



FROM THE AIR PROGRAM

Quality Assurance Matters

Many human activities worldwide have become increasingly reliant on information delivered from instruments, from vehicle and plane controls, hospital, industrial, and other scientific equipment, to weather stations and any professional level environmental monitoring instruments in operation. Supporting the information we receive from air quality and weather forecast media such as websites, radio and TV, printed news and official documents, are a host of instruments specifically designed and operated to the purpose of collecting the best data possible. This means generating data, usually numbers, that are the *closest to the truth* as we can get them. And behind these instruments are regimes of quality assurance measures, done on a regular basis, according to a specific schedule and method for that instrument. Going behind the scenes into environmental



instrument quality assurance reveals a vast and detailed effort to ensure that numbers from instruments are as defensible as possible. QA covers everything— where, when, how (in great detail!), by who, and also why instruments are operated to get data. Air monitors and the data they produce have to be checked against other systems, to ensure they continue to meet operational criteria and generate valid data. It is always a work in progress, and instrument operators must keep up with changes made to the methods as systematic improvements are identified, and sometimes made into standards or even regulation.

The Bishop Paiute air program made milestones this year in renewing quality assurance methods and the written plans for all 3 air quality monitors in operation, approved by EPA. The program also presented methods developed to increase the success rate of meeting QA criteria in a training session at the 2017 National Tribal Forum on Air Quality, with other Tribal air quality staff. EPA Region 9 staff has now adopted some of Bishop's practices into their educational materials. QA may not seem that exciting to everyone, but it's critical to a monitoring program!

Pictures, clockwise from left: a tiny fraction of existing paper documentation for Bishop's equipment audits, learning about updates to monitoring methods at the 2017 National Tribal Forum on Air Quality, wind speed motors for calibrating the Bishop Paiute's wind sensor, conferences such as the Forum are a way air specialists learn how to improve QA practices, session covering handheld air sensors, air flow rate meter on one of the Bishop Paiute particulate monitors.