



CAP Water Quality

Alexandra Arboleda, CAWCD Board Vice-President

Darrin Francom, Assistant General Manager,
Operations, Maintenance, and Engineering

Water Quality

Water Quality describes the condition of water, including chemical, physical, and biological characteristics with respect to its suitability for a particular purpose



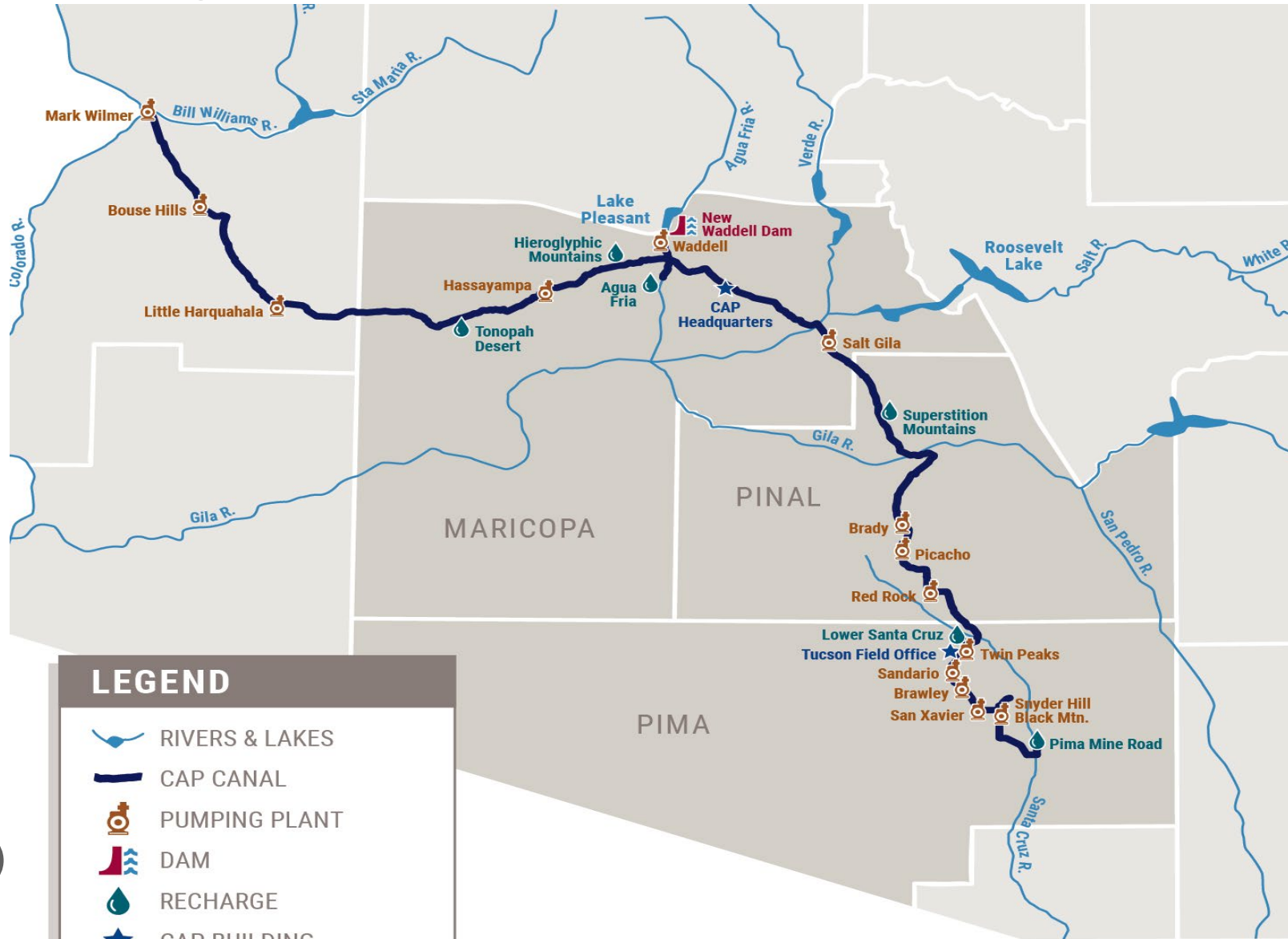
CAP Water Quality

1972 Master Repayment Contract

“The operation and maintenance of the facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The United States does not warrant the quality of water and is under no obligation to construct or furnish water treatment facilities to maintain or better the quality of water.”

