BOARD MEETING DATE: May 4, 2018 AGENDA NO. 4

PROPOSAL: Recognize Revenue, Appropriate and Transfer Funds and Issue Purchase Orders for Air Monitoring Programs and Equipment

SYNOPSIS: SCAQMD anticipates receiving up to $686,579 from the U.S. EPA and the California Air Pollution Control Officers Association for the PM2.5 Program. These actions are to recognize this revenue and appropriate funds for the PM2.5 Program into Science & Technology Advancement's (STA's) FY 2017-18 Budget and carry over any unexpended funds into STA's FY 2018-19 Budget. These actions are to also appropriate up to $178,484 for the remaining prior year's PAMS funding into STA's FY 2017-18 Budget and carry over any unexpended funds into STA's FY 2018-19 Budget; appropriate up to $37,705 for FY 2017-18 Supplemental CARB Subvention funds into STA's FY 2017-18 Budget; reallocate $30,000 from MATES V capital outlay savings within STA's FY 2017-18 Budget to purchase equipment; and transfer $60,000 between Major Objects in STA's FY 2017-18 Budget to purchase a yearly subscription to a monitoring network data software system. Finally, these actions are to issue purchase orders for air monitoring equipment.

COMMITTEE: Administrative, April 13, 2018; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize and appropriate, upon receipt, up to $212,800 from U.S. EPA for the FY 2018 PM2.5 Monitoring Program into Science & Technology Advancement's FY 2017-18 Budget (Org 47) ($461,000 was previously included in Salary and Employee Benefits within the FY 2017-18 Budget), as set forth in Table 1.
2. Recognize and appropriate, upon receipt, up to $12,779 in U.S. EPA PM2.5 Grant funds (through a sub-recipient agreement with the California Air Pollution Control Officers Association) for purchasing air monitoring equipment into Science & Technology Advancement's FY 2017-18 Budget (Org 44), as set forth in Table 1.
3. Appropriate any PM2.5 funds not expended by June 30, 2018, into Science & Technology Advancement's FY 2018-19 Budget, Services and Supplies and/or Capital Outlays Major Objects (Org 47 or 44).

4. Appropriate up to $178,484 for remaining prior year's PAMS funds from the General Fund Unassigned (Undesignated) Fund Balance into Science & Technology Advancement's FY 2017-18 Budget (Org 47), Services and Supplies Major Object, as set forth in Table 2.
5. Appropriate any PAMS funds not expended by June 30, 2018, into Science & Technology Advancement's FY 2018-19 Budget, Services and Supplies and/or Capital Outlays Major Objects (Org 47).
6. Appropriate up to $37,705 for FY 2017-18 Supplemental CARB Subvention funds from the General Fund Unassigned (Undesignated) Fund Balance and reallocate $30,000 from MATES V capital outlay savings into Science & Technology Advancement's FY 2017-18 Budget (Org 44), Capital Outlays Major Object, for the purchase of an ammonia gas analyzer (Table 3).
7. Transfer $60,000 from the Capital Outlays Major Object to the Services and Supplies Major Object in Science & Technology Advancement's FY 2017-18 Budget (Org 44) to purchase a yearly subscription to Envirosuite's monitoring network data software system.
8. Authorize the Procurement Manager, in accordance with SCAQMD Procurement Policy and Procedure, to issue sole source purchase orders for:
   a. One ammonia gas analyzer from Picarro Inc. in an amount not to exceed $67,705 (Table 3);
   b. One Partisol PM2.5 FRM sequential monitor from Thermo Fisher Scientific, Inc., in an amount not to exceed $20,000 (Table 1); and
   c. Two T640 PM2.5 continuous FEM monitors from Teledyne API in an amount not to exceed $60,000 (Table 1).

