2019 PQAO Training Presentation Descriptions

DAY 1 GENERAL SESSION (listed chronologically)

5-Year Network Assessment
Craig Anderson

Beginning on July 1, 2010, federal regulations require each state to assess its ambient air quality monitoring network every five years. The methods for performing the assessment are completely flexible and only need to meet a few criteria. This presentation will discuss the CFR requirements for assessments; the difference between 5-year assessments and Annual Network Plans; what was done in California for the 2015 assessment; ideas for what may be included in the 2020 assessment for the CARB PQAO; and a timeline for completing the 2020 assessment.

Network Design
Dena Vallano

This presentation will cover several topics related to network design to assist with decision-making for designing and maintaining a robust ambient air monitoring network. Topics will include balancing resources and priorities when designing a network, the EPA annual network plan and network assessment processes, meeting federal minimum monitoring requirements, considerations when making network changes (i.e. collocation requirements), and finally highlighting guidance and considerations for using sensors/non-regulatory monitoring to complement your regulatory monitoring network.

The Importance of Data: End User Perspective
Theresa Najita and Yushuo Chang

The presentation provides an overview of how monitoring data is used to determine where pollution problems exist and how to address them. First, the presentation focuses on CARB's use of criteria pollutant data collected for regulatory purposes, how concentrations relate to the state and federal air quality standards, and how the data is used in the planning process. Second, the presentation will focus on how the Placer County Air Pollution Control District, as a local air district, applies air monitoring data for public information, regulatory decision, and mitigation/reduction evaluation. The presentation includes real cases from within the District for discussion.

Station Operations
Nathan Trevino

An overview of station operations and the importance of the site operator in generating data. The site operator is an appreciated first line of defense in a robust quality management system and the foundation of generating valid, quality data.

Life of a PM2.5 Filter
(Video)

A visual exploration of the processes and procedures surrounding PM2.5 filters. Watch as a filter travels through initial processing at the laboratory, sampling in the field, and back to the laboratory for final processing and storage. The video will highlight important operational practices required to ensure sample validity and data quality.

DAY 1 BREAKOUT SESSIONS (listed alphabetically)

Exceptional Events Process
Michael Flagg

The Exceptional Events presentation will include and broad overview of the Exceptional Events Rule requirements, available EPA guidance documents and other resources, definition of "regulatory significance", and the process for flagging, notifying, and submitting exceptional event demonstrations to CARB and EPA for review.

Network Design: Real World Exercises
Joel Cordes and Joe Tona

Network Design is not just for setting up a new network. It covers the upkeep and modification of existing networks. This presentation will provide two examples of network modifications which have occurred in two different Air Pollution Control District's networks in California and discuss the steps which were taken to complete the modifications. This presentation will review the federal network design rules and objectives and minimum monitoring requirements and how they were applied for these two examples. At the end there will then be an exercise on site relocation versus shutdown. Small groups will evaluate a fictitious network and decide whether to shut down or relocate a monitoring station. The class will discuss the different options at the end.

PM2.5 Federal Reference Method: Bridging the Gap between Laboratory and Field Operations
Dustin Goto and Elias Villa

A dual perspective from laboratory and field staff on the requirements of PM2.5 FRM filter-based sampling. Focuses include criteria for sample handling and custody, timelines to meet to ensure sample validity, and the importance of communication.

SOPs and Addenda
Joel Craig and Leah Mathews

This presentation provides a look into the preparation of quality management documents from both a district and CARB perspective. Topics include the importance of quality management documents, where and how to access resources, document requirements, and the review and approval process.

Station Operations: A Day in the Life
Randy Lam

A typical day in the life of a station operator. Discusses an overview of the day to day requirements of site operation.

Station Operations: Q&A Forum
Ali Adams, Al Dietrich, Reggie Smith, and Karl Tupper

A panel of experts will be available to answer questions related to all site operations. The panel includes experts on: site operations, calibrations, data analysis, and laboratory analysis.

The Top 3 Problems with Station Documentation and Solutions
David Medina

There's a common saying in the air monitoring field; "If you didn't write it down, it didn't happen." This presentation will delve into the importance of station documentation and what documentation is required on site. Included will be the top three documentation issues air monitoring personnel may face and their solutions. The session will conclude with a station logbook activity.

Where Do All the Data Go?
Emily Gorrie

CARB has a long history of displaying aerometric data online. Our goal is to make data and statistics highly accessible to both agencies and the public. To meet this goal, we maintain several public websites with our users in mind. CARB has two long-standing databases and websites: iADAM for regulatory data and statistics, and AQMIS, which provides these data in near-real time. With a growing need for higher spatial-resolution monitoring and improved public data access (in support of AB 617), CARB is developing a new web portal, AQ-View. AQ-View combines community-scale and regional-scale data in a single user-friendly display.

2019 PQAO Training Presentation Descriptions

DAY 2 GENERAL SESSION (listed chronologically)

Technical Systems Audits
Leena Khangura

This presentation will detail what a Technical Systems Audit (TSA) entails, its purpose, what to expect during the process, and the most common findings. Several key areas addressed in a TSA will be discussed, with examples and tips on how to avoid findings in each area.

