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Grand Theft Water – Part I

Proposed California Water Project Would Decimate Salmon Fishery

By Kalla Hirschbein and Zeke Grader

In late July, California Governor Jerry Brown, accompanied by US Interior Secretary Ken Salazar, and surrounded by a cadre of agency representatives from NOAA and other federal and state agencies, announced plans for a multi-billion dollar water project to take half or more of the freshwater inflow to the Sacramento-San Joaquin River Delta and divert it south through a series of tunnels, pumps and canals for delivery to vast agribusiness holdings on the arid west side of the San Joaquin Valley and to land speculators/developers in Southern California.

What's at stake for fisheries is the second largest salmon producing system in the lower 48, and a vast spawning and nursery area for other commercially important species of fish and shellfish. The San Francisco Bay / Delta estuary is the migratory route for four species of Central Valley chinook between their natal Sierra streams and the Pacific. The western part of the estuary is an important nursery area for Dungeness crab and spawning habitat for the largest Pacific herring population south of British Columbia. The estuary was once a major producer of oysters and shrimp and still supports a major recreational fishery for native

sturgeon and non-native shad and striped bass.

To put in context and better understand the import of the California Governor's 25 July announcement, a brief review of California water and some of its fish is useful (to gain a full appreciation of western water development – and its effects on fish – read Marc Reisner's seminal work *Cadillac Desert*, first published in 1993).

A Brief Geography and History Lesson

California's salmon are at the southern tip of the species' range (at least in their native Northern Hemisphere waters). What sustained the Central Valley's once large chinook salmon populations has been a river system fed by the Sierra snowpack, encompassing the north running San Joaquin River, the larger south running Sacramento River, and their many tributaries.

Historically this river system contained more than 6,000 miles of salmon spawning habitat. The rivers then converge in an area downstream of Sacramento creating a Delta extending west to San Francisco Bay and forming the largest and most important estuary on the West Coast of the Americas. This estuary extends to the Golden Gate and

out into the Gulf of the Farallones and the Pacific.

The importance of the Bay-Delta estuary for fish production extends back at least 10 million years. And its fish and shellfish have helped sustain the Native Americans, then white settlers and the immigration that followed for at least 160 years; the first salmon cannery on the West Coast was built on the banks estuary of the river opposite Sacramento in 1852.

The fresh water inflow to the Delta mixing with the tidal flows from San Francisco Bay created the ecologically rich 'null' zone where fish and shellfish thrived. This was not water "wasting to the sea." The Delta inflows were coveted by farmers with no riparian water of their own to irrigate large swaths of the Sacramento and San Joaquin Valleys. It was also coveted by municipalities seeing water as key to their growth. First San Francisco, and then other urban water agencies began tapping Central Valley tributaries in the early 20th Century.

In the 1920's California was planning the development of its Central Valley Project (CVP), a plan to dam the mainstem of the Sacramento and San Joaquin Rivers and deliver those flows for agriculture in the Central Valley and for municipal uses. The



Great Depression changed all of that. California did not have the money for its Central Valley water plan, so the federal government picked it up as part of the massive public works projects it undertook to put people back to work. Work on Shasta Dam on the Sacramento and Friant Dam on the San Joaquin began in the 1930's and they were completed and began operations as World War II was winding down.

Friant operations were particularly deadly for San Joaquin salmon populations immediately following the project's startup. In violation of State law, no flows were provided for fish downstream of the dam – wiping out a large spring-run salmon population. Shasta Dam cut off access for fish to important spawning areas in the upper Sacramento, Pit and McCloud rivers, but its impacts would also be felt in later years as more of the reservoir's yield was claimed by irrigators and sent downriver to be pumped from the southern Delta to new irrigated farmlands on the west side of the San Joaquin Valley.

In addition to the dams on the Sacramento and San Joaquin, the CVP would later include dams on some of the tributaries, including the American, and, outside of the watershed, from the Trinity (in the Klamath watershed) and a large pumping plant near Tracy, at the southern end of the Delta. These pumps were intended to take the "CVP water" from the north and move it to its water contractors in the San Joaquin Valley. The CVP would become the nation's largest reclamation project.

The state was not satisfied with the CVP alone, which did not provide any water south of the Central Valley. Governor Pat Brown, father of the current Governor, pushed for a state project that would supply northern California water (e.g., from the Feather and Eel rivers) to southern California cities. In 1960, Pat Brown's water plan was barely approved by voters, who split north and south, to fund the State Water Project (SWP).

The Feather River was subsequently dammed at Oroville, a pumping plant

was built in the Delta near that of the CVP, a massive "Governor Edmund G. Brown California Aqueduct" was laid 700 miles down the west side of the San Joaquin Valley, and, with the help of massive pumps water was boosted over the Tehachapi mountains into the hands of southern California cities and cities-to-be.

