

SOLVING THE WEST'S WATER WOES REQUIRES A 'HOOVER-ESQUE' EFFORT, PLAN, AND COMMISSION



By: David A. Giglio

Herbert Hoover remains one of the most exceptional men to ever enter into public service. Orphaned at the age of 9, Hoover's grit and determination saw him rise to prominence as one of, if not, the best mining engineers of his generation. While his presidency is often considered to have been a failure, due to the economic calamity caused by the Great Depression, his time as Secretary of Commerce was truly something special. Now, with the Biden Administration announcing plans to implement historic water cuts on the seven western states (namely, Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming) that rely on the Colorado River, the time to convene a second Colorado River (Hoover) Commission to develop a long-term sustainable solution to the West's never-ending water crisis is now.

After gold was discovered in California at Sutter's Creek in 1848, the American West changed forever. People from all over the nation, as well as the world, were willing to risk life and limb for a chance to strike it rich on the "Golden Coast." In just fifty years, by 1900, the population of these seven western states/territories ballooned from 165,524 to 2,754,759. By 1920, the population surged to nearly 6 million people.

As is often the case during such a rapid migration event, the development of vital infrastructure could not keep pace. States began to bicker over vital resources, with the allotment of water from the Colorado River emerging as the primary point of contention.

Repeated efforts were made to get Washington to act, but little progress was made. Then, in 1922, frustrated by Congress's inaction and weary of their ability to craft a "fair" plan, Colorado attorney Delph Carpenter had an ambitious idea. Carpenter urged the states to take matters into their own hands by invoking the Constitution's "Compact Clause" (Article 1, Section 10, Clause 3) to convene a "Convention of the States" to develop a fair and sustainable solution.






Initially, the plan was met with an immense amount of skepticism. However, everything changed once the idea found an ally in then Secretary of Commerce Herbert Hoover. Hoover, a former mining engineer and native of California had long been planning to tame the Colorado River by constructing a dam at Boulder Canyon. Hoover viewed Carpenter's idea as the perfect catalyst to turn his plan into reality. Hoover presented the idea to President Coolidge and was able to convince him to approve the plan. In addition, President Coolidge appointed Secretary Hoover as the federal government's representative to be in charge of the commission's work.






Figure 1: Members of the Colorado River Commission, in Santa Fe in 1922, after signing the Colorado River Compact. From left, W. S. Norviel (Arizona), Delph E. Carpenter (Colorado), Herbert Hoover (Secretary of Commerce and Chairman of Commission), R. E. Caldwell (Utah), Clarence C. Stetson (Executive Secretary of Commission), Stephen B. Davis, Jr. (New Mexico), Frank C. Emerson (Wyoming), W. F. McClure (California), and James G. Scrugham (Nevada). Credit: Colorado State University Water Resources Archive

After weeks of negotiations and 10-hour days, the commission finally agreed to what became known as the "Hoover Compromise." Hoover's plan split the Colorado River Basin into two regions: "Upper Basin States" and "Lower Basin States," with the water divided equally between the two. Each basin would receive 7.5 million acre-feet (maf) per year. How the 7.5 maf would be distributed amongst basin members would be left to the states within each region to determine at a future date. Lower Basin states agreed to their current specific allotments in 1928 during the construction of the Hoover Dam, while Upper Basin states agreed to the Upper Colorado River Compact in 1948.

The agreed-upon yearly allotments were as follows:

UPPER BASIN		
STATE	PERCENTAGE	MAF/YEAR
COLORADO 	51.75%	3.85 MAF/YR
UTAH 	23.00%	1.71 MAF/YR
WYOMING 	14.00%	1.04 MAF/YR
NEW MEXICO 	11.25%	0.84 MAF/YR
ARIZONA 	0.70%	0.05 MAF/YR

LOWER BASIN		
STATE	PERCENTAGE	MAF/YEAR
CALIFORNIA 	58.70%	4.40 MAF/YR
ARIZONA 	37.30%	2.80 MAF/YR
NEVADA 	4.00%	0.30 MAF/YR

- NOTE: 1.5 maf/year of Colorado River water is allocated to Mexico.

Now, nearly 100 years later, and with the population of these seven states topping 61 million, despite some small tweaks, the annual water allotments for each state are still primarily determined by these original terms.

California, the state whose water consumption has always been the primary source of conflict, has seen its population swell from 5.7 million in 1930 to nearly 40 million today. Furthermore, when these terms were agreed to, it was incorrectly assumed that the average flow of the Colorado River was 16,400,000 acre-feet (af) per year. We now know that the actual yearly flow is between 13,200,000 af/year and 14,300,000 af/year.

It is simply nonsensical to continue operating on these antiquated terms, especially with the West's population swelling by 90% since 1920.

A new commission is necessary to renegotiate the terms, develop ways to stabilize the supply of water from the Colorado River, and most importantly, solve California's water management crisis by agreeing to support, implement, and fund (both on a federal and state level) California specific portion of my plan below.

Why should these other states care about helping California?

The answer is simple. Each of these states has a shared interest in putting an end to California's water crisis. Once California's problem is solved, much of the tension and disagreement will dissipate. To agree, fund, and implement the California-specific portions of my plan would dramatically reduce the amount of water that the state would need to take from the Colorado River-- specifically, the construction of new above-ground water storage and desalination plants along the state's coastline.