CARB Air Monitoring Field Training Program
Kathy Gill

This presentation introduces CARB's new field training program for site operators and calibrators and includes information on how you can adopt the document for use in your own organization.

Performance Audits: Current Practice and Future Activities
LaMar Mitchell and Aaron Plasencia

The audience will learn the current techniques for auditing gaseous instruments, focusing on lower audits levels, and for conducting flow rate audits on particulate samplers. Then, the latest technologies proposed for future use will be discussed. They include Airpointer, drones, wind tunnel, and remote sensors. Applications to community monitoring and other projects will also be discussed.

AQDAs and CANs: Friend or Foe
Honza Rejmanek

Details on an Air Quality Data Action (AQDA) requests will be discussed, including process and resolution scenarios. The presenter will end the talk with a quick comparison of an AQDA against a Corrective Action Notification, and its process and resolutions.

Standards Laboratory and NIST Traceability: The Truth is Out There!
Louise Sorensen

In this talk, the audience will learn what services CARB's Standards Lab can provide and how to request the correct service. In addition, the essential elements of traceability will also be discussed.

Why QC Program is Critical and Data Validation Template
Michael Flagg

U.S. EPA will provide an overview of the importance of QC programs and a brief introduction to U.S. EPA's QA Handbook Vol. II Validation Templates.

One Point QC Checks: A View of District Operations
Mallory Ham

Ventura County APCD will provide a district view point on performing 1-point QC checks for ozone, including the concentration range and frequency which 1-pt QC checks are performed by the District, and common things to consider when performing these QC checks for your site in order to determine their validity.

Q&A Session
Panelists: Kathy Gill, Ken Stroud, and Gwen Yoshimura
Moderator: Patrick Rainey

A panel of experts will be available to answer questions related to all air monitoring activities. The panel includes experts on: field operations, community monitoring, and regulatory programs.

DAY 2 BREAKOUT SESSIONS (listed alphabetically)

Air Quality Data Validation
Aman Bains

The presentation highlights that validation is more than bracketing data with valid QC checks. It is used to identify erroneous values from valid values during the data review process. This presentation will define the criteria, tools, and data review process needed for validating data before it is submitted to AQS.

AQ-Spec: Sensor Performance Evaluations
Brandon Feenstra

SCAQMD has established the Air Quality Sensor Performance Evaluation Center (AQ-SPEC) program. The AQ-SPEC program aims at performing a thorough characterization of currently available "low-cost" sensors under ambient (field) and controlled (laboratory) conditions. In this presentation recent results of low cost sensor evaluations are explained, compared, and discussed. Future plans for AQ-Spec program will be described.

Calibrations vs. Performance Evaluation Audits for Gaseous Instruments
Karl Tupper and Mike Hamdan

In this talk, the audience will learn the differences between a calibration and an audit of the same gaseous instrument, what standards are used in each procedure, and what the operator can expect during each.

CARB's Sensor Performance Evaluation Program
Koki Shimohashi

Low cost sensor use is becoming more widespread, and as such many questions have arisen regarding sensor performance and evaluation. This presentation will delve into the current sensor market landscape, the goal of sensor evaluations, and CARB's sensor evaluation program. Project highlights will include evaluation of sensors used during the Camp Fire and description of CARB's sensor evaluation chamber.

Electronic Logbooks: Options and Considerations
Patrick Rainey, Brian Russell, and Taylor Ziolkowski

This presentation will discuss electronic field documentation solutions in the context of electronic logbooks. Great Basin Unified APCD will share their system for electronic logbooks and EarthSoft will discuss EQuIS, their off-the-shelf system. Considerations to take into account when transitioning to electronic logbooks will also be covered.

Keeping Things Going: Preventative Maintenance, Instrument Repair, and Troubleshooting
Matt Razavi

This presentation provides a review the elements of an effective instrument maintenance program. This includes a discussion on preventative maintenance as a piece of ongoing quality control, instrument repair, equipment replacement, and troubleshooting. The discussion will conclude with a troubleshooting exercise.

Met Data: An Open Forum
Charles Knoderer and Honza Rejmanek

This presentation will describe the many uses of meteorological (Met) data, and its importance in forecasting air quality, determining exceptional events, and use in network assessment. Included will be input on the common parameters and tools used to collect Met data, and how to validate and audit Met data.

Metrological Traceability: A Game of JeoParody
Louise Sorensen

In this fun break-out session, the speaker will discuss the definition of traceability and the details of the seven essential elements behind traceability. The audience will then be challenged with a question-and-answer session in the style of Jeopardy.

Post-AQS Data Confirmation
Aman Bains

This presentation is a walkthrough of AQS reports recommended for review during the data certification process, and highlights the importance of data review as a function of quality control. Example reports will feature how to check completeness, improper coding, precision/bias values, flagging, and justifications, among others.

