Statewide Wastewater Air Toxics Pooled Emissions Study

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Air toxics inventorying & reporting programs were updated in 2020 and became effective January 1, 2022

AB 2588: Air Toxics "Hot Spots" Program (1987)

- Established statewide inventory programs for emissions from individual facilities and requirements for risk assessments and public notification of those risks.

AB 617: Criteria Air Pollutant & Toxic Air Contaminant Reporting Regulation (2019)

- Established statewide annual reporting of emissions data.
- Updates to improve emissions data to better understand sources contributing to adverse health risks or other impacts at local, regional, and statewide levels.

AB 2588: Air Toxics "Hot Spots" Program Updates

- Original program was established to:
  - Collect emissions data (list of >500 compounds)
  - Identify facilities having local impacts
  - Understand potential health risks
  - Notify nearby residents of significant risks
  - Reduce significant risks to acceptable levels
- Program updates expand compound list to >1,700 compounds, many of them:
  - Have unknown toxicity levels
  - Have unknown emission factors
  - Are not relevant to WWTPs

AB 617: Criteria Air Pollutant & Toxic Air Contaminant Reporting Updates

- Gives CARB authority to "harmonize" air monitoring, reporting, & local emissions reduction programs from stationary sources
  - Assess community exposure
  - Establish criteria for air monitoring
  - Identify source contributions and strategies for emissions reduction

- Objectives:
  - Establish emission reduction targets, schedule, & enforcement programs
  - Develop uniform statewide reporting
  - Air Districts to support annual reporting

Figure shows original communities prioritized for emission reductions; CARB maintains a list of nominated communities for future reductions.

How can WWTPs comply with the Air Toxics Reporting and Inventorying Program updates?

- CASA negotiated a phased compliance, allowing WWTPs to report business-as-usual through data year 2027 (reported in 2028)
- In meantime, wastewater utilities must perform a "two-step process" (either individually or as a group) to determine shortlist of compounds and factors:

    1. Scan air space of unit processes to determine detectable compounds (including PFAS)
    2. Quantify emissions of detectable compounds to determine potential risk
        - Methods approved by Air Districts
        - Toxicity potentials approved by Office of Environmental Health and Hazard Assessment (OEHHA) Scientific Review Panel

- Has this type of study been done statewide before…?

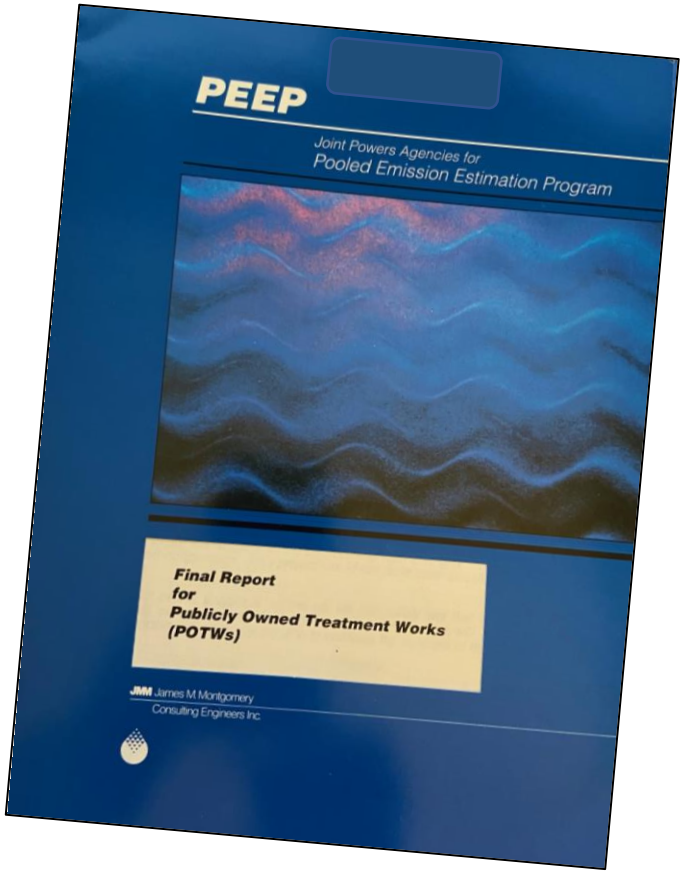
Wastewater sector performed a Pooled Emissions Estimation Program (PEEP) in 1989-1990!