While the first Colorado River Commission included only delegates from the seven western states and the federal government, if this second commission wished to avoid controversy and endless legal delays, it must also include delegates from the nation's biggest agricultural and environmental groups, Mexico, and the various western American Indian tribes. Doing so will help to ensure that no one feels like they were denied a seat at the table and, hopefully, reduce the risk of post-agreement litigation by outside groups.

To ensure this plan gets off the ground and builds the requisite support, it is imperative that a bipartisan group of legislators in Congress publicly reveal and support the commission and, following in the steps of Secretary Hoover, work to ensure that the White House vows to do the same. Getting the backing of Congress and the White House will help negate any hostile reception from governors like Gavin Newsom, who might try to resist the commission and its work.

While inviting representatives from the major environmental groups to take part in the new commission will hopefully reduce the risk of the agreement getting bogged down by legislation, there are no guarantees. As a result, Congress and the President should agree to deem the project a matter of national security. Doing so will provide the states and federal government with the ability to circumvent Environmental Impact Assessments (EIA) and allow for implementation of the plan to proceed without decades of delay. Over 70 percent of the fruits and vegetables that feed our nation come from these seven Western States, predominately California. If protecting America's food supply doesn't qualify as a national security issue, then I don't know what does. Going this route should reduce court challenges and allow for the plan to proceed quickly.

Tasks for the Commission to Consider:

- **Renegotiate current allotments based on current weather and population data** – This will undoubtedly be the first and most pressing task for the commission to deal with. First, as discussed earlier, the original allocations for the Lower and Upper Basin states were based on inaccurate flow data. The new allocations must be based on the correct flow data. Second, since one of the primary goals of the commission is to solve California's water issues, the new allotment agreement should be two-fold. The states should agree to new yearly allotments based on the current situation in California and then agree to renegotiate once California's water supply is bolstered via the implementation of the California-specific tasks below. This is because, if the federal government and the Army Corps of Engineers follow through with their commitment to fund and implement the California portion of this plan, California's need for water via the Colorado River will be greatly diminished.

- **Capture, store, and transport flood waters from high flood areas in the U.S.** – To help stabilize the flow of the Colorado River, the commission should include a plan for the construction of water storage projects and pipelines in high-flood states like Texas and the Southeast. Once the water is captured and stored, the pipelines would transport and dump it into the Colorado River. This would help ensure that Colorado's flow is reliable even in unusually dry years and/or periods of drought.

California Specific Tasks:

- **Repair aging infrastructure and restore native habitat in the San Joaquin Delta** – Today's Delta looks dramatically different than it did before becoming a civilized nexus of water supply. It has been transformed from a natural waterway into a complex channel of man-made canals, levies, and dikes. A functional delta is vital for California's economy and must be retained. While we work to repair and modernize our existing water infrastructure (Friant-Kern and Delta-Mendota Canals) we must also begin the process of constructing new conveyance systems and provide resources to re-establish estuaries at various points along the Delta that will not impede its economic operation. This will allow us to increase the economic efficiency of the Delta and restore natural habitats.
- **Clean up wastewater discharged into the Delta** – Close to a billion gallons of wastewater is dumped into the Delta each day. Even though environmental laws have specific requirements for wastewater discharge, many cities and towns do not have modernized or adequate treatment facilities and are unable to stop harmful pharmaceuticals or ammonia from making it into the Delta. These contaminants have devastating effects on wildlife and increase the amount of water that must be drained from reservoirs. We must invest in new modernized water treatment facilities in every town and city along the Delta.
- **Balance native and non-native species in the Delta** – The Sacramento-San Joaquin Delta is one of the most invaded estuaries in the world. There are more non-native species, in particular the striped bass, living in the Delta than native ones. We can allow all the water in the world to flow through the Delta, but if we continue to permit the populations of non-native species to grow unchecked, salmon and smelt populations will never recover.
- **Create new water storage** – Whether it's climate change or mismanagement causing our water crisis does not matter. To catch and store more water for dry seasons, you need more buckets. If our climate is becoming drier and precipitation events are less frequent, we must take advantage of when it does rain or snow. We could guarantee adequate water supplies throughout California by storing 2.5 to 3-million more acre-feet (AF) of water per year. Federal funding for projects like the Temperance Flat Dam (1.3-million AF), Sites Reservoir (1.5-million AF), Del Puerto Canyon Reservoir, increasing the capacity of the San Luis and Los Vaqueros Reservoirs and raising Shasta Dam must become a reality. Not only will these projects increase water available for drier periods, but they will also provide water for wildlife refuges and help in the battle to recharge groundwater.
- **Properly manage the forests** – Properly managed forests would dramatically reduce the frequency and severity of fires as well as increase the amount of water runoff into streams and underground aquifers. As wildfires increase in frequency and severity, the need to properly manage forests to a historic plant density is of the utmost importance. Our forests are between 80%-600% denser than they were a century ago and their floors are flush with highly flammable debris. We should reintroduce logging to help reduce density. We can also divert a percentage of the money set aside to fight wildfires and earmark it for forest management. These investments would restore the natural flow of runoff.
- **Invest in the development of desalination and reclamation facilities** – The development of desalination plants and the reclamation of recycled water would dramatically reduce or eliminate the need to pump water over the Tehachapi Mountains. Today, a fully functioning desalination plant can be built for just over \$1 billion. We must make it a priority to secure funding for the construction of these facilities along the California coast.