



# THE RISE OF QA

## IMPLEMENTING A QUALITY MANAGEMENT SYSTEM AT DWR



Until 2017, the Department of Water Resources (DWR) lacked a robust Quality Assurance Program to ensure the consistent collection of data of known and documented quality. Data collected without quality assurance (QA) hinders the ability to answer study questions accurately and make sound management decisions. This poster illustrates how a QA Program can be started from scratch, implement critical changes in a span of 2 years, and make plans for implementing a quality management system (QMS) across the Department.



A long time ago in a galaxy far, far away....

### EPISODE I: THE REVIVAL

**1988**

Formation of QA Program and QA Committee

**1992**

QA Policy WREM 60 established

**2016**

AB1755 approved - The Open & Transparent Water Data Act

**2017**

QA Program reinvigorated

- Increased funding
- Additional staffing



### EPISODE II: THE EXPANSION

The DWR QA Program coupled a bottom-up and a top-down approach.

- Initiated QA committees and subcommittees
- Representatives from each program
- Collaboratively find solutions to problems
- Engaged staff in consensus-based decision making
- Established a Communications and Engagement Strategy (C&E)
  - Open, transparent, and timely communication
  - Constant & consistent outreach and communication
    - 1. Meetings
    - 2. Emails
    - 3. e-newsletter
    - 4. SharePoint
- Developed standard operating procedures (SOPs) and standardized
  - Forms everyone can implement
  - Processes for calibrating water quality instruments
- Purchased QC instruments for verifying sensor accuracy
- Created tools to streamline laboratory data review
- Coordinated training on QC tools, statistics, and statistical programs

### EPISODE III: THE FUTURE

The DWR QA Program has many ambitious future goals

- Implementing a document control system
- Publishing additional department-wide SOP's
- Providing training to staff on QA topics and processes
- Resolving issues
  - Turbidity ratings
  - Elevated blanks
  - Outlier detection
- Establishing data review processes
- Establishing metadata standards
- Developing a split sample program
- Implementing an internal auditing program
- Supporting DWR's Laboratory transition to the 2016 TNI laboratory standard



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