2019 PQAO Training Presentation Descriptions

DAY 3 GENERAL SESSION (listed chronologically)

PQAO Updates and Website Tour
Mike Miguel and Andrea McStocker

PQAO updates will include new information on technical system audits, major accomplishments, and monitoring roles and responsibilities. A brief webpage tour will highlight important resources on CARB's Quality Assurance website.

California Community Air Monitoring
Jeremy Smith

Assembly Bill 617 (AB 617) continues California's environmental leadership in establishing innovative new policies to improve air quality. This bill directs new community-focused and community-driven action to reduce pollution and improve public health in communities that experience disproportionate burdens from air pollutant exposure. This presentation will include discussion of community air monitoring as part of AB 617, community air monitoring approaches and tools, and emerging or novel community air monitoring applications.

DAY 3 BREAKOUT SESSIONS (listed alphabetically)

2B Technologies: Ozone and NOx Instrument Demos

This is a hands on demonstration of 2B Technologies Personal Ozone Monitor (POM), Model 405 nm NO2/NO/NOx Monitor, and Model 205 Dual Beam Ozone Monitor.

Consistency of Null Code Usage in AQS
Kimberly Mitchell

The breakout session will provide examples of commonly encountered situations and the type of Null codes that should be used. It will provide information on commonly used Null codes throughout the PQAO, and which codes to avoid when invalidating data.

Corrective Action Processes
Aman Bains, Kevin Durkee, and Kate Hoag

In this break-out session, CARB will discuss what constitutes a corrective action notification (CAN), with options that an air district can choose. Several scenarios will be presented to help the audience understand when a CAN is or is not initiated. SCAQMD and BAAQMD will give overviews of the districts' own corrective action request and quality assurance alert, and the purpose and use of each.

Excel Based Electronic Documentation System
Joel Craig

The presentation will describe and demonstrate an electronic documentation system specifically designed to address all documentation in ambient air monitoring station operation. This modular system allows for easy customization for each agency's procedures as well as differing pollutant and meteorological measurements.

Met One: Instrument Demo

TBD

Mobile Optical Remote Sensing for Air Quality and Emission Monitoring
Olga Pikelnaya

FluxSense is mobile analysis tool using Solar Occultation Flux (SOF), which is currently being used by South Coast Air Quality Management District (SCAQMD). This presentation will describe how it can be used to identify emission and leakage sources. The pollutants which can be identified with FluxSense will be discussed. SCAQMD will describe current and potential future uses of the FluxSense technology.
Day 2 Breakouts

Northern Sonoma County APCD Camp Wildfire Response
Aman Bains

This presentation is a case study describing Northern Sonoma County Air Pollution Control District's response to air quality impacts of the recent Camp Fire. Included is a discussion of the instruments and sensors that were available and deployed to monitor the event. The results of the monitoring are reviewed and compared. Also discusses are concerns and recommendations for communication with the public.

STI AirNow
AirNow-Tech is a password-protected website for air quality data management analysis, and decision support. This session is a live demonstration of the website and its capabilities.

Technology Update, Regulatory PM Monitoring
Simon Cheung

This presentation is an update on regulatory particulate matter (PM) monitoring methods. It includes a background of California's PM problem and monitoring instrument options used by CARB. The presentation will conclude with a discussion of three field evaluations CARB performed on a Teledyne API T-640 monitor.

Teledyne API: T640 Demo

This is a hands on demonstration of the Teledyne API T-640 PM mass monitor. Focus will include demonstrations of the general operation of the monitor, backpressure compensation, and PMT check/adjustment with the Spandust.

Toxic Ambient Air Monitoring Programs
Dustin Goto, Ali Adams, and Yuniang Zhao

This presentation provides a brief overview of the CARB Monitoring and Laboratory Division (MLD) Toxic Ambient Air Monitoring Programs. Presenters will give a Field and Laboratory perspective, coupled with new technologies and monitoring techniques within the Study of Neighborhood Air near Petroleum Sources (SNAPS).

Wildfire and Incident Air Monitoring Response Coordination
Joseph McCormack

This presentation discusses a variety of wildfire response methods used by CARB's Incident Air Monitoring Section. These include modelling and low to high cost mobile network sensors and instruments. Discussion of acquiring data, interpretation and providing to public in timely manner. Overview of several data visualization sites available.

2019 PQAO Training Speaker Biographies

Alicia Adams
California Air Resources Board

Ali Adams is a PM2.5 Laboratory Analysts with CARB's Monitoring and Laboratory Division (MLD) in Sacramento, California. The MLD PM2.5 lab analysts handle more than 16,000 weighing's per year for 32 monitoring sites, and support periodic PM2.5 research projects and sister laboratories in the State. She has been actively involved in CARB Technical System Audits, and ongoing improvements to the PM2.5 program and laboratory processes.

