Where we started... GAO Report

United States Government Accountability Office
Report to Congressional Requesters

GAO

November 2020

AIR POLLUTION

Opportunities to Better Sustain and Modernize the National Air Quality Monitoring System

In November of 2020, the Government Accountability Office (GAO) released a report recommending that EPA work with state, local, and Tribal (SLT) air agencies to:

1. Develop, make public, and implement an <u>asset management framework</u> for consistently sustaining the national ambient air quality monitoring system

2. Develop and make public an air quality monitoring <u>modernization plan</u>

Asset Management Framework Status

☑ GAO Report Released

☑ EPA Outreach to Air Agencies with Asset Management Programs

☑ Draft Asset Management Framework Released to SLTs for Review

☑ Pilot Asset Management Process (Fall 2023)

☑ Finalize Asset Management Framework (Winter 2024)

☑ Launch Asset Management Reporting Tool and Report Template (Spring 2024)

Final Asset Management Framework

- On January 25, 2024, OAQPS issued a memo to address the GAO recommendation to implement an ambient air quality monitoring asset management framework. (link)

- The GAO suggests, and the EPA agrees, that SLTs will benefit by having a standard set of metrics and information that, at a minimum, will allow for and ensure that air agencies utilize a basic inventory management process.

- "SLTs will collect and organize specific information about their ambient air quality monitoring assets and submit an annual asset management report to the EPA, via their respective EPA Regional Office…"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

January 25, 2024

MEMORANDUM

SUBJECT: Implementing an Ambient Air Quality Monitoring Asset Management Framework

FROM: Richard Wayland, Director
Air Quality Assessment Division

RICHARD WAYLAND
Digitally signed by RICHARD WAYLAND
Date: 2024.01.25 13:40:43 -05'00'

TO: Regional Air Division Directors, Region 1 – 10

In November of 2020, the Government Accountability Office (GAO) released a report titled *Air Pollution – Opportunities to Better Sustain and Modernize the National Air Quality Monitoring System*.[1] In the report, the GAO provided two key recommendations for the U.S. Environmental Protection Agency (EPA) to work with state, local, and Tribal (SLT) air agencies to: 1) develop, make public, and implement an asset management framework for consistently sustaining the national ambient air quality monitoring system, and 2) develop and make public an air quality monitoring modernization plan. In response to this report, this memo is focused on the first recommendation. A separate document, at a later date, will address modernization including a summary of actions using supplemental appropriations from the American Rescue Plan Act of 2021 and Inflation Reduction Act of 2022.

Final Asset Management Framework: Report Fields

- Asset Owner and State

- Asset Status (In Use, Not Deployed)

- Asset Type

- Asset Manufacturer

- Asset Model

- Asset Serial Number

- Asset Acquisition Year

- Asset Purchase Price <u>Range</u>
  - Mandatory: Items purchased in 2023 or later
  - Optional: Items purchased 2022 or before

- Current Condition

- Agency Asset No. (optional)

- Comment (optional)

