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Water Review

A Perspective On Western Water Issues Prepared By The Family Farm Alliance And Its Members

CALIFORNIA

The Pumps Went Dry

Dwindling Numbers Of Tiny Delta Smelt Lead To A California Shutdown

For nearly three weeks in early June, the heart of California's water supply system was mostly shut down because of concern over a tiny fish in danger of extinction, despite the fact that California is gripped by critical drought conditions.

Water Education Foundation

The Harvey O. Banks Pumping Plant, where water is lifted from the Delta to begin its journey to Central and Southern California through the State Water Project's California Aqueduct.

BACKGROUND

The State Water Project's Harvey O. Banks Pumping Plant and the federal Central Valley Project's Jones Pumping Plant are located in California's northwestern San Joaquin Valley near Tracy, east of the Bay Area.

The Banks pumps mark the beginning of the California Aqueduct, which stretches to Central and Southern California. The Jones (formerly Tracy) Pumping Plant supplies the CVP's Delta-Mendota Canal. The canals parallel each other along the western valley foothills as far as O'Neill Forebay and adjacent San Luis Reservoir.

TOGETHER, THE PLANTS pump enough water from the Bay-Delta Estuary to supply 25 million California residents and five million acres of farmland. Areas served from the pumps range from the Bay Area on the north to San Joaquin Valley, central coast and much of Southern California.

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Background: California's Delta Water Export Pumps

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For many years, these facilities and the state and federal water contractors who rely upon them have been affected by water management decisions (frequent restrictions) on pumping in order to minimize "takings" of species listed under the Endangered Species Act.

Those include Chinook salmon, steelhead and the Delta smelt. Salmon and steelhead have been major, well-known ESA issues along much of the West Coast. The Delta smelt is a local fish that occurs only within the Delta and its maze of channels connecting lower portions of the Sacramento and San Joaquin rivers, the principal Central Valley streams.

It is the Delta smelt that this year has emerged as the estuary's No. 1 ESA protection problem as its population totals have plunged. Many marine biologists and environmentalists contend the Delta smelt is on the brink of extinction.

THE RESULT WAS that between May 30-June 20, much of the Delta water depended upon across wide reaches of the state was turned off to protect the Delta smelt.

THE DELTA SMELT

For a fish that has caused so much disruption and has the potential to cause further water supply grief, the Delta smelt isn't much.

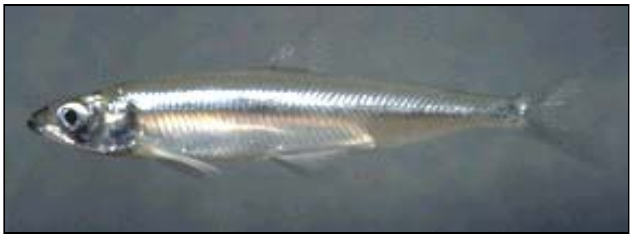
It is a small, slender-bodied fish, usually only 2-3 inches long. Live delta smelt appear almost translucent.

DELTA SMELT ARE FOUND only in the Bay-Delta Estuary and like brackish water. They usually inhabit salinity ranges of less than 2 parts per thousand (ppt) and are rarely found at salinities greater than 14 ppt.

During the late winter to early summer, delta smelt migrate to fresh water to spawn. Females only produce between 1,000 and 2,600 eggs which sink to the bottom and attach to the substrate. Larvae hatch between 10-14 days, float with the water currents downstream until reaching areas where salt and fresh water mix along the Sacramento River and Carquinez Strait.

Delta smelt are fast growing and short lived with most growth within the first 7-9 months of life. Most smelt die after spawning in the early spring, and few survive to a second year. The delta smelt historically was one of the most common fish in the Sacramento-San Joaquin Estuary, yet because of its fluctuating abundance from year to year, research has shown that its population levels have been declining rapidly.

U.S. Fish and Wildlife Service



The Delta smelt

ENVIRONMENTALISTS HAVE often blamed the state and federal pumps for the smelt's problems but other factors, such as toxics and invasive species, are also taking a toll. The U.S. Fish and Wildlife Service in 1993 listed the species as threatened under the ESA. It is now viewed as an indicator of the Delta's larger environmental problems.

ISSUES AND EFFECTS

Nothing about the Delta and its environment is simple. The state and federal governments, along with scores of stakeholders, have spend much of the past 15 years trying to carve through the problems through the CalFed Bay-Delta Process and Program. Millions of dollars in studies have taken place and many boards and bureaucracies have come and gone. Delta problems – those of fishery habitat, invasive species and other environmental

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Issues: Federal And State Court Delta Smelt Cases

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questions; water quality; infrastructure (such fragile levees and constant flooding threats for low-lying lands, mostly on islands, along Delta channels); and water supply – have remained.

