

BOARD MEETING DATE: October 6, 2023

AGENDA NO. 3

PROPOSAL: Recognize Revenue, Appropriate Funds, Execute and/or Amend Contracts, and Issue Solicitations and Purchase Orders for U.S. EPA Grants

SYNOPSIS: Recently, U.S. EPA awarded competitive grants to enhance air quality monitoring in communities. South Coast AQMD was awarded two of these grants - one to expand its existing pilot sensor library program and one to conduct enhanced measurements of PM2.5. These actions are to recognize up to \$999,900 in revenue from U.S. EPA into the General Fund, appropriate up to \$999,900 in the Monitoring and Analysis' FY 2023-24, and/or FY 2024-25, and/or FY 2025-26 Budgets, execute and/or amend contracts, and issue solicitations and purchase orders to support these two projects.

COMMITTEE: Administrative, September 8, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize up to \$999,900 in revenue upon receipt from U.S. EPA into the General Fund to expand South Coast AQMD's existing pilot sensor library program, and conduct enhanced measurements of PM2.5;
2. Appropriate up to \$999,900 from the General Fund Undesignated (Unassigned) Fund Balance for the Monitoring and Analysis' (MAD) FY 2023-24 and/or, FY 2024-25, and/or FY 2025-26 Budgets, Services & Supplies Major Object, as indicated in Tables 1 and 2; and
3. Authorize the Executive Officer, in accordance with South Coast AQMD's Procurement Policy and Procedure, to execute and/or amend contracts, and issue solicitations and purchase orders to support efforts for the two U.S. EPA funded projects, as listed in Tables 1 and 2.

Wayne Nastri
Executive Officer

Background

On December 13, 2021, U.S. EPA released Request for Applications (RFA) # EPA-OAR-OAQPS-22-01 to announce the availability of funds for “Enhanced Air Quality Monitoring for Communities” projects. The RFA solicited applications from eligible entities to conduct ambient air monitoring of pollutants of greatest concern in communities with environmental and health outcome disparities stemming from pollution and the COVID-19 pandemic. South Coast AQMD submitted two grant proposals to U.S. EPA requesting funding in the total amount of \$999,900 for two separate projects: (1) “Empowering Community-based Air Quality Monitoring through South Coast AQMD’s Sensor Library Program” (funding requested: \$499,900), and (2) “Enhanced measurements of PM2.5 chemical composition and size distribution in Wilmington, California” (funding requested: \$500,000). South Coast AQMD was notified that both proposals have been selected for funding by U.S. EPA - one under the Inflation Reduction Act (Sensor Library Program) and one under the American Rescue Plan (Enhanced Measurements of PM2.5).

Proposal

Empowering Community-based Air Quality Monitoring Through South Coast AQMD’s Sensor Library Program

The objective of this three-year project is to offer a larger variety of air quality sensors for community members to borrow for appropriate applications and expand the number of communities. The program provides education about air quality and provides technical support through a dedicated sensor educational toolkit. The sensors used in this program will be calibrated and quality-checked prior to deployment to ensure they provide accurate data. The collected data will be accessible through an online portal where the public can visualize and analyze air quality information. This program, currently undergoing a pilot phase, will be initially focused on AB 617 environmental justice communities. Through this grant, the program will be expanded to include other communities in the Basin allowing additional participation.

South Coast AQMD will partner with non-profit community organizations, local governments, and academic institutions to deploy air quality sensors through AQ-SPEC. This project will enable high-quality data collection and sustained air monitoring, engage communities to improve local air quality, and empower students with Science, Technology, Engineering, and Math learning opportunities around air quality monitoring in support of communities.

Enhanced Measurements of PM2.5 Chemical Composition and Size Distribution in Wilmington, California

The main goal of this three-year project is to conduct enhanced monitoring of PM2.5 and its chemical components, and physical properties in Wilmington, California, a community that has been disproportionately impacted by air pollution and is part of the AB 617 community of Wilmington, Carson, West Long Beach. South Coast AQMD will build on existing partnerships with community representatives and the existing monitoring resources in the Wilmington community by adding additional measurement

capabilities. For this grant, a portable trailer will be equipped with advanced, commercially available, and fast-response instruments for stationary monitoring of PM_{2.5} and its main components, including several hazardous air pollutants. The results of this study will provide new information on major sources of air pollution such as ship emissions, ports activities, and goods movement and their relative contribution to air quality in Wilmington and the surrounding areas.

