

California Department of Water Resources
John Leahigh's Testimony in Support of the
Consolidated Place of Use Petition

This testimony is divided into two parts. Part I focuses on the hydrologic conditions that have necessitated the request for the Consolidated Place of Use Petition. Part II provides a brief background of how transfers of water across the Delta are accomplished.

Part I: Hydrology

The purpose of this portion of DWR's testimony is to very briefly summarize hydrologic conditions that have necessitated the request for the petition for Consolidated Place of Use which is before the State Water Resources Control Board (State Water Board).

Water year 2009 will likely be designated as the third consecutive dry year in both the Sacramento Valley and San Joaquin Valley watersheds. The Sacramento Valley Index classified 2007 as a dry year and 2008 as a critically dry year while the San Joaquin Valley Index classified both 2007 and 2008 as critically dry years. Water Year 2009 is currently classified as "dry" in both basins, using the 50% exceedence (Sacramento basin) and 75% exceedence (San Joaquin basin) hydrologies (as specified in Decision 1641).

While last October was about average, both November and December brought less than average precipitation in the northern Sierra. Concern increased markedly in January 2009 as an unusually strong high pressure system limited precipitation to only one-third of average for the month.

February began with precipitation at only 65% of average and the snowpack at only 60% of average. At that time, reservoir storage was only 65% of average with several reservoirs, notably Lake Shasta and Lake Oroville, at or approaching historic low levels.

In mid-February 2009, the weather patterns shifted and a series of wet storms crossed the state for the next three weeks, raising snow levels, reservoir storages and significantly increasing rainfall totals. By the end of the first week of March, the hydrologic picture had changed considerably. However, after a wet start to the month, March ended up being just slightly above average (119% of average). Statewide, snowpack was still less than average.

Lake Oroville still stands at 72% of average for this year. While some reservoirs across the state are in much better shape than they were, Oroville and Shasta, a federal reservoir and the state's largest, are still below average.

Reservoir Storage

Over the last couple of months, the state's reservoirs have gained nearly three million acre-feet of storage. Smaller reservoirs like Friant and Folsom filled to their flood control limits. However, Lake Shasta and Lake Oroville, which are the major water supply sources for the federal and state water project systems, still remain significantly below average levels for this time of year. At the end of March, storages in Lake Shasta and Lake Oroville were about 860,000 acre-feet and 800,000 acre-feet, respectively, less than the historical average for the end of March.

Water Supply Allocations

Despite the wetter conditions that have occurred mid-February through early March, south-of-Delta water allocations for the State Water Project (SWP) and Central Valley Project (CVP) remain at record low levels. Due to the dry conditions in January and early February, the water projects slowly filled San Luis Reservoir south of the Delta. Despite improved hydrologic conditions since then, the continuing Delta crisis and the newly imposed regulations to protect endangered species have limited exports and has limited the Projects' ability move water into San Luis Reservoir. Since mid-February, the SWP has not been able to export nearly 200,000 acre-feet of water from the Delta due to flow restrictions directly related to export curtailments. The restrictions were deemed necessary to protect Delta smelt and longfin smelt. Other restrictions to be announced in June by NOAA's National Marine Fisheries Service will be required to protect salmon, steelhead and green sturgeon. These issues will continue to limit the water supply for users south of the Delta.

In October, 2008, the initial SWP allocation for 2009 was announced at 15%. That level represented the second lowest initial allocation since the SWP began operation. In February, the allocation remained at 15%. In March, the allocation was increased to 20%. In April, the allocation was again increased to 30% to reflect the current water supply conditions. This is still an estimate. Additional updates to this figure are possible later in the year, although continued dry conditions in April make an increase unlikely. If the final allocation remains at 30%, this would match the lowest allocation to municipal and industrial SWP water supply contractors historically.

Currently, the CVP's delivery estimates based upon the April forecast are 10% for agriculture users and 60% for municipal and industrial users south of the Delta, and 15% for agriculture users and 65% for municipal and industrial users north of the Delta.

Comparison of Present Drought with Past Droughts

Water year 2006-07 ended with 53 percent of average statewide runoff. Sacramento River region was classified as “Dry,” and the San Joaquin River region was classified “Critical.” Water year 2007-08 ended with 58 percent of average statewide runoff, and both the Sacramento and San Joaquin River regions were classified “Critical.” Water year 2008-09 is expected to yield more runoff than 2007-08 with a forecast of 70 percent of average. The three-year average runoff for the current drought will likely be about 60 percent of average. Put another way, for the last three years total statewide runoff has been equivalent to about two normal years.

While the present drought period has not been as severe as some past droughts in terms of either duration (1929-34 and 1987-92) or single-year intensity (1977), there are several factors that make the current drought potentially just as significant in terms of impacts to water users. In the time since the state’s last major drought in 1991, California added 9 million new residents, experienced a significant increase in the planting of permanent, high-value crops not subject to fallowing, and has had its water operations’ flexibility significantly reduced throughout the year. In light of these factors, missing out on one normal year’s worth of runoff in the past three years has resulted in significant adverse effects, causing Governor Schwarzenegger to proclaim a state of emergency.

Summary

While water supply conditions have improved considerably since mid-February of this year, the impacts of a prolonged three-year drought have taken their toll. One-year, two-year and three-year cumulative precipitation totals for the state all rank in the 60%-70% of normal range.

Part II: Water Transfers across the Delta

The Project water transferred across the Delta under the Consolidated Place of Use Petition will be coordinated through the 2009 Drought Water Bank. This water will be moved in the traditional window during the summer and early fall months of July through September. This is the time when delta smelt and other listed species are typically not in the south Delta and therefore no susceptible to entrainment at the Project facilities.

Rates of increased exports during the traditional summer/early fall transfer period to capture the DWB transfer flows will not be above rates that were analyzed in the December 15, 2008 Biological Opinion for the Coordinated Operations of the CVP and SWP (Exhibit DWR-05).

Under low outflow conditions, increased in Delta exports can cause additional seawater intrusion, even if the Delta outflow is not changed (i.e., if additional releases are made from upstream reservoirs to match the increase in export pumping). The additional increment of inflow (and corresponding increase in Delta outflow) that is needed to offset the additional effect of exports on seawater intakes, is referred to as “carriage water.” DWR will ensure that carriage water is provided to protect Delta water quality standards.

In addition, DWR will transfer water only after meeting all regulatory obligations. The transfer of Project water will not prevent DWR from meeting requirements under Decision 1641. Furthermore, DWR will operate the Delta export facilities in compliance with the delta smelt Biological Opinion and future biological opinions, transferring water only after meeting obligations of the opinions.