Delta water export pumping that means so much to the vast majority of California's booming population relies entirely on the Delta's crooked waterways, with fingers kept crossed over decaying levees, water quality woes, ESA problems and other fishery difficulties to get water from the Sacramento River to the pumps.

REGARDING THE DELTA SMELT and recent pump shutdown, the U.S. Fish and Wildlife Service issued a biological opinion in 2005 that said pumping would not jeopardize the Deltra smelt's continued existence. The permit did not set firm limits on how many fish the pumps could "take". On May 25, U.S. District Judge Oliver Wanger of Fresno cited this lack of specificity as one of the reasons why he was voiding the biological opinion.

Only a month earlier, an Alameda County Superior Court Judge in Oakland ruled that the state's Banks Pumping Plant was violating the state's own endangered species laws.

Judge Frank Roesch ruled the state Department of Water Resources (DWR) does not have proper permits or authority to operate the Banks Pumping Plant. He gave state officials 60 days to come up with a new plan to avoid killing Chinook salmon and Delta smelt, both protected under the Endangered Species Act, or shut down the pumps.

Judge Roesch's ruling left the DWR in a fix: Permitting processes would take far more time than is available. The state has appealed Judge Roesch's decision, thus staying the ruling.

IT WAS AGAINST this backdrop that the pumping shutdown occurred May 30. Department of Fish and Game Director Ryan L. Broddrick asked the state to stop the pumps because so many Delta smelt were being killed, less than two weeks after a fish census determined Delta smelt population had reached an all-time low.

One day later, the U.S. Bureau of Reclamation shut down all but one of its Jones plant pumps (left on to provide water to the City of Tracy). Both the SWP and CVP shutdowns were voluntary.

There were immediate water supply impacts for a few small cities and irrigation districts along the Delta-Mendota Canal, and for Bay Area communities that use SWP supplies.

Further down the system, however, contractors were kept mostly whole with heavy releases and a rapid drawdown in both San Luis Reservoir (where the two million acre-foot lake was down to 558,000 acre-feet by June 27 after falling 600,000 acre-feet, and 60 feet in surface elevation, within a month) and its O'Neill Forebay.

THERE WERE IMMEDIATE FEARS that a new shutdown might occur.

In fact, on June 22 in U.S. District Court in Fresno, Judge Wanger heard a plea from environmentalist organizations that Delta water export pumping should be stopped on grounds too many of the fish were being killed after the pumps were restarted. Judge Wanger disgreed after hearing water managers for the CVP and SWP contend water temperatures near the Tracy plants had risen to the point that the smelt had left the area as they typically do in spring. Environmentalists countered that the pumps' "reverse flows" in the Delta were preventing the three-inch-long fish from reaching cooler water.

Judge Wanger held that evidence does not indicate that current Delta pumping operations jeopardize the smelt's continued existence. Environmentalist groups said they might return to court.

ANOTHER CONCERN among SWP and CVP officials and contractors concerned the stability of B.F. Sisk-San Luis Dam, a massive rock and earth-filled barrier that forms San Luis Reservoir, because of the rapid water drawdown of two feet per day. Such a problem arose nearly three decades ago.

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Issues: Worse Drought Ever In Southern California

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A graver worry is that the south state's water supplies could be jeopardized in what has turned out to be the driest-ever year in Southern California, especially since most water reserves have been used or committed.

Many water agencies in the San Joaquin Valley took emergency actions to suspend transfers and tighten conservation.

Many Southern California and Bay Area water providers urged users to cut back on demands.

STATUS AND OUTLOOK

The State Water Project and Central Valley Project resumed pumping June 17 and things were back to normal within a few days.

However, many water officials view the recent pumping shutdown as another sign that the state must deal with Delta issues once and for all.

"We have a system that is not sustainable for our water supplies or the ecosystem," Department of Water Resources Director Lester Snow said.

ONE SUCH SOLUTION is an old idea. A Peripheral Canal, turned down by California voters in 1982, is getting new attention. The 43-mile canal – considered by some to potentially be the nation's biggest-ever public works project – would run from the Sacramento River town of Hood around the eastern and southern Delta periphery to convey Northern California water directly to state and federal Delta export pumping plants near Tracy. Thus, it would bypass the Delta's problem areas.

Governor Arnold Schwarzenegger, who has been championing additional California water storage, has also promoted the need to fix the Delta and take a look at a Peripheral Canal.

In Sacramento, a recent report by the Public Policy Institute of California provides five Delta water supply options. Three alternatives include versions of a Peripheral Canal. Another deals with reduced Delta export pumping. The fifth suggests water storage near the Delta. The State Senate is considering legislation to require the Department of Water Resources to select one of the options by next January 1.

"If we don't fix the Delta," DWR Director Snow said, "this is going to start happening every year."

The San Francisco Bay and Sacramento-San Joaquin Delta as seen from space

U.S. Geological Survey