Purpose: Provide wastewater utilities a standard estimation methodology and emission factors for reporting Volatile Organic Compound (VOC) emissions.

- JPA of 25 POTWs across CA
- 18 unit processes sampled (liquid, solid, gas)
- 20 sites (north and south)

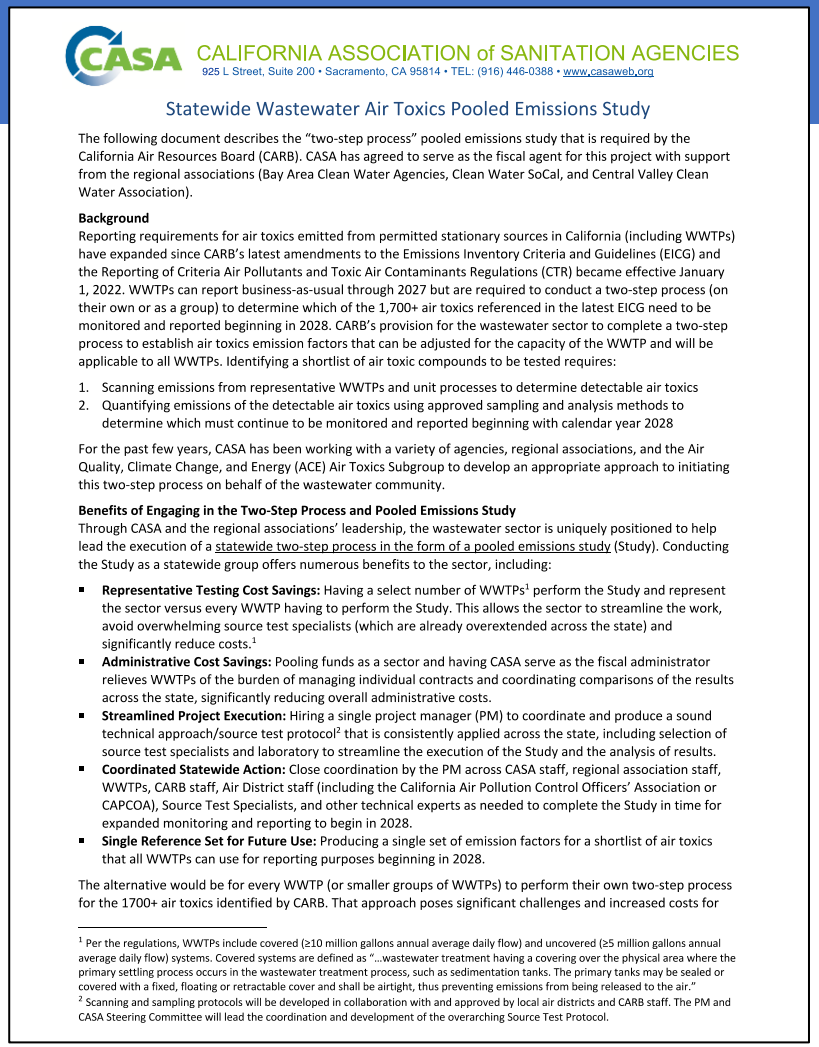
- 3 rounds of sampling over 11 months
- Project duration: 2 years
- Budget: $2.5M (1990)

Result: Short-list of VOCs relevant to the wastewater sector and emissions factors.



Benefits of performing a Statewide Pooled Emissions Study?

- Cost savings through representative testing (select subset of WWTPs) and reduced administrative demands
- Streamlined project execution with single project manager
- Statewide coordination of stakeholders
- Identify a single set of compounds and emission factors for use/reference



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Statewide Wastewater Air Toxics Pooled Emissions Study

The following document describes the "two-step process" pooled emissions study that is required by the California Air Resources Board (CARB). CASA has agreed to serve as the fiscal agent for this project with support from the regional associations (Bay Area Clean Water Agencies, Clean Water SoCal, and Central Valley Clean Water Association).