Craig Anderson
California Air Resources Board

Craig Anderson is an Air Pollution Specialist in CARB's Air Quality Analysis Section and is currently working on monitoring network design and assessment, data certification, federal ozone designations, and analysis projects supporting State Implementation Plans. Craig has over 20 years of air quality experience in a wide range of areas, including operational ozone and PM2.5 forecasting; developing and managing real-time air quality information systems; performing exceptional event analyses; permitting for stationary sources; and preparing environmental impact reports. Craig has a B.S. in Atmospheric Science from U.C. Davis and a M.S. in Atmospheric Science from Rutgers University.

Aman Bains
California Air Resources Board

Aman Bains has over seven years of experience with ARB's Monitoring and Laboratory Division. Aman is currently an Air Resources Engineer and works for the Quality Management Section. His primary responsibilities include serving as an air monitoring liaison for local air districts and developing and reviewing quality management documents.

Yushuo Chang
Placer County Air Pollution Control District

Yushuo Chang is the Planning and Monitoring Manager at Placer County Air Pollution Control District. Mr. Chang supervises the District's tasks on air quality plan development, incentive programs, the smoke management program, CEQA review program, and the air monitoring network. He has participated with CARB's Roseville Rail Yard Study on potential relative risk from diesel locomotive emissions and was the Rail Yard air monitoring project manager. In addition to his normal assignments, Yushuo is responsible for the District's AB 617 program. Prior to working with the agency, Yushuo received his Doctor of Philosophy degree in Environmental Engineering from University of Southern California.

Simon Cheung
California Air Resources Board

Simon Cheung is one of the air quality monitoring instrument specialists with CARB's Monitoring and Laboratory Division in Sacramento, California. He has been actively involved in recent development to continuous PM instruments for the regulatory PM monitoring program. In the Operation and Data Support section, he is also responsible for administering the AQ data management system that reports real-time and for-record data from the CARB's ambient air monitoring network. Simon is a Professional Engineer in the state of California, with a bachelor's degree in Mechanical Engineering from UC Berkeley and a master's degree in Mechanical Engineering from CSU Sacramento.

Joel Cordes
Santa Barbara County Air Pollution Control District

Joel Cordes is the Principal Monitoring Specialist at Santa Barbara County Air Pollution Control District in Santa Barbara California. He has a B.S. in Mechanical Engineering from the University of Texas at Austin. Joel manages the operation of Santa Barbara's air monitoring network and oversees the collection of data from the air monitoring network in addition to CEMS data from sources throughout the county. Joel has been with the APCD since 1992. Prior to the APCD, Joel worked in private industry designing ambient air and source monitoring instrumentation and systems.

Joel Craig
Independent Air Quality Consultant

Joel Craig has almost 40 years of experience in ambient air and meteorological monitoring. Mr. Craig has managed monitoring efforts for local air pollution control districts in California as well as air monitoring projects as a part of large international consulting firms. Mr. Craig has been working as an independent consultant for the past 8 years, working for local air districts and Tribal environmental departments in California.

Albert Dietrich
South Coast Air Quality Management District

Albert Dietrich is the Principal Air Quality Instrument Specialist responsible for Atmospheric Measurements Operations within the Science & Technology Advancement Division. At this time he oversees a network of over 35 ambient air monitoring stations and is responsible for organizing the day to day operations of this network. Al has been with SCAQMD for 33 years and has spent time in the Special Monitoring group, the Support/Repair section, Air Monitoring Operations and the Data Validation Sections. Al participated in implementation of the NATTS, NCORE, and Near-Road monitoring networks.

Kevin Durkee
South Coast Air Quality Management District

Kevin Durkee has been with South Coast AQMD for more than 29 years, first as an Air Quality Specialist, then as Senior Meteorologist for 10 years before becoming Quality Assurance Manager in late 2017. His experience forecasting, analyzing and modeling air pollution brings a broad understanding of end-user data needs to the Monitoring & Analysis Division. Kevin has a B.S. in Atmospheric Sciences from UCLA. While the QA position brings some new challenges, Kevin welcomes the opportunity to work with the many dedicated people in the air quality measurements community.

Brandon Feenstra
South Coast Air Quality Management District

Brandon Feenstra is an Air Quality Specialist at South Coast AQMD. Brandon has been working in the Air Quality Sensor Performance Evaluation Center (AQ-SPEC) since 2014. He is responsible for the field deployment aspect of AQ-SPEC evaluations and for designing deployable sensor solutions that can be incorporated into SCAQMD's ambient air monitoring network. Mr. Feenstra received his Bachelor of Science degree in Chemistry, his Master of Public Administration, and his Master of Science in Earth & Environmental Sciences degrees from California State University, San Bernardino. Brandon is currently a PhD student at the University of CA, Riverside in Chemical and Environmental Engineering with his research focusing on low-cost air sensing solutions.

Michael Flagg
United States Environmental Protection Agency

Michael Flagg has been working on the Air Monitoring Team in the Air Quality Analysis Office at EPA Region 9 for 10 years and has focused on a number of different air quality issues throughout the region. Most recently, Michael is the geographic lead for Arizona DEQ and Imperial County APCD and has been focusing on Ozone issues.

