

**Hearing in the Matter of California Department of Water Resources and
United States Bureau of Reclamation
Request for Change in Point of Diversion for California Waterfix**

**Statement of Qualifications
Chris Shutes**

1999 – 2006: Volunteer fisheries advocate in two hydropower relicensings

2006 – Present:

- Water Rights Advocate, FERC Projects Director, California Sportfishing Protection Alliance
- Steering Committee, California Hydropower Reform Coalition; Vice-Chair since 2011

2009 – Present:

- Steering Committee, national Hydropower Reform Coalition.

I have developed proficiency in working with diverse water balance models over sixteen years in multiple hydropower relicensings, including the El Dorado Project, Upper American River Project, DeSabra – Centerville Project, Yuba-Bear and Drum-Spaulding projects, Merced River Project, Yuba River Development Project, Camp Far West Project, and others. In hydropower relicensings, I have participated in review of hydrology in support of model development with hydrologists and engineers. I have also recommended scores of model runs and have reviewed the output of hundreds of model runs from water balance models in different formats, including OASIS, HEC-ResSim, and Excel.

I have developed good working relationships with hydraulic engineers and modelers who work for the California Department of Fish and Wildlife and others who work for consultants to hydropower project licensees. I have limited ability to set up model runs in Excel-based models, and often rely on these engineers for support.

I have worked with multiple hydropower project operators and hydrographers responsible for moving water into turbines and canals and for releasing water into rivers. I have become familiar with hydraulic infrastructure, both on site and through drawings. I have developed a good understanding of the difference between modeling and actual operations and have helped to resolve many technical and multi-variable logistical difficulties of implementing hydropower license terms on the ground.

During the seventies and eighties, I fished regularly in the Delta. I have also fished in many of the major rivers and stream in California north of Merced. I developed interest in hydrology correlating hydrographs with in-river conditions I observed while fishing.

I began working on relicensing hydroelectric projects as an unaffiliated, volunteer stream fisheries advocate in 1999. On the El Dorado Project, I used a synthesized hydrology dataset, Excel, and output from an OASIS-based water balance model to develop a lake level proposal for Silver Lake that became the basis for resolving 10 years of litigation.

Most of the subsequent hydro projects on which I have worked are also water supply projects, and have required the use of hydrology, modeling and understanding of actual operations to

evaluate trade-offs between flow, storage, hydropower and water supply. Management of reservoir storage is a foundational issue in most of them. In addition to visual quality and water supply, most reservoir operations must deal with management of cold-water pools, whose importance generally increases in inverse proportion to reservoir elevation, both in geographic terms and in terms of reservoir stage height. Some of the projects on which I have worked in which reservoir management was a major interest and concern are Merced, Don Pedro, Yuba River Development, DeSabra – Centerville, and Upper North Fork Feather.

Though I did not participate in the relicensing of the Oroville Facilities per se, I engaged in the State Water Board's proceeding for the Water Quality Certification of that project. Before the Board, I advocated for establishment of a carryover storage requirement to protect the Oroville cold water pool.

I have developed a good working knowledge of Central Valley water operations and hydrology through various means. These include my understanding of input hydrology and operations from watershed upstream of Central Valley rim dams, as well as direct work on power projects on some of those rims dams. I have also attended multiple workshops at the State Board, including those to develop the Delta Flow Criteria Report and many related to the update of the Bay-Delta Water Quality Control Plan. I was the author of many of CSPA et al's protests, objections and petitions for reconsideration for the Temporary Urgency Change Petitions of the SWP and CVP in 2014-2016, and attended many of the workshops related to these petitions. I have also reviewed and often commented on tens of thousands of pages of technical and environmental review documents related to the operation of the SWP and CVP.

In my water rights work for CSPA, I have been a witness in three water rights hearings before the State Water Board, including the hearing to revoke the Bureau of Reclamation's permits for Auburn Dam. I have filed about twenty water rights protests on behalf of CSPA and resolved one, and have followed up on several major protests that CSPA filed prior to 2006. I filed protests in 2009 in response to the respective petitions for extension of time for the water rights permits of the CVP and SWP. I have also attended multiple meetings and workshops of the State Water Board related to various water rights issues. I have reviewed tens of thousands of pages of documents relating to water rights, including water rights orders and decisions, environmental documents, and court rulings and briefs.