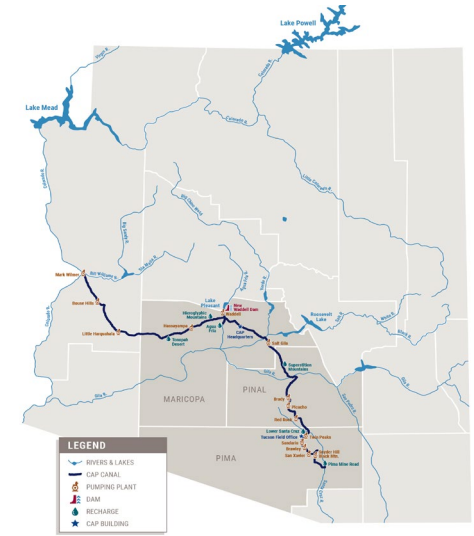


CAP System Map



LEGEND

- RIVERS & LAKES
- CAP CANAL
- PUMPING PLANT
- DAM
- RECHARGE
- CAP BUILDING



CAP Historic Water Quality

1985-1995 Sampling Program

- Partnership between CAWCD/Reclamation and USGS
- Three canal sites
- ~50 constituents sampled either monthly or quarterly
 - Includes priority pollutants and a variety of more “exotic” constituents that are rarely detected.
- Two real-time stations (Tonopah and Headquarters)



CAP Historic Water Quality

1996

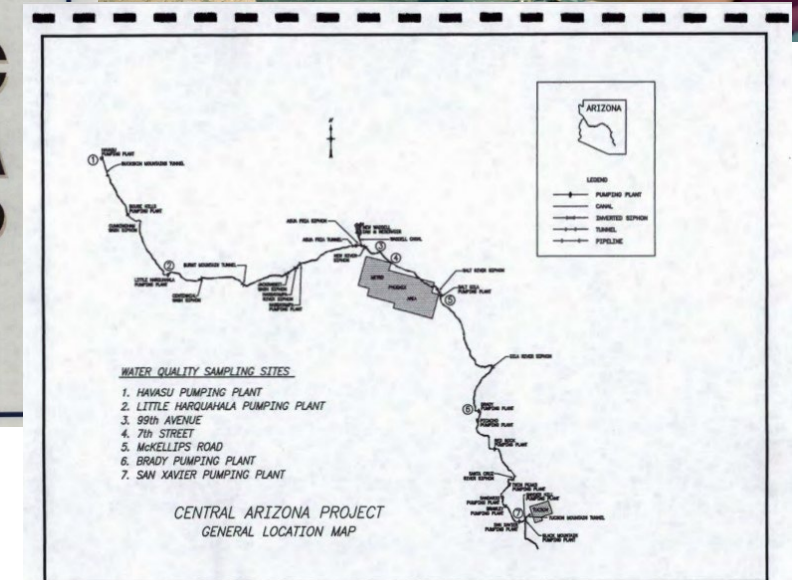
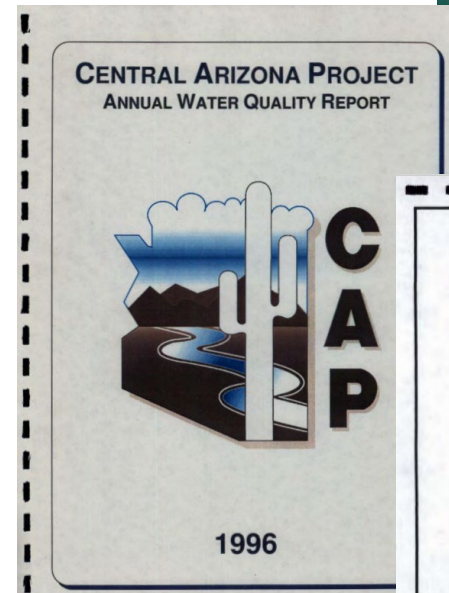
- CAWCD took over the monitoring program
 1. Continue long-term water quality data set
 2. Support ongoing studies
 3. Respond to customers' needs



CAP Historic Water Quality

1996–2005 Sampling Program

- Weekly grab samples at 4 canal sites; monthly grab samples at 3 additional sites (~16 constituents)
- Quarterly grab samples at 3 canal sites (~14 constituents)
- Lake Pleasant grab samples and depth profiles
- Research based sampling
 - Taste and odor
 - Agua Fria River
 - Bill Williams Inflow
 - Algae sampling
- Real-time stations at Mark Wilmer PP, Hassayampa PP, and Waddell P/G Plant



CAP Historic Water Quality



2006-2019 Sampling Program

- Monthly grab samples at 6 sites (~23 constituents)
- Quarterly grab samples at 3 canal sites (~120 constituents)
- Lake Pleasant grab samples and depth profiles
- Real-time stations at CAP Headquarters and Mesa (McKellips Road)
- Water quality data posted online



Key Takeaways

- The primary goal of CAP's Water Quality Program is to provide valuable information and recommendations to internal and external stakeholders.
- The Program has been in place since 1985 and includes a long-term data set that allows us to evaluate trends in water quality since the canal was completed.
- Water quality in the CAP is considered to be stable and “good”.