Proposed Purchase Through Solicitation Process

Data Management, Visualization, and Cloud Storage

Data management, visualization and storage capabilities are required to validate, analyze, and display sensor data that will be measured under the expanded Sensor Library Program funded by U.S. EPA . Once collected, all sensor data will be merged with other relevant air quality information into a data visualization platform that is currently being developed by South Coast AQMD staff. This action is to execute and/or amend contracts or issue purchase orders with vendor(s) selected from South Coast AQMD's list of prequalified vendors to support data management, visualization, and cloud storage capabilities for the Sensor Library Program in an amount not to exceed \$80,000, as listed in Table 1.

Proposed Purchases Through Sole Source Purchase Order

Sensor Calibration Upgrade

Aeroqual Ltd. has developed a remote Moment Matching (MOMA) technique to calibrate sensor networks based on regulatory data from existing air monitoring stations. Currently, MOMA can be applied to data from only Aeroqual sensors and further development is needed so that this calibration technique can be applied to data provided by sensors from all different vendors that will be used for the Sensor Library Program. This action is to execute a sole source contract with Aeroqual Ltd. for up to \$30,000 (as shown in Table 1) to enhance the capabilities of the MOMA technique. Aeroqual Ltd. is the only contractor that has the knowledge and experience necessary to complete this work.

Aerodyne Time-of-Flight Aerosol Chemical Speciation Monitor

Aerodyne's Time-of-Flight Aerosol Chemical Speciation Monitor (ToF-ACSM) is the only field monitoring system on the market that measures the mass loading and chemical composition of non-refractory aerosol particles in real-time. This system is designed for long-term unattended deployment and routine monitoring of the PM mass concentration and chemical composition including organics, sulfate, nitrate, ammonia, and chloride. This information is critical to satisfy the goals and objectives of the enhanced PM_{2.5} monitoring project funded by U.S. EPA . This action is to execute a sole source purchase with Aerodyne, Inc. for up to \$248,000 (as shown in Table 2) for the purchase of one of their ToF -ACSM system to conduct monitoring of PM mass concentration and chemical composition.

Xact® 625i Multi-Metal Monitor

The Xact® 625i is the only field x-ray fluorescence instrument that offers an Automated Data Analysis Plotting Toolset (ADAPT) package to analyze the measurements of over 40 different metals in ambient particles in real-time. The ADAPT package includes the hardware for on-site meteorological measurement and intuitive software which is accessed in the field or remotely through the onboard computer. The software platform generates multiple graphical reports in near real-time over user selected time periods to deliver insights on the temporal and directional variability trends of the measured metals. In addition, the Xact® 625i is the only multi-metal monitor with demonstrated ability to provide near-real time measurements of air toxic metals on a mobile platform. The metal data provided by the Xact® 625i is critical to satisfy the goals and objectives of the enhanced PM2.5 monitoring project funded by U.S. EPA . This action is to execute a sole source purchase with SailBri Cooper, Inc. for up to \$130,000 (as shown in Table 2) for the purchase one Xact® 625i monitor to conduct particulate metal measurements.

TSI Water-based Wide-range Ambient Monitoring Scanning Mobility Particle Sizer

TSI's Water-based Wide-range Ambient Monitoring Scanning Mobility Particle Sizer (SMPS™) is used to measure the size distribution of sub-micrometer particles and to better understand PM sources. This system, which is comprised of a classifier, wide range differential mobility analyzer, a water-based condensation particle counter, and an aerosol neutralizer is only available through TSI, Inc. and offers a unique combination of specifications and features that suits the specific goals and objectives of the enhanced PM2.5 monitoring project funded by U.S. EPA. This action is to issue a sole source purchase with TSI, Inc. for up to \$117,000 (as shown in Table 2) for the purchase of one TSI Water-based Wide-range Ambient Monitoring S MPS™ system to conduct size distribution measurements of PM.