Background
Reporting requirements for air toxics emitted from permitted stationary sources in California (including WWTPs) have expanded since CARB's latest amendments to the Emissions Inventory Criteria and Guidelines (EICG) and the Reporting of Criteria Air Pollutants and Toxic Air Contaminants Regulations (CTR) became effective January 1, 2022. WWTPs can report business-as-usual through 2027 but are required to conduct a two-step process (on their own or as a group) to determine which of the 1,700+ air toxics referenced in the latest EICG need to be monitored and reported beginning in 2028. CARB's provision for the wastewater sector to complete a two-step process to establish air toxics emission factors that can be adjusted for the capacity of the WWTP and will be applicable to all WWTPs. Identifying a shortlist of air toxic compounds to be tested requires:

1. Scanning emissions from representative WWTPs and unit processes to determine detectable air toxics
2. Quantifying emissions of the detectable air toxics using approved sampling and analysis methods to determine which must continue to be monitored and reported beginning with calendar year 2028

For the past few years, CASA has been working with a variety of agencies, regional associations, and the Air Quality, Climate Change, and Energy (ACE) Air Toxics Subgroup to develop an appropriate approach to initiating this two-step process on behalf of the wastewater community.

Benefits of Engaging in the Two-Step Process and Pooled Emissions Study
Through CASA and the regional associations' leadership, the wastewater sector is uniquely positioned to help lead the execution of a statewide two-step process in the form of a pooled emissions study (Study). Conducting the Study as a statewide group offers numerous benefits to the sector, including:

- **Representative Testing Cost Savings:** Having a select number of WWTPs[1] perform the Study and represent the sector versus every WWTP having to perform the Study. This allows the sector to streamline the work, avoid overwhelming source test specialists (which are already overextended across the state) and significantly reduce costs.[1]
- **Administrative Cost Savings:** Pooling funds as a sector and having CASA serve as the fiscal administrator relieves WWTPs of the burden of managing individual contracts and coordinating comparisons of the results across the state, significantly reducing overall administrative costs.
- **Streamlined Project Execution:** Hiring a single project manager (PM) to coordinate and produce a sound technical approach/source test protocol[2] that is consistently applied across the state, including selection of source test specialists and laboratory to streamline the execution of the Study and the analysis of results.
- **Coordinated Statewide Action:** Close coordination by the PM across CASA staff, regional association staff, WWTPs, CARB staff, Air District staff (including the California Air Pollution Control Officers' Association or CAPCOA), Source Test Specialists, and other technical experts as needed to complete the Study in time for expanded monitoring and reporting to begin in 2028.
- **Single Reference Set for Future Use:** Producing a single set of emission factors for a shortlist of air toxics that all WWTPs can use for reporting purposes beginning in 2028.

The alternative would be for every WWTP (or smaller groups of WWTPs) to perform their own two-step process for the 1700+ air toxics identified by CARB. That approach poses significant challenges and increased costs for

[1] Per the regulations, WWTPs include covered (≥10 million gallons annual average daily flow) and uncovered (≥5 million gallons annual average daily flow) systems. Covered systems are defined as "…wastewater treatment having a covering over the physical area where the primary settling process occurs in the wastewater treatment process, such as sedimentation tanks. The primary tanks may be sealed or covered with a fixed, floating or retractable cover and shall be airtight, thus preventing emissions from being released to the air."
[2] Scanning and sampling protocols will be developed in collaboration with and approved by local air districts and CARB staff. The PM and CASA Steering Committee will lead the coordination and development of the overarching Source Test Protocol.

CASA

CASA has agreed to serve as fiscal administrator supporting the Statewide Pooled Emissions Study

Statewide Pooled Emissions Study details:

- Broader set of compounds to be sampled relative to 1990 PEEP
- 145+ WWTPs to share the cost
- 1 Project Manager
- Estimated duration: 3-4 years
- Estimated budget: $10 M

- CASA working with Regional Associations (like BACWA) to coordinate participation

The statewide Pooled Emissions Study will be performed in two phases:

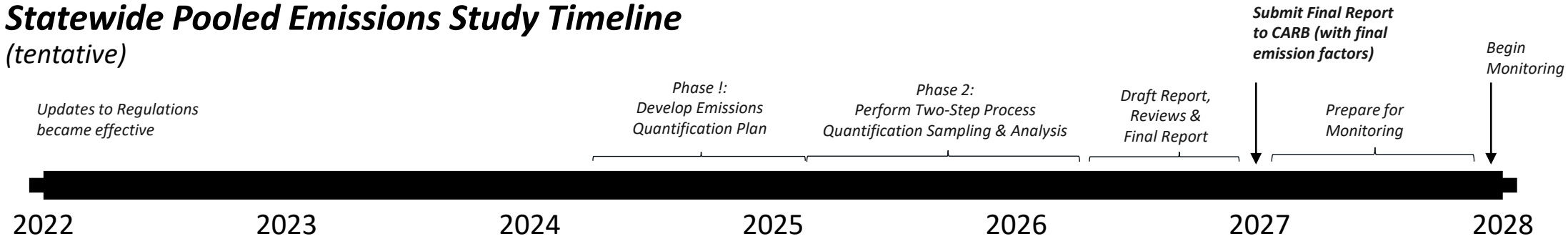
1. **Phase 1 (2024):** PM will develop (and gain approval from CARB and Air Districts for) an overarching **emissions quantification plan** to perform CARB's Two-Step Process.

2. **Phase 2 (2025-2027):** PM will **perform the Two-Step Process** with Source Test Specialists and in close collaboration with CARB, air districts, CASA's Steering Committee and participating WWTPs.

Outcome: Shortlist of relevant compounds and emission factors for use (e.g., as part of BAAQMD's Rule 11-18 Health Risk Assessment process)

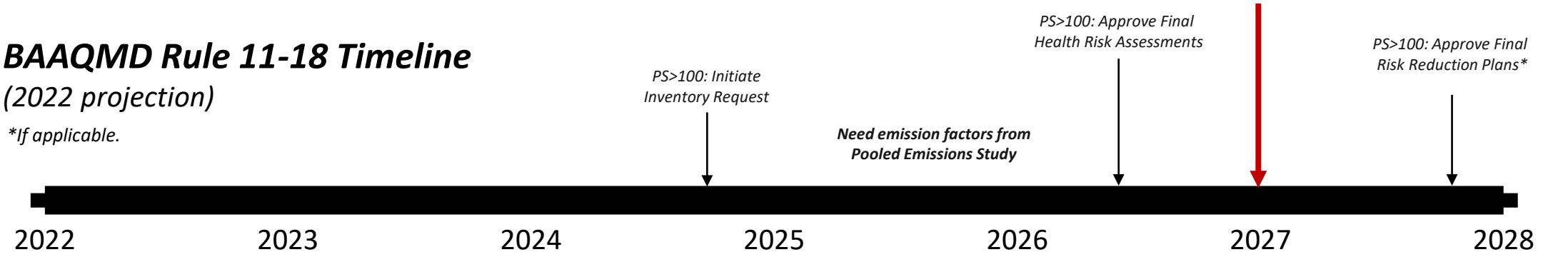
How will the BAAQMD use the output of the Pooled Emissions Study?

Statewide Pooled Emissions Study Timeline
(tentative)



BAAQMD Rule 11-18 Timeline
(2022 projection)