Final Asset Management Framework

- **Template Spreadsheet**
  - OAQPS issued a final spreadsheet template for air agencies.
  - The template uses the <u>same fields in Attachment 1 of the memo</u>.
  - EPA is collaborating with DAS companies on export tools/reports.
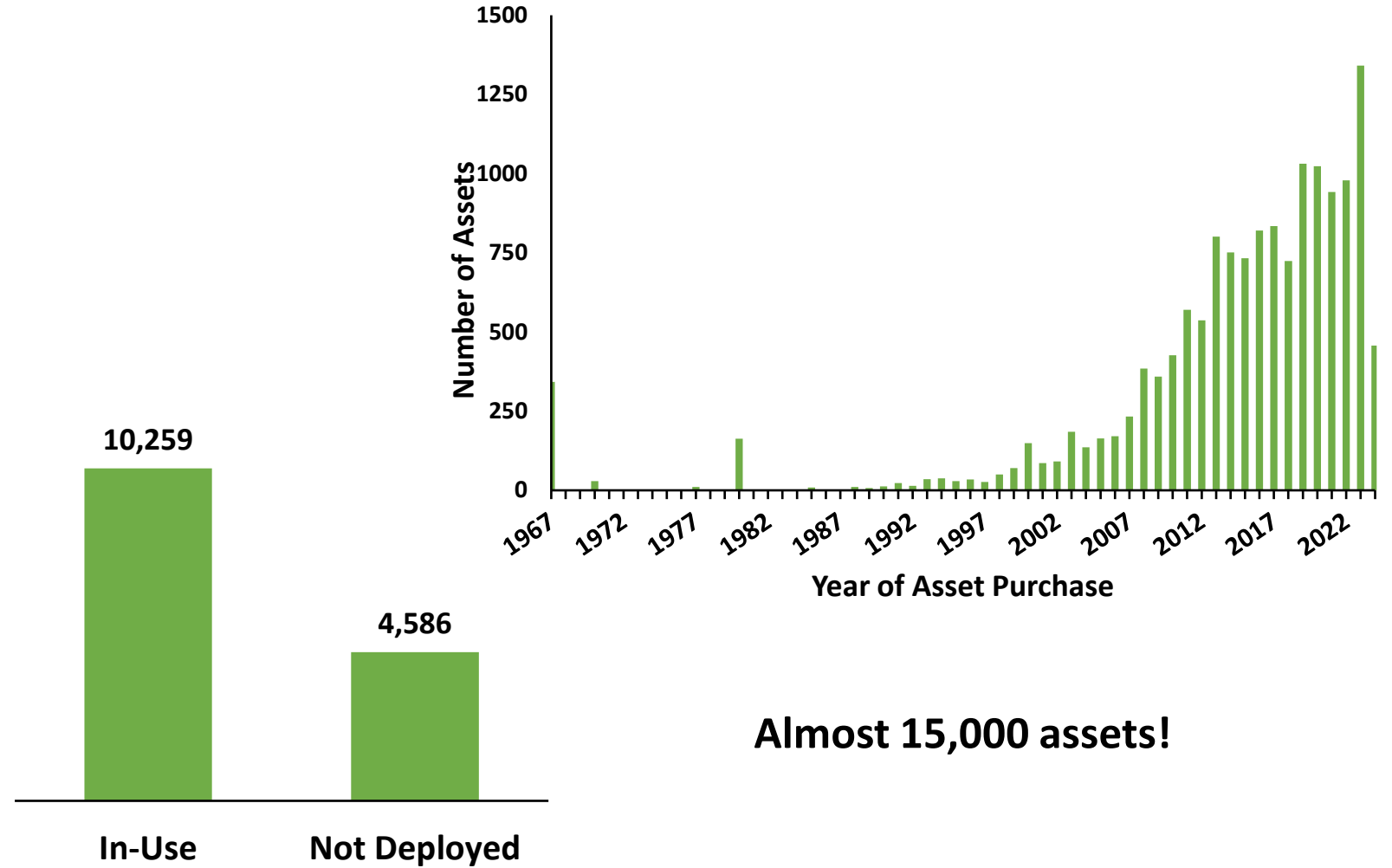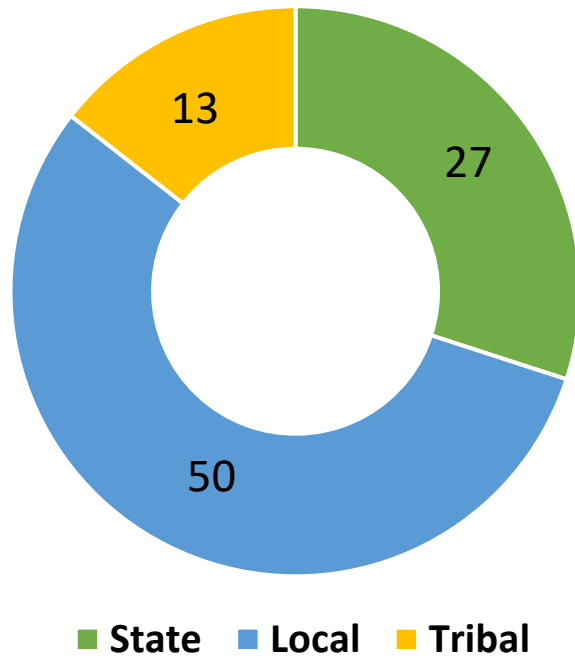
- **Asset Management Reporting Tool**
  - SLTs submit the completed template as an email attachment to AMRT@epa.gov.
  - This information will allow air agencies and the EPA to answer questions that aid in informing air monitoring policies and procedures related to the national ambient air monitoring network.
    - For example, SLTs may use the information to optimize air monitoring network investments
    - EPA may use the submitted data to inform funding allocations in the event of supplemental appropriations.