2019 PQAO Training Speaker Biographies

Kathy Gill
California Air Resources Board

Kathy Gill graduated from Wayne State University in Detroit, Michigan with a degree in biology. She began working at CARB in 2001 in the Operations Planning and Assessment Branch of the Monitoring and Laboratory Division planning special monitoring projects for SB25, the Children's Environmental Health Protection Program. She moved on to manage the Organics Laboratory and is now Chief of the Air Quality Surveillance Branch. Her responsibilities include overseeing the operation of CARB's ambient air monitoring network throughout California.

Emily Gorrie
California Air Resources Board

Emily is an Air Pollution Specialist in the Consumer Products and Air Quality Assessment Branch of the Air Quality Planning and Science Division. The section is responsible for maintaining aerometric data and statistics and making these data available online through CARB's ADAM and AQMIS websites. Emily has worked on the ADAM and AQMIS databases and webpages for nearly 3 years, and is helping create CARB's new AQ-View community air quality monitoring data portal.

Dustin Goto
California Air Resources Board

Dustin Goto graduated from California State University, Sacramento with a Bachelor of Arts in Geography and Computer Cartography. Dustin began his career with the California Air Resources Board (CARB) in 2005, working in the Quality Assurance Section supporting the performance audit program. He currently works in the Air Monitoring North Section where his primary responsibilities include field calibrations at CARB and district monitoring stations, station operation, and second level review of monitoring data. Dustin has also served on the Cal/EPA Enforcement Training Team and has presented at the Air and Waste Management Association's Air Quality Measurements Methods and Technology conference on greenhouse gas monitoring.

Mallory Ham
Ventura County Air Pollution Control District

Mallory Ham is the manager of the Monitoring Division at the Ventura County Air Pollution Control District. Mallory began his career with the district as an Air Pollution Meteorologist. In addition to his years forecasting air quality and overseeing meteorological operations, he has worked in data quality assurance, ambient air monitoring operations, data acquisition systems, agricultural burning, and instrument repair. He earned his bachelor's degree in Atmospheric Science from UCLA and has worked for the District since 1997.

Mike Hamdan
South Coast Air Quality Management District

Mike Hamdan is a Senior Air Quality Instrument Specialist in the Quality Assurance branch at the South Coast Air Quality Management District. He has over 18 years of experience at the agency. In addition to his time in quality assurance, Mike has worked in the Data Validation group which handled final data review and submittal to AQS. As part of his current position his primary responsibility is in conducting Performance Evaluation audits for gaseous instruments at over 30 air monitoring stations in the South Coast Air Basin. Mike earned a Bachelor's degree in engineering at Cal State Long Beach.

Kate Hoag
Bay Area Air Quality Management District

Kate Hoag has been measuring and analyzing air quality or pollutant exposure data since 1995. She is currently an Assistant Manager at the Bay Area AQMD where she oversees a section responsible for providing technical assistance and air quality data analysis to a variety of programs in the agency including community health protection, source test, rulemaking, and enforcement. She also served as the agency's Quality Assurance Officer for over three years. Prior to joining the Air District in 2015, she worked at Region 9 EPA and the School of Public Health at UNC-Chapel Hill. Kate earned a MS in Atmospheric Science from Colorado State University and a Ph.D. in Earth and Planetary Science from UC Berkeley.

Leena Khanugra
California Air Resources Board

Ms. Khangura is an Air Pollution Specialist with the Monitoring and Laboratory Division at CARB. Her work in quality assurance includes four years in the private sector; and ten years with CARB in the Quality Assurance Section. She obtained a Bachelors degree in Biological Sciences from California State University, Chico. In the past ten years, Ms. Khangura has been responsible for conducting thousands of performance evaluations for criteria pollutants at hundreds of air monitoring sites throughout the State. Additionally, for the last three years she has been a member of CARB's technical systems audit (TSA) team. This team conducts comprehensive audits for those Districts within CARB's Primary Quality Assurance Organization, and evaluations the District's entire air monitoring program.

Charles Knoderer
Bay Area Air Quality Management District

Charley Knoderer is the manager of the Meteorology section at the Bay Area Air Quality Management District and has been with the Air District since 2014. Prior to joining the Air District, he worked at Sonoma Technology, Inc. (STI) in Petaluma, California. Prior to joining STI in 2000, Charley obtaining his M.S. in Atmospheric Science from the University of Wisconsin, Madison, and his B.S. in Atmospheric Science from the University of California, Davis. Charley obtained his Certified Consulting Meteorologist certification from the American Meteorological Society in 2014.

Randy Lam
South Coast Air Quality Management District

Randy Lam is a station operator in atmospheric measurements for the South Coast Air Quality Management District. Prior to joining the SCAQMD he was a high school science teacher in Biology, Earth Science, Forensics and Oceanography. Randy graduated with a Bachelor of Science in Biology and a Master of Arts in Teaching from the University of California, Irvine.