**If applicable.*

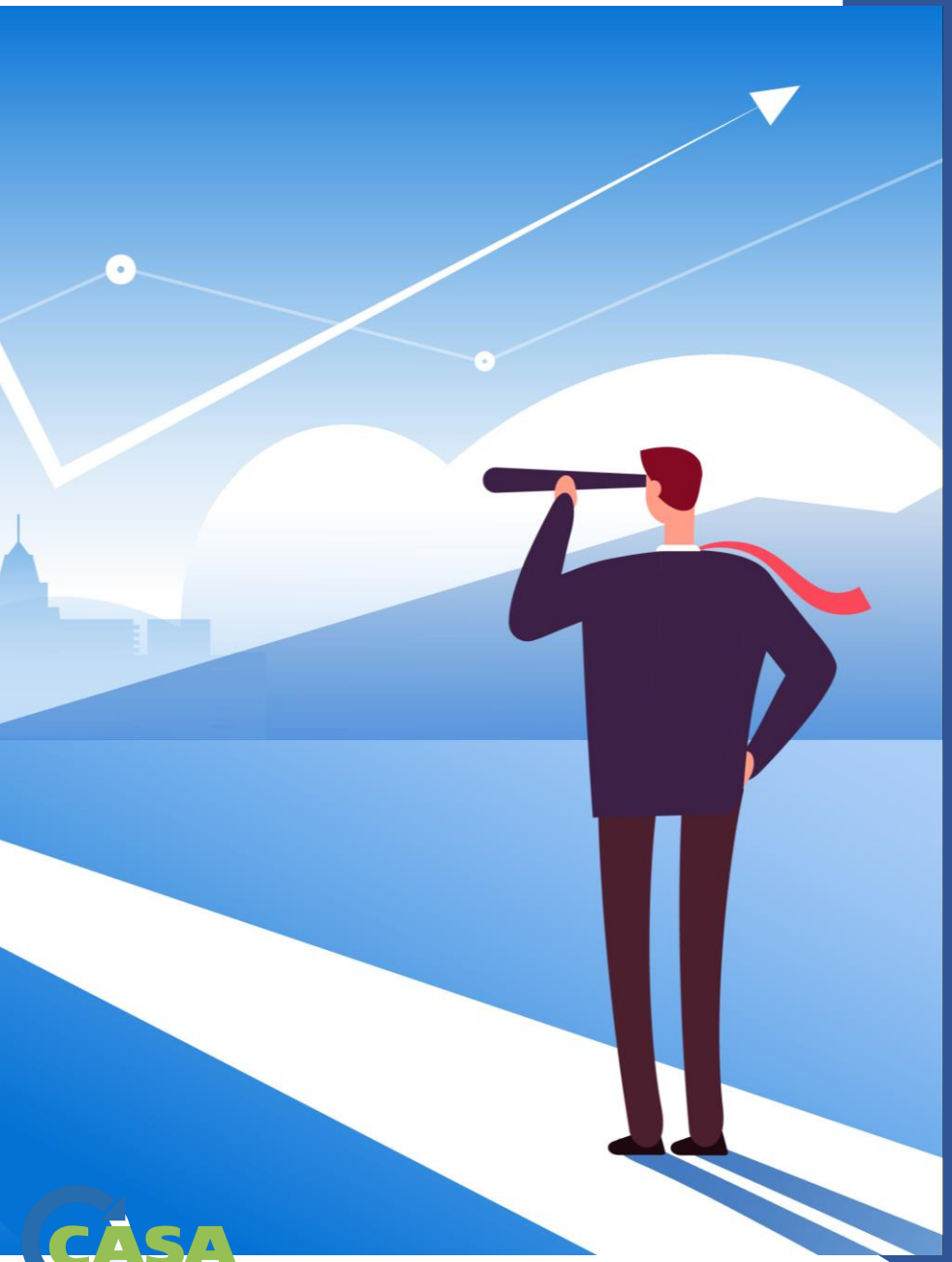


BAAQMD responded to BACWA's comments submitted February 29th regarding concepts for amendments to Rule 11-18: "…emission factors (from the Pooled Emissions Study) are expected to be available before the Air District initiates the Rule 11-18 review…"

Participants contribute each fiscal year based on need identified to complete the Study