The SWP, with its fully built-out delivery system, was never extended to rivers other than the Feather after Governor Reagan scotched a proposed dam at Dos Rios on the Eel River. The State, however, cut contracts for the amounts of water it believed it would have from a fully developed SWP and this has led to a clamor to this day among the more junior contractors for fulfillment of their contracts for water that doesn't exist in most years – at least not in the SWP.

The chicanery around California water was not limited to Los Angeles and the Owens River (remember Jack Nicholson's 1974 "Chinatown"). In addition to some small family farms in the Sacramento Valley and along the east side of the San Joaquin Valley, CVP water operations were now feeding some huge corporate "families" (including companies like Standard Oil) with holdings 10 to 100 times more land than the 160 acre limit set for receiving taxpayer-subsidized CVP water. This was all under the "watchful" eye of the Bureau of Reclamation.

On the State side, since much of the water from the SWP was not needed initially by southern California, contracts were let to sell the "surplus" water at bargain basement prices to land owners on the west side of the San Joaquin – suddenly making the cheap, arid, and often-toxic parcels in that part of the valley (which could now be serviced by the State's SWP canal system) valuable as newly irrigated lands. These were not exactly "family farmers," with landowners such as Southern Pacific Railroad and Chevron.

The two water projects were making millions for millionaires.

A Broken System

The wealth being created in the valley and for some southern California land speculators was not without its costs. Salmon populations began feeling the impact of the two projects by the impassable dams, changed flow regimes, and the dewatering of the San Joaquin from Friant to the confluence of the Merced River, the 75 miles that once produced so many spring-run chinook. The wealth being created for a few with these new pipelines was impoverishing thousands of fishermen at the other end and decimating public trust fish populations.

The damage by the CVP to San Joaquin runs ended the century old Bay-Delta gillnet salmon fishery; which was closed by the Legislature after the 1957 season. And, the impacts from the SWP (e.g., the Red Bluff Diversion Dam) led to calls as early as 1968 by the California Fish & Game for closures on the ocean troll and sport salmon fisheries.

Hatcheries, filled with fall-run chinook were built to mitigate some of the losses on the Sacramento and the tributaries. But there was a secondary impact coming from the huge toll being taken as a result of the combined State and Federal pumping operations at Tracy. The pumping was strong enough at times to create a reverse flow on the San Joaquin. Baby salmon going with the flow were no longer heading west through the estuary to the ocean, but were now being sucked backwards to the pumps. Most of these disoriented youngsters become prey – those that don't perish at the pumps or in the Projects' "salvage" operations.

In the mid-1960's fishermen and scientists concerned with the plight of salmon populations, began to champion the idea of building a canal around the Delta to take Sacramento River to the pumps and thus eliminate the problem of reverse flows. The large water contractors also liked the idea since it meant they'd be getting higher quality water than that being sucked out of the Delta; they just didn't want



to pay for such a “peripheral canal.”

Keep in mind this was pre-Clean Water Act, pre-Endangered Species Act, and when the Delta was regarded by engineers as a reservoir, not a uniquely valuable ecosystem. “Estuary” was not part of the vocabulary then. To put it in context, this was also at the time when the Corps of Engineers laid out plans for filling San Francisco Bay.

When PCFFA finally came together in 1976, one of its “marching orders” was to support the peripheral canal. By 1982, however, a great deal of thought had been given the project by fishing groups and most felt it would simply make matters worse. In the late 1970’s the State had already begun a program of rearing hatchery fish to a large size (hoping to increase survival) and trucking them past to the Delta – which had become a black hole for baby salmon in years of average and below-average rainfall – for release into San Francisco Bay. Unfortunately natural spawners were left to figure out how to migrate through the Delta and their numbers have continued to decline as a result.

Relying on untested screening technology to keep baby salmon out the peripheral canal intakes on the Sacramento River was risky and would probably be impossible to shut down once the canal was constructed. The other question was what impact the steadily increasing demand for Project water would have on the estuary. This was an ecosystem, after all, that relied on naturally varying levels of freshwater inflow throughout the season to maintain its biological productivity. That productivity included a place for young salmon to grow and build strength before going to sea.

During Jerry Brown’s first Administration, the State Legislature passed, and he signed, a bill to build the “peripheral canal.” But this time the water agencies and their contractors, not fishermen, were championing it. Shortly after the bill’s passage, a referendum sponsored by canal opponents – which included much of Northern California, the Delta and its farmers, many Southern California water rate payers, and

fishermen – qualified for the June 1982 ballot. The referendum was passed overwhelmingly by the voters, stopping the peripheral canal in its tracks.

Part II Next Month

That’s where things stood 30 years ago. The canal threat had ended, at least for then, but the Bay-Delta estuary and its salmon remained in trouble. In Part II next month we look at some of the attempted fixes over the past three decades, a peripheral canal resurrection and plans for the big water heist. 🐟

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