Wayne Nastri
Executive Officer

MMM:JCL:KD:AP:AK

Background

PM2.5 Program

Since 1998, U.S. EPA has provided funds under Section 103 for a comprehensive PM2.5 Air Monitoring Program. To date, there are 20 ambient SCAQMD monitoring stations operating 23 Federal Reference Method (FRM) PM2.5 monitors under U.S. EPA funding and 17 Federal Equivalent Method (FEM) PM2.5 continuous monitors. In addition, U.S. EPA has supported the expansion of the network to collect ongoing PM2.5 mass and chemical speciation at several sites within the South Coast Air Basin. The chemical speciation of fine particulate matter helps with the characterization of PM2.5 sources, air quality conditions and health impacts. SCAQMD is expected to receive up to $673,800 from the U.S. EPA for the annually funded PM2.5 Program.

In December 2017, the SCAQMD was informed that it can expect to receive up to $12,778.63 in one-time U.S. EPA PM2.5 Grant funds through a sub-recipient agreement with the California Air Pollution Control Officers Association (CAPCOA) to purchase FEM equipment for monitoring PM2.5. This is part of an effort to encourage phasing out filter-based FRM sequential samplers for collecting PM2.5 filter samples for gravimetric analysis and replacing them with more advanced instruments for monitoring PM2.5 on an hourly or near real-time basis.

PAMS Program

In February 1993, the U.S. EPA promulgated the PAMS regulations for areas classified as serious, severe or extreme non-attainment for ozone. These regulations require SCAQMD to conduct monitoring for ozone precursors with enhanced monitoring equipment at multiple sites. The PAMS Program also funds the meteorological upper air profilers at five locations. Since the onset of the PAMS Program, the U.S. EPA has annually allocated Section 105 supplemental grant funds in support of this requirement.

CARB Supplemental Subvention and MATES V Funding

FY 2017-18 CARB Supplemental Subvention in the amount of $37,705 is available for the purchase of equipment. In July 2017, the Board had approved $72,000 for the purchase of two dilution systems under the MATES V Program and actual expenditures were below the authorized amount. A $30,000 savings from the purchase of the dilution systems will be combined with the CARB Supplemental Subvention funding to purchase an ammonia gas analyzer in an amount not to exceed $67,705.

Monitoring Network Data Software

The Science & Technology Advancement (STA) FY 2017-18 Budget included funding under the Capital Outlays Major Object for the purchase of a subscription to Envirosuite, an air quality monitoring network data visualization and analysis system designed to support the management of air quality data in real-time. It was later determined that Envirosuite's system is a scalable Software as a Service (SaaS) product that does not require the purchase of software or a license, and is not an intangible or capital asset. Therefore, a transfer of funds from the Capital Outlays Major Object to Services and Supplies Major Object is required before this product can be procured.

Proposal

PM2.5 Program (FYs 2017-18 and/or 2018-19)

SCAQMD anticipates receiving a U.S. EPA award of $673,800 in Section 103 Grant funds for the continuation of the PM2.5 Program through March 31, 2019. These actions are to recognize revenue up to $212,800 from U.S. EPA for the FY 2018 PM2.5 Monitoring Program and appropriate funds into STA's FY 2017-18 Budget ($461,000 was previously included in Salary and Employee Benefits Major Object within the FY 2017-18 Budget), as set forth in Table 1. These actions are to also recognize revenue up to $12,779 in U.S. EPA PM2.5 Grant funds through a sub-recipient agreement with

CAPCOA and appropriate funds into STA's FY 2017-18 Budget as partial payment for the sole source purchase of FEM equipment for monitoring PM2.5 (see Table 1). The balance required to purchase this PM2.5 monitor (approximately $17,221) will be covered using part of the U.S. EPA Section 103 Grant funds. Any funds not expended by June 30, 2018, will be appropriated into STA's FY 2018-19 Budget.

PAMS Program (FYs 2017-18 and/or 2018-19)

There is a balance of $178,484 from the previous year's PAMS funding. This action is to appropriate up to $178,484 into STA's FY 2017-18 Budget, as set forth in Table 2. Any funds not expended by June 30, 2018, will be appropriated into STA's FY 2018-19 Budget.

