California's Water Storage Needs a New Management Blueprint, not More Concrete

As the State enters a third year of drought, new or enlarged "in-stream" and "off-stream" storage reservoirs are being considered, including two new reservoirs (Sites and Temperance Flat) and expansion of two or three existing reservoirs (Shasta, San Luis, and Los Vaqueros). However, new water storage in reservoirs is not the sole—or best—answer to California's water crisis. As an alternative to relying on more reservoirs, we strongly support better groundwater management, changes in operation of existing storage to buffer users and the environment from drought, and the increased "conjunctive" (multiple) use of the State's existing groundwater basins.

California has the potential to meet future storage needs through better management of existing storage, coupled with judicious expansion of storage.

- New water storage is just one component of an overall water plan for the state, along with water conservation, better groundwater management, and increased efficiencies in agricultural water use.

- Water storage is important as a bridge between the natural patterns and locations of precipitation (rain and snowfall) and the times and locations of human water use.

- In the future, managed, integrated storage is likely to become even more important due to effects of climate change, such as less dependable natural storage in the form of snowpack.

- It is important that forecast-based operations be utilized in the management of large reservoirs and that removal of sediment impounded by existing dams is examined to increase storage.

- The "conjunctive" (multiple) use of the State's existing groundwater basins in combination with surface supplies will become increasingly important.

To assure a sustainable water supply, better groundwater management and storage is essential.

- While surface water taken from rivers and stored in reservoirs is a critical supply for the state's urban areas and agriculture, storing and pumping water in groundwater aquifers makes up the majority of water supply that is used. In

909 12th Street, Suite 202, Sacramento, CA 95814
(916) 557-1100 • Fax (916) 557-9669 • www.SierraClubCalifornia.org

particular, the large groundwater basins in the Central Valley, southern California, and elsewhere, are the "work horses" of the state's water supply system.

- Some of the groundwater basins are routinely recharged by injecting or seeping raw or treated (recycled) water into the aquifer, for later withdrawal. Increasingly, the "conjunctive use" of groundwater basins for storage and later reuse is seen as a key component of future water supplies.

- Two of the largest groundwater storage basins are the Kern County Water Bank, which stores surface water from the Central Valley and State Water Projects, and the Orange County Replenishment System, which takes treated wastewater from the urban area.

New in-stream and off-stream reservoirs are too expensive for farmers and urban water users and would require deep taxpayer subsidies.

- With over 1,400 dams already impounding most of California's streams and rivers not only are there no more practicable dam sites but any new dams would severely impact the remaining riverine habitats. Finding locations and paying for any new in-stream or off-stream reservoir faces all of the same environmental and financial issues as any other huge infrastructure system, including loss of valuable wildlife habitat.

- Feasibility studies for the new proposed reservoirs indicate that the amount of "new" water that can be delivered in an average year is fairly small in comparison to the immense cost of constructing, which is often in the range of $2.5 to $4 billion.

- The only way proposed new reservoirs (or even some expansions of existing reservoirs) can "pencil out" is by assuming a deep subsidy by taxpayers, either through the federal government or with urban users subsidizing ag users.

- The proposed Temperance Flat Reservoir, for example, would only deliver on average 41,000 to 140,000 acre feet per year and will cost at least $2.5 billion. Almost three-quarters of the $2.5 billion cost is assumed to be paid by federal and state taxpayers, leaving only one-quarter of the cost of the dam allocated to the actual water users (12% ag, 14% municipal/industrial).

- Expansion of some existing off-stream reservoirs may be warranted if the cost-benefit makes sense, such as increasing the dams at San Luis Reservoir or at Los Vaqueros Reservoir (Contra Costa County).

New reservoirs will not solve drought water shortages or California's chronic excess of demand over supply. They are too expensive, provide too little "new" water, will only work with deep taxpayer subsidies, and will harm the environment.