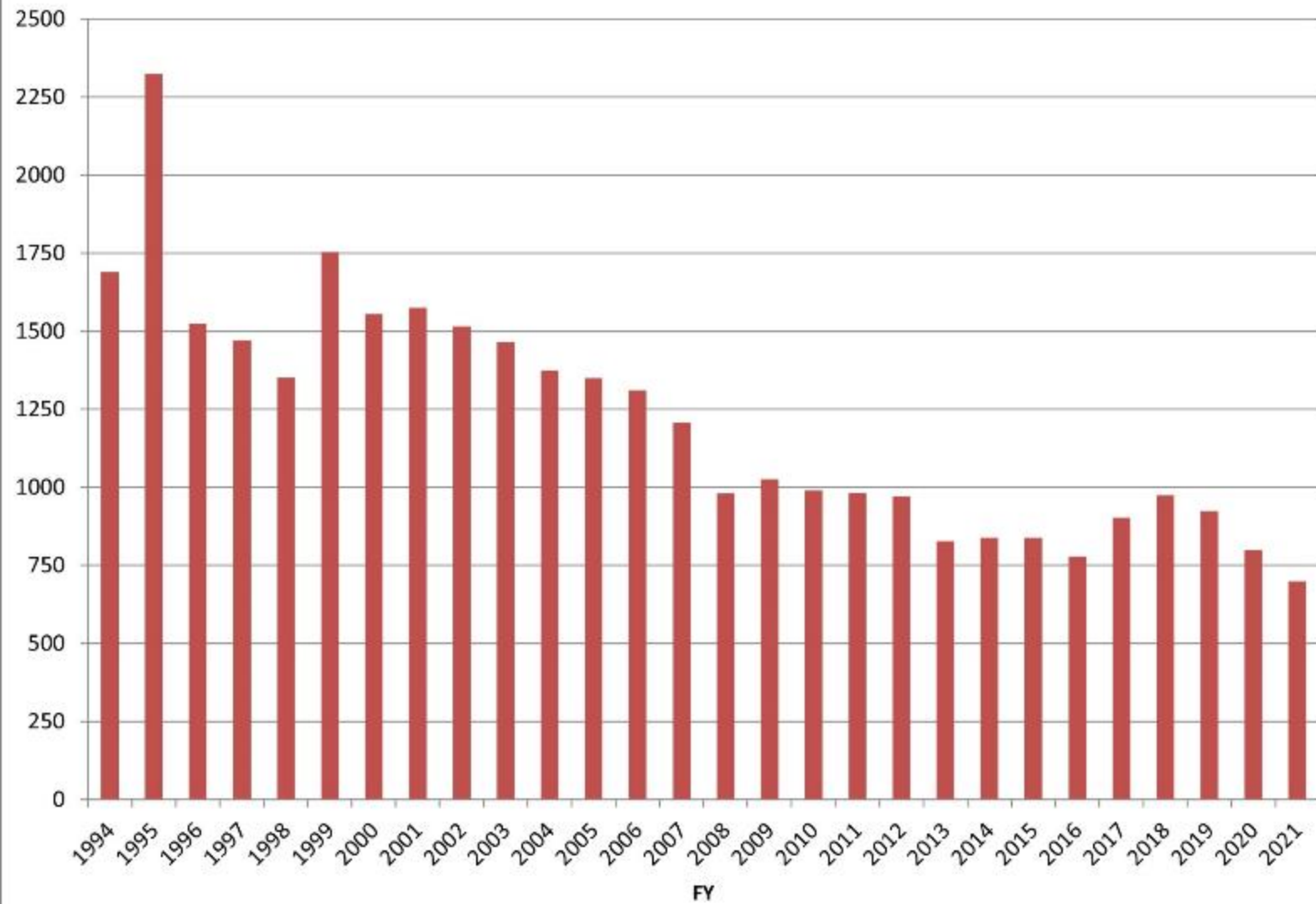
Trend in the Use of AULs



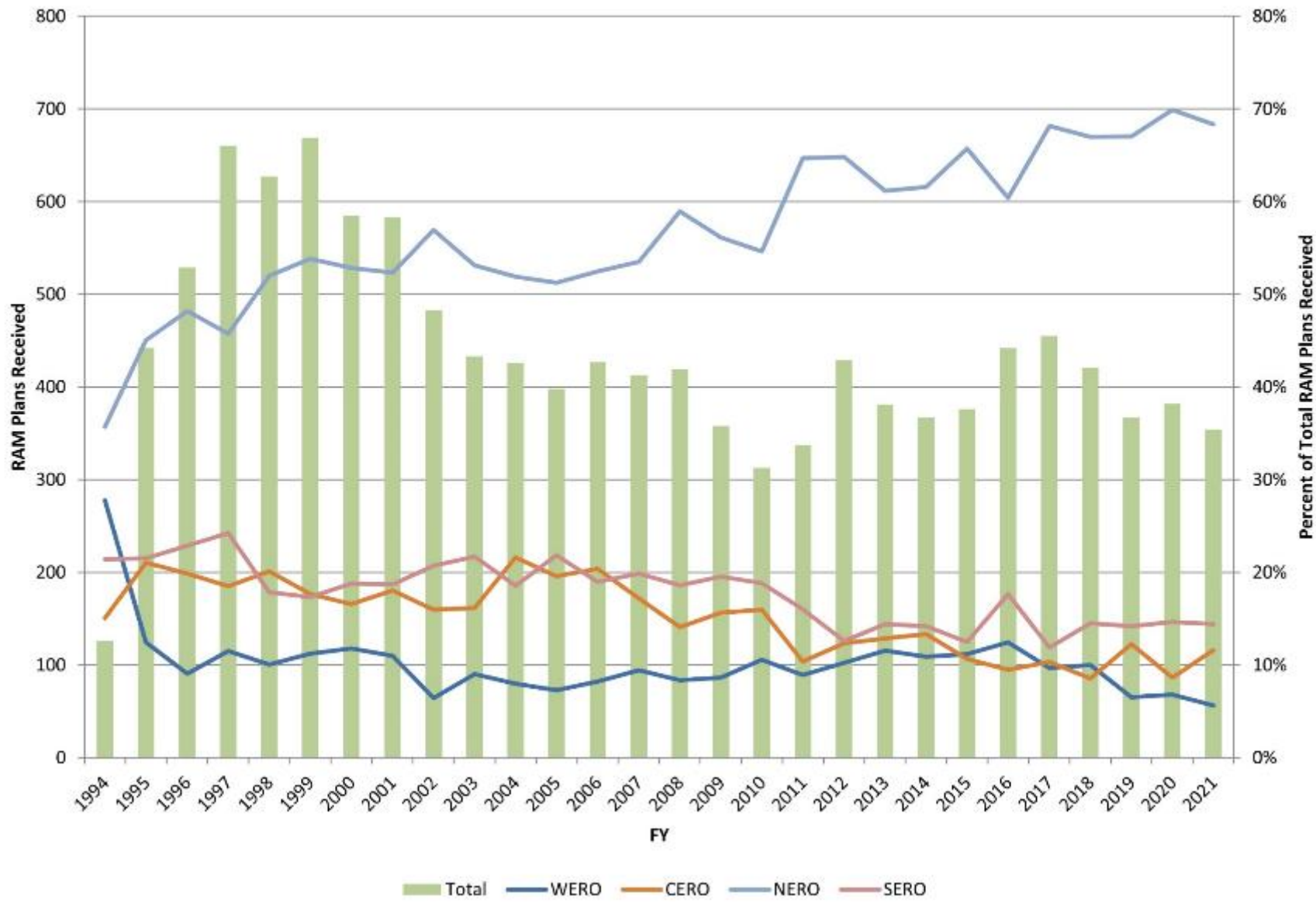
MassDEP Audits Complete by FY



Immediate Response Action Approvals by Fiscal Year



Release Abatement Measure Activity



Discussion

Committee Members?

General Public?