- **Annual Deadline – July 1**
  - EPA Regional Offices will work with air agencies on timing and reporting for their first submission, goal of July 2024 providing flexibility, as needed, in the first year.

Preliminary Asset Information

90 SLT agencies submitted (so far) out of 465

- State
- Local
- Tribal

27
50
13

10,259
4,586

In-Use   Not Deployed

Number of Assets

1500
1250
1000
750
500
250
0

1967 1972 1977 1982 1987 1992 1997 2002 2007 2012 2017 2022

Year of Asset Purchase

Almost 15,000 assets!

Supplemental Slides

Pilot Test Process

- **Objective:** for air agencies and EPA to evaluate the proposed asset management framework.
  - Air agencies were asked to select 2-3 sites for the pilot test, particularly sites representative of their network and not just the "easy" ones.
  - Air Agencies participating in the pilot test had varying levels of current asset management tracker systems.

- Changes between the draft framework and the pilot test:
  - Removed all optional fields.
  - Transitioned from site-specific item locations to generic locations (e.g., lab, storage, field).
  - Made "Asset Purchase Price" field a range instead of exact number.

Pilot Test Process – Participants

- **Pennsylvania**
  - Custom asset management tracking platform already in use.
  - PA programmed a data download consistent with EPA's draft template.
- **Nevada DEP**
  - Must use their statewide property management system.
- **Georgia DNR**
  - No current asset management system but have started trying to use AirVision.
- **Mass DEP**
  - Currently using AirVision asset management module.
- **South Coast AQMD**
  - Must use their district's property management system.

Pilot Test Process – Data Fields

- Asset Owner
- Asset General Location
- Asset Purpose
- Asset Type
- Asset Manufacturer
- Asset Model
- Asset Serial No.

- Asset Acquisition Date
- Asset Purchase Price Range
- Current Condition
- Agency Asset No. (optional)
- Comment (optional)

Pilot Test Process – General Results

- Overall, air agencies appreciated simplified data fields instead of those suggested in the draft asset management framework.

- EPA used the feedback form the pilot test to again simplify the critical fields.

- Air agencies urged EPA to work with common air quality data acquisition providers (e.g., DR DAS, AirVision) to add report downloads consistent with EPA's final asset management reporting template.

Reporting Process Overview

- Asset Management Data Entry Template

  Purpose: to facilitate and standardize the process of reporting data on air quality assets.

  - The template **must** be used to submit asset information.
  - The template file was sent via email - download and save as an .XLSX file.
  - Asset information is entered in this template.

- Submitting completed file

  - Email completed file to AMRT@epa.gov.

- Data will be ingested and saved from template upload/email

Final Asset Management Framework

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- "SLTs will collect and organize specific information about their ambient air quality monitoring assets and submit an annual asset management report to the EPA, via their respective EPA Regional Office..."

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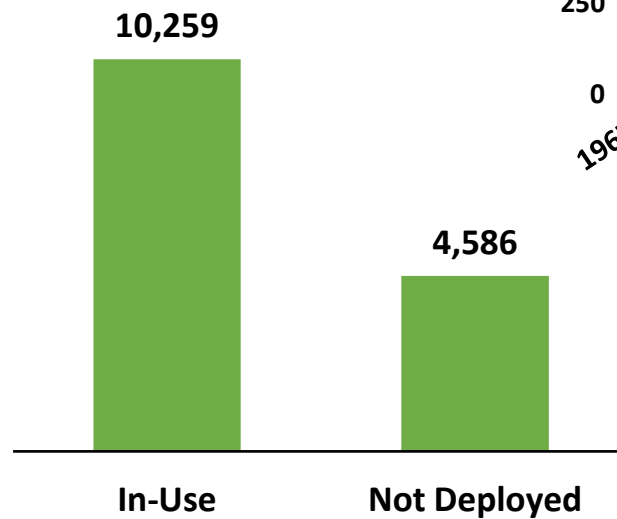
- **Asset Management Reporting Tool**
 - OAQPS is working with a contractor on the tool to ingest the asset management data.
  - SLTs submit the completed template as an email attachment to AMRT@epa.gov.