Leah Mathews
California Air Resources Board

Leah Mathews earned her bachelor's degree in Physics from the University of Pacific and her master's degree in Civil Engineering from the University of Southampton, United Kingdom. She began her career with CARB working in the Laboratory Support Section supporting ambient air monitoring programs throughout the state, and currently works in CARB's Quality Management Section. Her primary responsibilities include writing and reviewing quality management documents, providing quality assurance/quality control support, and performing various liaison activities between CARB and local air districts.

Joseph McCormack
California Air Resources Board

Joseph McCormack is an Air Pollution Specialist with the California Air Resources Board's Incident Air Monitoring Section. Joseph's responsibilities include planning, coordinating and preparing for emergency air monitoring incidents. For the last seven years, Joseph has been responsible for conducting air quality monitoring campaigns to measure impacts from wildfire, and is currently developing a new statewide prescribed fire air monitoring program. Joseph received his Bachelors of Science Degree in Biochemistry with a concentration Chemistry from the University of California, Riverside.

2019 PQAO Training Speaker Biographies

Andrea McStocker
California Air Resources Board

Andrea is an Air Pollution Specialist in the Quality Management Section of CARB. As a PQAO liaison, she is tasked with overseeing quality management activities throughout the PQAO. In addition to her liaison duties, Andrea manages CARB's Quality Assurance webpage. She has a Master's degree in Environmental Policy from American University in Washington, D.C.

David Medina
San Diego County Air Pollution Control District

David Medina is an Associate Air Pollution Chemist with the San Diego Air Pollution Control District. He has been with the San Diego Air Pollution Control District since 2012 and works in the Monitoring Division. David is currently overseeing the PAMS VOC program. He has also been involved in various programs within the Monitoring Division including the calibration of PM 2.5 samplers and special projects. He received a Ph. D. in Chemistry from the University of California, Riverside and a B.S. in Chemistry from the University of California, Irvine.

Michael Miguel
California Air Resources Board

As Assistant Division Chief for the California Air Resources Board's Monitoring and Laboratory Division, Michael is responsible for overseeing the agency's ambient air monitoring program. Previously, he served as Chief of the Quality Management Branch where he directed the activities of the Primary Quality Assurance Organization. Michael has also managed the successful implementation of several regulations, including: Small Off-Road Engines, Off-Highway Recreational Vehicles, Portable Fuel Containers, and Drayage Trucks. Michael graduated from Cal Poly, San Luis Obispo and has worked for the Air Resources Board for over 30 years.

LaMar Mitchell
California Air Resources Board

LaMar Mitchell is an air pollution specialist with the Quality Assurance Section of CARB. He is part of a team of auditors that conduct performance evaluations of air districts that are included the CARB PQAO. LaMar brings to us his 29 years of experience in air pollution control from his previous 10 years work with the Sacramento Metropolitan AQMD and 19 years with the Compliance Division and Monitoring and Laboratory Division of CARB. LaMar holds an AS in Math and Physical Science from American River College in Sacramento and a BS in Mechanical Engineering from California State University, Sacramento.

Kimberly Mitchell
Great Basin Unified Air Pollution Control District

Kimberly Mitchell is a research and systems analyst with Great Basin Unified Air Pollution Control District. She is responsible for data acquisition and plays an integral role in the District's data validation process. Prior to joining Great Basin Unified APCD she spent over a decade managing and validating large datasets for the U.S. Forest Service.

Theresa Najita
California Air Resources Board

Theresa Najita, a meteorologist by training, has been with the California Air Resources Board for almost 20 years. Currently an Air Pollution Specialist in the Air Quality Planning and Science Division, her work focuses on area designations, exceptional event analysis, and State and federal planning efforts. She also works closely with CARB's Monitoring and Laboratory Division on monitoring site placement, retention, and removal.

Olga Pikelnaya
South Coast Air Quality Management District

Dr. Pikelnaya is a Program Supervisor at the South Coast Air Quality Management District, working on developing South Coast AQMD's optical remote sensing (ORS) program and implementation of Refinery and Community Air Monitoring (Rule 1180). Prior to joining South Coast AQMD, Olga worked as a post-doctoral researcher at University of California Los Angeles, where she developed and deployed ORS instrumentation for monitoring of refinery emissions. Dr. Pikelnaya earned her Ph.D. in Atmospheric and Oceanic Sciences from UCLA. Her main research interests include implementing innovative instrumentation and measurements strategies for real-time emission monitoring and assessing the impact of industrial emissions on neighboring communities.

Aaron Plasencia
California Air Resources Board

Aaron Plasencia is an Air Resources Engineer with the Monitoring and Laboratory Division at CARB. As part of the Quality Assurance Section he conducts performance evaluations of air monitoring sites for all air districts in California. Along with working in the field as an auditor, he also performs instrument certifications in the CARB Standards Lab. Aaron earned a Bachelor of Science degree in Aerospace Engineering from the California Polytechnic State University, San Luis Obispo.