CARB Supplemental Subvention and MATES V Funding

An ammonia gas analyzer is needed for the speciation of PM2.5 along with regional modeling efforts. Consequently, these actions are to appropriate up to $37,705 for FY 2017-18 Supplemental CARB Subvention funds and reallocate $30,000 from MATES V capital outlay savings into STA's FY 2017-18 Budget, Capital Outlays Major Object, for the purchase of an ammonia gas analyzer (see proposed purchases below).

Monitoring Network Data Software

This action is to transfer $60,000 from Capital Outlays Major Object to Services and Supplies Major Object in STA's FY 2017-18 Budget to purchase the yearly subscription for Envirosuite's air quality monitoring network data visualization and analysis system. It will not be an intangible or capital asset. A monthly fee will be paid to Envirosuite to run their cloud computing system interface software on a Web browser.

Proposed Purchases through Sole Source Purchase Orders

Ammonia Gas Analyzer

An ammonia gas analyzer is needed to help with the verification of the ammonia inventory used for the speciation of PM2.5 along with regional modeling efforts. This instrument provides near real-time measurements that will coincide with the chemical speciation of fine particulate matter. Historically, the SCAQMD has used fine particulate filter samples for the analysis of ammonia. Due to the need to identify the wood smoke contribution to fine particulate matter, the filter historically used for ammonia measurements is now being analyzed for wood smoke precursors for the MATES V study. Two ammonia gas analyzers are needed to supplement the fine particulate speciation; one is being provided by the University of California Riverside and staff recommends procuring the other instrument through a sole source purchase order from Picarro Inc. The estimated cost of the ammonia gas analyzer is $67,705 (see Table 3).

Partisol PM2.5 FRM Monitor
The U.S. EPA Section 103 grant award includes one-time funding for the purchase of one FRM sequential PM2.5 sampler from Thermo Fisher Scientific, Inc. The Partisol PM2.5 monitor is the only commercially available FRM sampler still in use in SCAQMD's air monitoring network; and it is the only monitor that would allow SCAQMD to satisfy U.S. EPA collocation requirements, which dictate that new FRM samplers added to the network must use the same sampler/method code as those that are already in operation within the network. The cost of this sampler will not exceed $20,000 (see Table 1).

T640 PM2.5 Continuous FEM Monitor
The U.S. EPA Section 103 Grant award includes one-time funding of $30,000 for the purchase of one Teledyne API T640 PM2.5 continuous FEM monitor. Additional funding from this Section 103 Grant award of approximately $17,221 will be added to the funding received through the sub-recipient agreement with CAPCOA for the purchase of a second Teledyne T640 instrument (see Table 1). The Teledyne API Model T640 is the only real-time, continuous PM2.5 mass monitor that uses scattered light spectrometry for measurement and can provide one-minute or better time resolution. Because of the proprietary technology used, this instrument requires less maintenance than more traditional filter-based FEM samplers used in our network. Thus, this specific monitor has the potential to reduce operational costs associated with running the SCAQMD PM2.5 monitoring network. The cost of the two instruments will not exceed $60,000 (see Table 1).

Sole Source Justification
Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for sole source purchases from Picarro Inc. is made under Section VIII.B.2.c (3): The project involves the use of proprietary technology. Picarro Inc. is the only manufacturer of an ammonia analyzer that is portable, rugged and capable of parts-per-billion sensitivity.

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. Specifically, this request for two sole source awards is made under the provision B.3.a.: The item is available only from a single source. The Partisol PM2.5 monitor from Thermo Fisher Scientific, Inc., is the only instrument that would allow SCAQMD to satisfy U.S. EPA collocation requirements, which dictate that new FRM samplers added to the network must use the same sampler/method code as those that are already in operation within the network. The Teledyne API T640 FEM instrument is the only real-time, continuous PM2.5 mass monitor that uses scattered light spectrometry for measurement and can provide one-minute or better time resolution.