- **Annual Deadline – July 1**
  - As mentioned in the memo, EPA Regional Offices will work with air agencies on timing and reporting for their first submission, goal of July 2024.
  - There was no good deadline consensus because many air agencies have different agency-driven asset management timelines.

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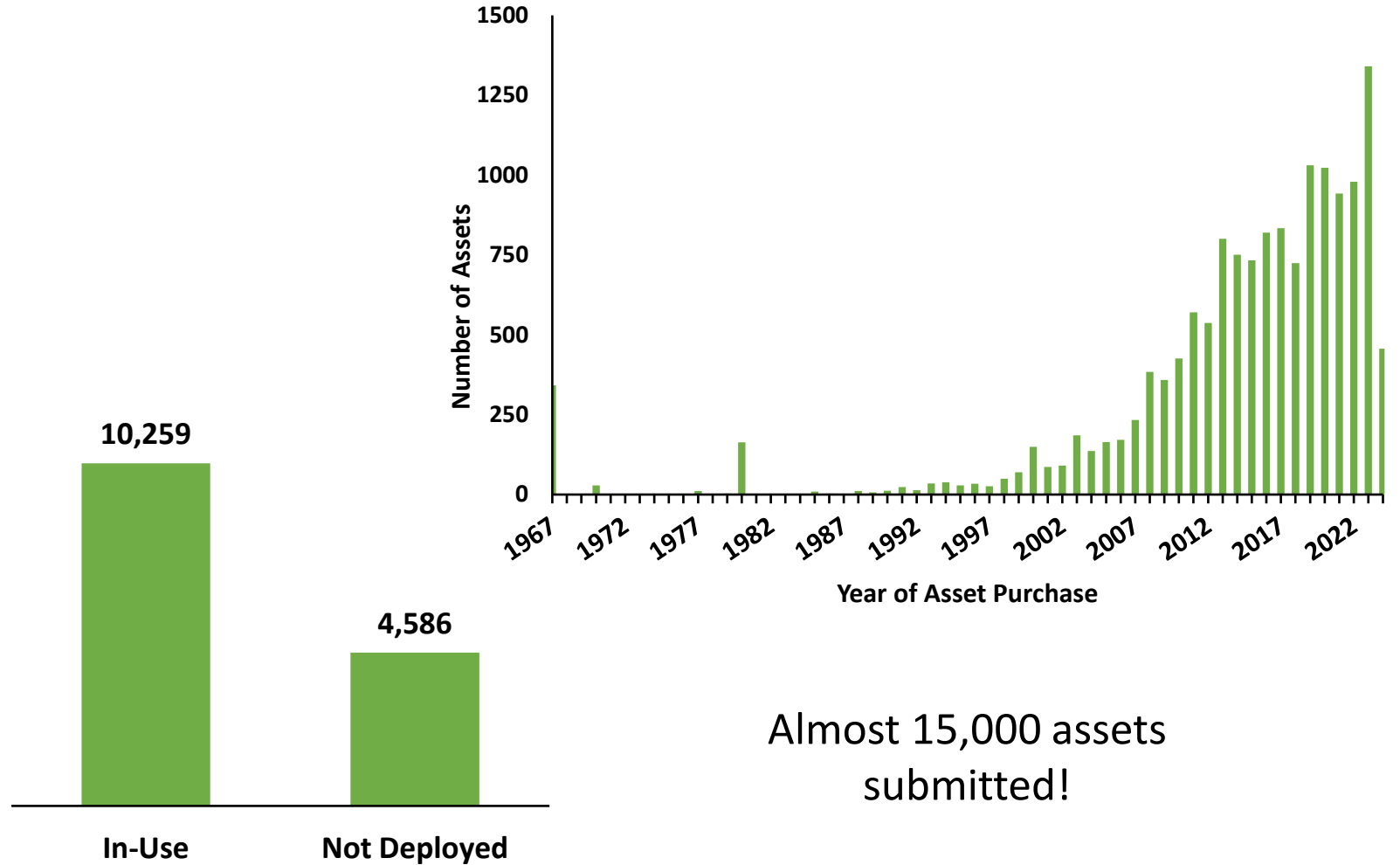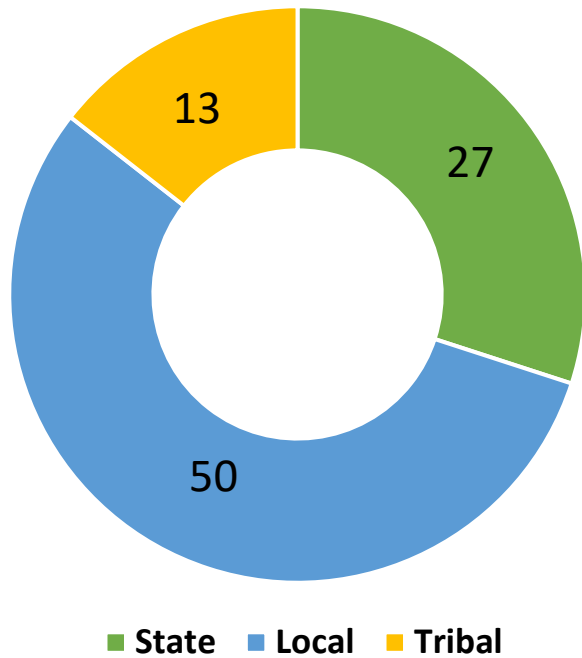
Almost 15,000 assets
submitted!