Patrick Rainey
California Air Resources Board

Patrick Rainey is the manager of the Organics Laboratory Section and oversees the analysis of ambient air samples collected from air monitoring and sampling sites throughout the State for criteria, toxic, and potentially toxic air pollutants. Previously, he was the manager of the Quality Management Section and has also worked in the Quality Assurance Section conducting performance audits of air monitoring stations. Prior to coming to CARB, Mr. Rainey worked at Test America, a commercial analytical laboratory as the Technical Director & Air Toxics Operations Manager, Department Manager-Air Toxics, and team leader/organics extraction group supervisor for a combined 18 years. Mr. Rainey possesses a Bachelor of Science degree in Environmental Toxicology from University of California, Davis.

Matt Razavi
California Air Resources Board

Matt Razavi earned his Bachelor's degree in Electrical Engineering in 1997, and is close to completing a Master's in Electrical Engineering at California State University, Sacramento. He has been an Instrument Technician at CARB's Monitoring and Laboratory Division since 2016. He is responsible for the operation, maintenance, testing, troubleshooting and repair of complex electronic air quality/monitoring instrumentation in support of the CARB's ambient air monitoring network. Prior to joining CARB, Matt worked in the seismic and automation industry for 10 years performing instrumentation support.

Honza Rejmanek
California Air Resources Board

Honza Rejmanek is an Air Pollution Specialist in CARB's Quality Assurance Section. Honza received an MS in Atmospheric Science from UC Davis and a BA in Biology from UC Santa Cruz. Honza has experience in complex field atmospheric research including areas such as instrumentation design and testing, installation and maintenance of weather station networks in icy terrain, and biometeorological stations in rice fields and vineyards. He previously managed the UC Davis National Weather Service climate station. Honza also uses his weather acumen as an accomplished flight instructor and paraglider. He participated in five Red Bull X-Alps races, a 640-mile hike and paraglide feat from Austria to Monaco.

2019 PQAO Training Speaker Biographies

Brian Russell
Great Basin Unified Air Pollution Control District

Brian Russell is a Systems and Research Analyst with the Great Basin Unified Air Pollution Control District headquartered in Bishop, California. Brian has been with the District almost 10 years now and started as a field technician on the Owens Dry Lake Bed. Originally from Ann Arbor, Brian has a undergraduate degree in Electrical Engineering and a Masters degree in Space Engineering from the University of Michigan focusing on instrumentation for remote sensing. Brian is an open source software and hardware enthusiast and works primarily building IT systems for GBUAPCD using open source tools whenever possible.

Koki Shimohashi
California Air Resources Board

Koki Shimohashi is an Air Resources Engineer in the Monitoring and Laboratory Division. He currently works on sensor evaluation including monitoring system development and data analysis.

Reggie Smith
California Air Resources Board

Reggie Smith is the manager of the California Air Resources Board's (CARB) Operations and Data Support Section. His section is responsible for administering the CARB's air quality data management system which reports real-time and data for record from the CARB's ambient air monitoring network. He graduated from the University of Maryland in 1987 with a bachelor's of science degree in Physical Sciences and Meteorology. Reggie began his career with the CARB in 1993. Over the past 20 years he has been involved with many aspects of the CARB's ambient air monitoring program.

Jeremy Smith
California Air Resources Board

Jeremy Smith is a Staff Air Pollution Specialist at the California Air Resources Board (CARB) in the Monitoring and Laboratory Division. Jeremy's work at CARB has included heavy-duty vehicle emissions testing, advanced measurement technology development, ambient air monitoring, and community air quality monitoring design. Prior to working at CARB, he investigated the secondary aerosol chemistry of biomass burning emissions, cloud and rainwater chemistry in polluted areas, and the chemistry of deep ocean sediment. Jeremy has a Ph.D. from UC Davis, a M.S from the University of North Carolina Wilmington, and a B.S from the University of South Carolina.

Louise Sorensen
California Air Resources Board

Louise Sorensen is the Quality Assurance Officer at CARB's Monitoring and Laboratory Division, Standards Laboratory in Sacramento, California. She ensures efficient operation and traceability to NIST through the data quality process and documentation. After spending over a decade working in air pollution research at University of California, Davis, Louise understands the importance of developing, maintaining and monitoring the performance of a data quality system to ensure compliance with regulations. She has a certificate of achievement from NIST in completion of Fundamentals of Metrology and ISO/IEC 17025. Louise holds a B.S. in Animal Science from the University of California, Davis.

Eric Stevenson
Bay Area Air Quality Management District

Eric Stevenson is a chemical engineer with over 25 years of experience in the environmental field. He has designed remediation systems, performed air pollution emissions permitting, testing and monitoring and, as the current Director of Meteorology, Measurement and Rules at the Bay Area Air Quality Management District, manages the Air Monitoring, Laboratory, Source Test, Meteorology, Quality Assurance, Data Management and Rule Development programs. He is a member of various committees and work groups dealing with air quality issues on a local, state and national level, including the National Association of Clean Air Agencies (NACAA) Air Monitoring Steering Committee, charged with interfacing with the U.S. EPA to develop monitoring rules and guidance.