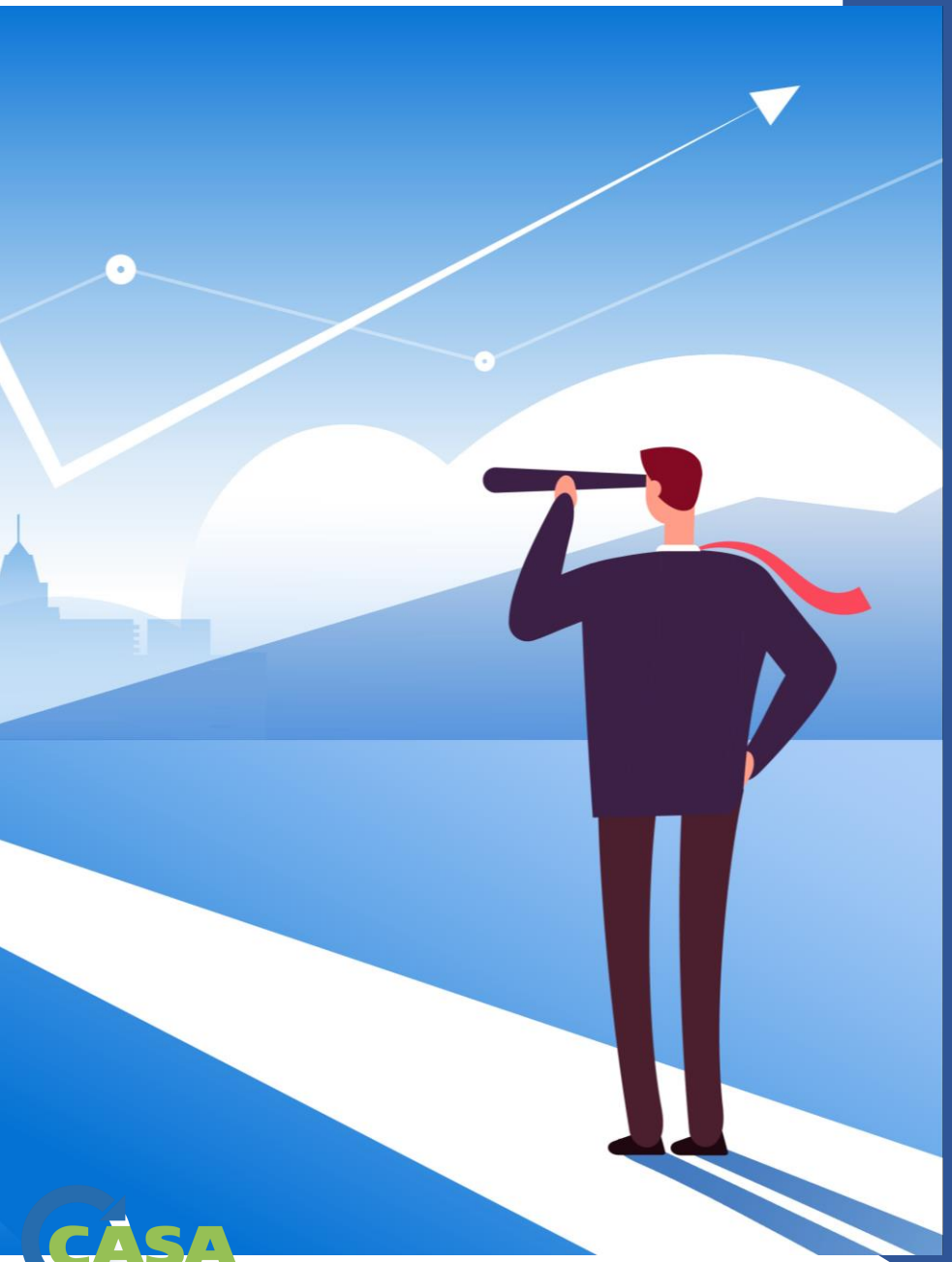
- Estimated budget: $10 M (shared by 145+ wastewater treatment facilities)
- Estimated duration: 3-4 years

Fiscal Year 2024	Fiscal Year 2025: Pay July 1, 2024	Fiscal Year 2026: Pay July 1, 2025	Fiscal Year 2027: Pay July 1, 2026
$200 per MGD, BACWA contributed on behalf of members, to be recovered	$1,000 per MGD, BACWA contributed on behalf of members, to be recovered	budget ~$1,250 per MGD, TBD based on findings of Step 1	budget ~$1,250 per MGD, TBD based on findings of Step 1



Study Activities

- Participant outreach
  - 145+ facilities statewide (working through regional associations)
  - Monthly Air Toxics Subgroup meetings, 2nd Wednesday's, 1-2 pm
- Formed Steering Committee
- Hired Project Manager – Yorke Engineering
- Phase I Kickoff – May 2024



Next Steps

- Continued outreach – need your participation in the Pooled Emissions Study to succeed, please reach out:
  - Invoicing – Lorien Fono, lfono@bacwa.org
  - Study details – Sarah Deslauriers sdeslauriers@casaweb.org
- Join CASA's monthly Air Toxics Subgroup mtgs for Study updates.
  Next: May 8th, 1-2 pm
- Join quarterly BACWA AIR Committee mtgs for Rule 11-18 updates.
  Next: May 29th 10 am-Noon

Questions

Contact Information:

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Pooled Emissions Study

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BACWA AIR
Rule 11-18

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Who is CASA?

- CASA is the leading voice for clean water agencies on regulatory, legislative and legal issues. We represent more than 135 public agencies that engage in the collection, treatment or disposal of wastewater.
- Our advocates engage with the State Legislature, Congress, and various regulatory agencies on behalf of our member agencies.
- We facilitate member engagement on important issues through our committees, workgroups, workshops, webinars, forums and events, including our two major conferences: a Winter Conference in January and Annual Conference in August.
- Our communications program includes social media engagement, a biweekly newsletter, and member alerts on important issues.
- Both elected Board/Council members and managers/staff at member agencies are active in all aspects of the organization.

CASA