Remaining Asset Management Schedule

Milestone	Target Date
OAQPS collaboration with DAS companies	January-March 2024
OAQPS Distributes Reporting Template (Fillable Excel Sheet with Instructions)	April 2024
OAQPS launches Asset Management Reporting Tool (Email Address)	May 2024
OAQPS sends a tutorial on using the Asset Management Reporting Tool and the Reporting Template	May 2024
SLT Asset Management Reports Due	July 1, 2024
OAQPS Assessment of the Framework	Ongoing, as needed

Appendix

Data Field	Data Field Type	Data Field Description
Applicability Year	Text	Calendar year in which the asset is being submitted
Asset Owner	Choice	The entity that owns the asset, typically the state, local, or Tribal air agency
State	Text	State where the asset is located
Asset Type	Choice	Equipment category type (e.g., Data Logger, Pollutant Monitor, Dilution System, Rack, etc.)
Asset Status	Choice	Identifies whether the asset is currently being utilized (in-use or not deployed)
Asset Manufacturer	Text	Name of Instrument/Asset Manufacturer
Asset Model	Text	Model Series for the Asset
Asset Serial ID	Text	Serial number as provided, printed, or labeled on instrument, and/or coded into firmware by manufacturer
Asset Acquisition Date	Date	Date that the asset was obtained, regardless of new/used status
Asset Purchase Price	U.S. Currency	Due to availability of information, this field is optional for assets purchased before 2023, and critical for assets purchased in or after 2023
Current Condition	Choice	Condition describes the availability, functionality, operability, and/or reliability of the asset. This is a <u>subjective</u> determination by the owner, but a critical assessment of an asset's usefulness. Options: • Good- asset performing as expected, with no concerns regarding reliability or need for extra maintenance • Fair- asset performing at an acceptable level, but there may be concerns with reliability and/or the need for maintenance • Poor- asset performing below acceptable levels, or not at all, with concerns for reliability and/or the need for extra maintenance, repair, or replacement
Asset Agency ID (Optional)	Text	Air agencies may use this optional field if they assign a unique asset identifier to the equipment
Agency Comment (Optional)	Text	Air agencies may provide an optional comment related to the asset