Ken Stroud
California Air Resources Board

Ken Stroud is Chief of the Community Air Monitoring Branch, comprised of 4 sections: Community Air Monitoring North, Community Air Monitoring South, Incident Air Monitoring and Advanced Monitoring Techniques. Ken's portfolio includes AB 617 work as well as SNAPS (Study of Neighborhood Air near Petroleum Sources), GHG monitoring, incident air monitoring and other community monitoring activities.

Joe Tona
Tehama Air Pollution Control District

Joe Tona is the Air Pollution Control Officer for the Tehama County Air Pollution Control District in Red Bluff California. He has a B.S. in Environmental Science from Humboldt State University. Before becoming APCO, Joe managed the operation and data collection of Tehama County's air monitoring network. Joe has been with the APCD since 2013. Prior to working with the District, Joe worked in private industry as a Research Forester. He performed watershed studies using weather stations and radio communication equipment throughout northern California.

Nathan Trevino
San Joaquin Valley Air Pollution Control District

Nathan Trevino is currently the supervisor for the air monitoring program at the San Joaquin Valley APCD. Nathan has been in his current position for 8 years and has been with the District for 11 years. His primary responsibilities include the supervision of air monitoring staff and coordination of activities in support of 23 locations within the eight county air basin of the San Joaquin Valley.

Grace Tuazon
California Air Resources Board

Grace Tuazon is an Air Pollution Specialist in the Quality Management Section in the Monitoring and Laboratory Division. She is district liaison to Great Basin Unified APCD, Northern Sonoma County APCD, and Placer County APCD. Grace has a B.S. in Biochemistry from Sacramento State University and did research in organic chemistry while getting her degree. Before coming to CARB, she worked as a conference planner for Sac State's College of Continuing Education.

Karl Tupper
San Luis Obispo County Air Pollution Control District

Karl Tupper is an Air Quality Specialist with the San Luis Obispo County Air Pollution Control District where he has worked for the last eight years. He operates four air monitoring stations for the District, and also has a hand in various special projects and data analyses. Prior to the District, he conducted pesticide air monitoring studies for an environmental non-profit. He has a master's degree in Chemistry from UC Berkeley and a bachelor's degree from Yale.

Lilian Turcios
Northern Sonoma County Air Pollution Control District

Lilian R. Turcios is an Air Quality Specialist for the Northern Sonoma County Air Pollution Control District where she oversees the air quality monitoring and data analysis. Ms. Turcios holds a BS in Environmental Health from Texas Southern University and an MS in Health Informatics from The University of Texas. She has been with The Mighty Northern since 2016, and began her career in air quality in 2014 as an Environmental Specialist for the Lincoln-Lancaster County Health Department in Lincoln, Nebraska, where she conducted enforcement and compliance work.

2019 PQAO Training Speaker Biographies

Dena Vallano
United State Environmental Protection Agency

Dena Vallano is a Physical Scientist within EPA Region 9's Air Quality Analysis Office. She currently specializes in PM2.5 and air sensors and is the geographic lead for ARB, San Joaquin Valley APCD, and San Luis Obispo County APCD. She has worked in EPA's Office of Research and Development to advance federal partnerships related to technological innovation and next-generation air quality monitoring. She holds a Ph.D. in Ecology and Evolutionary Biology from Cornell University and a Bachelor of Science in Biology from Villanova University.

Elias Villa
California Air Resources Board

Elias Villa earned a Bachelor of Science in Environmental Science and Management from the University of California, Davis. He began work for the California Air Resources Board (CARB) in 2014 within the Laboratory Support Section, supporting laboratory operations for the Northern Laboratory Branch. Now in the Inorganic Laboratory Section, Elias is the lead analyst for filter-based PM2.5 mass analysis.

Gwen Yoshimura
United State Environmental Protection Agency

Gwen Yoshimura has worked for the U.S. EPA since 2004. She started in EPA Region VII's air planning office, and joined the air monitoring team in EPA Region IV in 2009, and is now the manager of the Air Quality Analysis Office and has worked with agencies such as CARB, BAAQMD, Hawaii DOH, and Guam EPA. Gwen has a B.S. in Earth Systems from Stanford University.

Yunliang Zhao
California Air Resources Board

Yunliang Zhao is an Air Pollution Specialist in the Community Air Monitoring South Section. Yunliang received his Ph.D. from University of California, Berkeley and subsequently worked as a Postdoctoral fellow and research scientist at Carnegie Mellon University. He has published 25 peer-reviewed papers and recently published his research on secondary organic aerosol formation from gasoline vehicles in Proceedings of the National Academy of Science. Yunliang's past research projects include the study of source apportionment of atmospheric organic particles and the characterization of gas-phase emissions from on-road vehicles and off-road engines. His expertise in instrumentation includes the introduction of a thermal desorption gas chromatography-mass spectrometry instrument for quantification of semi-volatile organic compounds.