Sole Source Justification

Section VIII.B.3 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award funded, in whole or in part with federal funds, may be justified. The request for sole source awards and purchases from Aeroqual Ltd., Aerodyne, Inc., SailBri Cooper, Inc. and TSI, Inc. is made under the provision B.3.a.: These items are only available from a single source. The request for sole source subawards identified in Table 1 is made under the provision B.3.c.: The awarding Federal agency or pass-through entity expressly authorizes non-competitive proposals in response to a written request from the non-Federal entity.

Benefits to South Coast AQMD

The implementation of these two projects will provide better education to AB 617 communities on the appropriate use and application of air quality sensors and advance the characterization of PM2.5 sources in the Wilmington area. The result of these studies will also help governmental organizations and other policymakers to better understand air quality issues at the community level and provide more input to policy decisions that protect the public from the impacts of air pollution.

Resource Impacts

Upon Board approval, sufficient funding from the two U.S. EPA grants will be available to support the Sensor Library and Enhanced PM2.5 Monitoring projects.

Attachments

Table 1: Proposed Expenditures for Sensor Library Program for FY 2023-24 through FY 2025-26

Table 2: Proposed Expenditures for Enhanced PM2.5 Monitoring Project for FY 2023-24 through FY 2025-26

Table 1

**Proposed Expenditures for Sensor Library Program
for FY 2023-24 through FY 2025-26**

Description	Account Number	Program Code	Estimated Total Cost
Air Quality Sensors for Different Applications (Up to 250 units, costing \$200 to \$4,999 each)	68300/77000*	43239	\$125,000
Sensor Supplies (e.g., Android phones, protective cases for short term loans, etc.)	68100	43239	\$6,000
Lab Supplies (consumables)	68050	43239	\$5,000
Data Management and Visualization	67450	43239	\$80,000 (Solicitation to Prequalified Vendor)
Sensor Calibration Upgrade	67450	43239	\$30,000 (Sole Source)
Subaward for Community Health Worker (Day One)	67450	43239	\$53,000
Subaward for Pomona (Clean & Green Pomona)	67450	43239	\$10,000
Subaward for Riverside (University of California, Riverside)	67450	43239	\$45,000
Subaward for Vista Hermosa (Vista Hermosa Community Group)	67450	43239	\$45,000
Subaward for fourth community partner	67450	43239	\$45,000
Subaward for City of Los Angeles, Mayor's Office	67450	43239	\$20,000
Outreach Activities (e.g., workshops, public meetings)	67450	43239	\$25,000
Participant Support Costs (for hosting sensors, @ \$100 per host)	67450	43239	\$10,000
Software for translating Sensor Guidebook (Adobe InDesign, 3-year access)	67450	43239	\$900
Total Appropriations Services & Supplies and/or Capital Outlays Major Object*			\$499,900

*During the procurement process, these items may be categorized as Capital Outlays or Services and Supplies, depending on whether the item is purchased or contracted as a service.

Table 2

**Proposed Expenditures for Enhanced PM2.5 Monitoring Project
for FY 2023-24 through FY 2025-26**

Description	Account Number	Program Code	Estimated Total Cost
Consumables, Tools, Hardware, and other Supplies	68050/68300	43238	\$5,000
Aerodyne Time-of-Flight Aerosol Chemical Speciation Monitor (Qty 1)	77000	43238	\$248,000 (Sole Source)
<u>Xact® 625i Multi-Metal Monitor</u> (Qty 1)	77000	43238	\$130,000 (Sole Source)
<u>TSI Water-based Wide-range Ambient Monitoring SMPS™</u> (Qty 1)	77000	43238	\$117,000 (Sole Source)
Total Appropriations Services & Supplies and/or Capital Outlays Major Object*			\$500,000

*During the procurement process, these items may be categorized as Capital Outlays or Services and Supplies, depending on whether the item is purchased or contracted as a service.