Resource Impacts
The U.S. EPA estimates that SCAQMD will receive a Section 103 FY-2018 PM2.5 Grant award of up to $673,800. Of this amount, $461,000 has already been included in STA's budget, leaving $212,800 to be appropriated through this Board action. Additionally, the SCAQMD may receive up to $12,779 in PM2.5 funds through a sub-recipient agreement from CAPCOA. Accordingly, up to $225,579 in revenue will be recognized and appropriated as set forth in Table 1. U.S. EPA Section 103 Grant funding will support the continuation of the PM2.5 Monitoring Program, including equipment and services and supplies necessary to meet the objectives of the Program.

The U.S. EPA prior year's remaining PAMS Program funds will help support continued efforts under the PAMS Program.

FY 2018 PM2.5 funding, FY 2017-18 CARB Supplemental Subvention Funding and MATES V funding will support the purchases of air monitoring equipment for PM2.5 and ammonia measurements in amounts not to exceed $80,000 and $67,705, respectively, from STA's FY 2017-18 Budget (Org 47 or 44), Capital Outlays Major Object, as indicated in Tables 1 and 3.

Attachments
Table 1 - Proposed PM2.5 Expenditures FY 2017-18 and/or 2018-19
Table 2 - Proposed PAMS Expenditures for FY 2017-18 (Remaining Prior Year's Balance)
Table 3 - Proposed Purchase through Sole Source Purchase Order

Table 1
Proposed PM2.5 Expenditures FY 2017-18 and/or 2018-19

Account Description	Account Number	Program Code	Estimated Expenditures
Services & Supplies Major Object:			
Rents and Leases Structure	67350	47500	$ 12,500
Maintenance of Equipment	67600	47500	37,779
Building Maintenance	67650	47500	12,500
Travel (National Ambient Air Monitoring Training Conference)	67800	47500	6,000
Laboratory Supplies	68050	47500	60,000
Office Expenses	68100	47500	6,000
Small Tools	68300	47500	10,800
Total Services & Supplies:			**$145,579**
Capital Outlay Major Object:			
Partisol PM2.5 FRM Monitor (1)	77000	47500	20,000
PM2.5 Continuous FEM Monitor (2)	77000	47500/44716	60,000*
Total Capital Outlay:			**$80,000**
FY 2017-18 Appropriations			
U.S. EPA Clean Air Act Section 103 Grant funds for the PM2.5 Program			212,800
Sub-recipient agreement with CAPCOA			12,779
Total FY 2017-18 Appropriations:			**$225,579**
Salaries & Benefits*^			**$461,000**
Total Award:			**$686,579***

Funds not expended by June 30, 2018, will be carried over to FY 2018-19.
*This includes partial funding in the amount of $12,779 from a sub-recipient agreement for receiving EPA PM2.5 Grant Funds through CAPCOA.
*^Salaries and Benefits are already included in the adopted FY 2017-18 Budget.

Table 2
Proposed PAMS Expenditures for FY 2017-18 (Remaining Prior Year's Balance)

Account Description	Account Number	Program Code	Appropriations Not to Exceed (a)
Services & Supplies Major Object:			
Rents & Leases Structure	67350	47530	$ 6,000
Professional and Specialized Services: Station Upgrades	67450	47530	20,000
Temp Agency Services	67460	47530	4,000
Maintenance of Equipment	67600	47530	50,000
Building Maintenance	67650	47530	16,000
Communications	67900	47530	4,000
Laboratory Supplies	68050	47530	25,000
Office Expense	68100	47530	8,000
Small Tools	68300	47530	36,000
Miscellaneous	69500	47530	9,484
FY 2017-18 Appropriations:			**$178,484**

(a) Funds not expended by June 30, 2018, will be carried over to FY 2018-19.

Table 3
Proposed Purchase through Sole Source Purchase Order

Description	Qty	Funding Source	Estimated Cost
Picarro Inc. Ammonia Gas Analyzer Program Codes (44716/44443)	1	Supplemental CARB Subvention funds ($37,705) and MATES V funds reallocation ($30,000)	$67,705
Total Proposed Purchase Through Sole Source Purchase Order			**Not to Exceed $67,705**