CPEN WRD: Challenges, Opportunities and Solutions?

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(7) Water sheds
(4) Aquifers
(21) Wells (12 South/2 Los Flores/6 North)
(34) Storage Reservoirs
(2) Adv Water Treatment Plants
(2) I&M Plants
(N/S) Distribution Systems
*Notionally cross-base pipeline
(8000) Connections
(400) Miles of pipe
Conjunctive Use w/ FPUD
(2) Tertiary Treatment Plant
(56) Lift Stations
(8) Oil/Water Separators
(153) Miles of WW piping
(5) Recycled Water Sites
Discharge via Oceanside Outfall
CHALLENGES:

1. Personnel – (5409) Water Operators
   • (302) Fed Gov, (105) DON, (64) MC, (19) in CA, (14) at CPEN
   • Non-competitive Salaries, less generous benefits
   • Special Districts – Treatment OR Distribution

2. SCADA – Water and Wastewater
   • Severe Operational Impacts

3. Emerging Contaminants
   • PFCs, Hex-Chrome, TCE, Uranium, etc.

4. Drought/Flooding – cycles
   • Water Security – Risks to Supply and Distribution Systems
1. Personnel – CPEN Problem - Contract Operators?
2. SCADA – CPEN Problem (MC Problem)
3. Emerging Contaminants
   • Detection System Design and Installation
   • Treatment System Design, Construction, Operation
4. Drought/Flooding – cycles
   • Design, Construct, Operate Alternative Sources of Supply Systems – Desal, IPR, DPR, etc.
   • Risk Mitigation for Natural Hazards and Human Threats
   • Adaptation - Consulting, System Design, Construct, Operate
   • Distribution System – Repair, Renovate, etc.
   • Public-Private Ventures

Solutions = Business Opportunities