



Photo credit: John Hannon, Reclamation

Model Development Summary

Randi Field, Hydrologic Engineer

Reclamation, Central Valley Operations Office



Development Activities

- Model Framework Selection
- Model Selection
- Data Management
- Data Development
- Model Development
 - Geometry, Boundary and Initial Conditions
 - Unique Features
 - **Model Calibration, Validation, Sensitivity Analysis**



Source: Reclamation



Model Development: Summary

- **Accomplishments:**
 - Consistent representations for both system and high-resolution models
 - Calibrated/tested reservoir and river models supported by comprehensive documentation
 - Reviewed by members of the MTC
- **Assessment:**
 - Results from both models compared to measured data and results from each model suggest similarities in model performance
 - Identification of where models deviate
 - Detection of observed data errors or missing data
 - Areas to improve:
 - Boundary condition estimation techniques
 - Assessing/comparing calibration parameters



Model Development: Accomplishments

- ResSim (system level) and CE-QUAL-W2 (high-resolution) preparation
 - Develop model discretization to accept common boundary conditions:
 - Inflow temperature
 - Meteorology
 - Operational controls
 - Release from each outlet (TCD and river outlets)
 - TCD gate settings
 - TCD temperature targets
 - Application modes
 - Model comparison capabilities
 - Data linkages
 - Documentation

