

Case Study – Water Supply Reliability (Surface Storage)

Common Assumptions Development for Surface Storage Projects

Surface storage is one of 11 program elements of the CALFED Bay-Delta Program to address Water Supply Reliability, one of the Program's four primary objectives.

The CALFED Record of Decision identified five surface storage investigations:

- Shasta Lake Water Resources Investigation (SLWRI),
- North-of-the-Delta Off-stream Storage Investigation (NODOS),
- In-Delta Storage Program (aka Delta Wetlands),
- Los Vaqueros Enlargement Investigation (LVE), and
- Upper San Joaquin River Basin Storage Investigation (USJRBSI).

The individual surface storage investigations are currently underway. While each investigation addresses unique purposes and needs, and also involves different sets of partners and interests, the investigations share common requirements:

- Complete planning reports and feasibility studies, and
- Alternative analysis to comply with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and Clean Water Act Section 404 requirements.



Los Vaqueros Reservoir

Because of the unique policy, management and technical needs of the surface storage investigations, the need for a comprehensive coordinated evaluation framework remains. Providing this framework is the objective of the Common Assumptions effort.

The Common Assumptions process represents a concerted effort by the CALFED Bay-Delta Program, the Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR), to coordinate and implement an evaluation framework to support the common needs of the surface storage investigations. Representatives from these agencies and their consultants make up the Common Assumptions Team.

To complete the environmental documentation and permitting process, each surface storage project team must complete the following tasks:

- Represent CEQA (existing) and NEPA (future) no-action conditions,
- Characterize likely impacts of the proposed projects and alternatives, and
- Assess cumulative impacts of the proposed projects with other expected projects.

The Common Assumptions process and framework includes the following:

1. Strategic planning for, and policy and management coordination of, the surface storage investigations and other related CALFED programs;
2. Establishment of common assumptions for existing and future no-action baselines and cumulative condition analyses, including the characterization and quantification of other water management actions (agricultural and urban water use conservation, recycling and desalination, water transfers, and conjunctive use); and
3. Establishment of a common analytical framework and associated tools and methodologies for integrated hydrologic and economic analysis, including implementation of baselines and cumulative analyses, development and implementation of common reporting metrics for assessing the impacts and benefits of projects, and definition and implementation of modeling protocols and quality control measures.

Because of the analytical needs at each stage of the surface storage investigation planning process, and because of continually improving analytical tools and datasets, a strategy to manage and coordinate study needs and analytical tools is required. In addition, since the storage investigations are a component of the CALFED Program, the assumptions and analyses conducted must be closely coordinated with other CALFED elements and a variety of others including the Bay Delta Conservation Program and the Delta Habitat Conservation and Conveyance Program.

The Common Assumptions process has three levels of reports: Initial Alternative Information Reports, Plan Formulation Reports and Feasibility Reports. Each level of analyses and Common Model Package (CMP) builds on the previous level through additional refinement of assumptions, datasets, analytical tools and reporting metrics. Each successive level also allows for greater levels of quality control/quality assurance, a greater level of resolution and detail, and greater consistency across all of the surface storage investigations.

Not all the development activities are under the direct management of the Surface Storage Common Assumptions Team. Many are long-term development efforts governed by new regulations (e.g., new Biological Opinions); other programs (BDCP/DHCCP); budgets; and timelines. The Common Assumptions strategy is periodically updated to include the most up-to-date relevant information and the team is involved in various ways to assist other programs to accomplish the interrelated management and technical objectives.

Since the Common Assumptions effort began in 2001, more than \$5.5 million has been spent on refining assumptions and models using a combination of CALFED Program general funds and Proposition 50 bond funds. Future CMP refinements to incorporate new Biological Opinions will be funded using Proposition 84 bond appropriations.