Fisheries based on an anadromous species like salmon are tricky because they need both on- and offshore resources to be economically viable. Because the harvest of anadromous fish happens in the ocean, it’s easy to forget how many obstacles these fish must face before they end up on the back deck.

This month we’re using our soapbox to discuss fishery threats that have only one connection to the ocean: salmon. Specifically, we’re looking at California’s Central Valley Chinook salmon. These fish are caught in California, Oregon and Washington, and they illustrate just how complicated the onshore portion of an anadromous fish’s life can be.

There are at least ten California and federal agencies that regulate issues that impact these fish. Most have no jurisdiction over activities at sea. However, they nevertheless have a direct impact on the fleet’s ability to land salmon, and that’s why the fleet must be involved.

We are right now in the throes of several major project proposals, adjudications, programs and other bureaucratic endeavors that could reduce the number of young Central Valley Chinook that make it to the Pacific. What follows is a brief discussion of some of the most pressing issues taking place about a hundred miles inland that could impact commercial salmon fishermen’s ability to catch fish, and we also give you ways you can get involved to prevent that from happening.

**Background**

California’s Central Valley is actually two valleys running north and south in the middle of the state, and covering about half its overall length. These valleys, called the Sacramento and San Joaquin for the rivers that carved them, meet at a delta just above the San Francisco Bay.

It is the Sacramento River and its tributaries that produce the Sacramento fall-run Chinook, the only commercially harvestable salmon that comes from the Central Valley.

For our purposes, the starting point of the Sacramento River is just below Shasta Dam, near Redding, CA. Shasta Dam might be the first and last thing a fall-run Chinook ever sees, because it is the farthest point on the Sacramento River that fish can still reach; it is an impassable roadblock to further migration.

From Shasta Dam, the river runs due south past the City of Sacramento, and into the San Francisco Bay Delta Estuary. The Estuary is the point where the Sacramento River meets the San Joaquin River, which has been flowing due north through its own valley, and where both rivers meet and mix with ocean water coming through San Francisco Bay.

Water flowing to the Bay Delta Estuary is one of the most contested natural resources on the planet. On one side are salmon and other riverine species, as well as their advocates. On the other side are industrial agriculturalists and other southern California water users who benefit from the largest plumbing system in the world.

That Central Valley plumbing system, which is comprised of the Central Valley Project (CVP) and the State Water Project (SWP), is a system of dams, ditches and canals that divert water out of the Sacramento and the Delta and ship it south for irrigation and municipalities.

It is this massive system, both natural and engineered, that gives rise to the crucial issues facing salmon away from the ocean.

**Threat 1: “Cal Water Fix,” Delta Water Quality and Flow**

Formerly known as the Bay Delta Conservation Plan (BDCP), the newly renamed “Cal Water Fix (CWF)” is a massive infrastructure project to construct two 40-foot tunnels that would pipe Sacramento River water from diversion points just below the City of Sacramento, underneath the SF Bay Delta, and into preexisting pumps that export water into the San Joaquin Valley.

These “Twin Tunnels” have the capacity to double the amount of water...
exported from the Sacramento River and the San Francisco Bay Delta Estuary. That spells disaster for the species that depend on enough fresh water inflow to migrate downstream, like Chinook, and for the fragile ecology of the Bay Delta Estuary itself.

That health is important to young salmon, which can spend a significant amount of time laying over in the Bay Delta Estuary, fattening up before finishing their migration to the sea. If the equilibrium is off, then prey species are harder to find, water quality gets worse, and rearing habitat disappears. In other words, the Twin Tunnels could facilitate the starvation, poisoning and consumption of baby salmon before they ever get a chance to hook up with a troller.

Despite growing protests from an array of Californians who oppose the project for a variety of reasons, government agencies are in full-court press to get the Twin Tunnels project approved.

In September 2015, the California Department of Water Resources (DWR) submitted an application to the State Water Resources Control Board (Board) requesting a permit for the Twin Tunnels intakes. Shortly thereafter, DWR submitted an application to the Army Corps of Engineers for a permit to excavate the wetlands where the Twin Tunnels will be located.

Those permit applications are the precursors to rolling out the bulldozers. More importantly, though is that they are cutting in line and short-circuiting the process of asking a whole lot of key questions that still need to be answered about whether this project even makes sense!

In 2009, the Board was ordered by the California Legislature to “develop flow criteria” for the Delta – that is, the State Board needs to determine how much water the Delta needs to ecologically survive – before it would be allowed to permit any more diversion points. This is pretty logical: it is appropriate to understand just how much water we absolutely need to keep in the river before we start skimming off the top.

Similarly, the Board has yet to complete its revision of a Water Quality Control Plan, which is supposed to ensure that Delta water is clean enough for fish to swim and folks to drink. And you guessed it: water quality in the Delta is largely dependent on maintaining the right inflow of freshwater from the Sacramento River!

On top of it all, the environmental review of the CWF proposal isn’t even completed.

So the Board will address DWR’s application for the Tunnel intakes before the water quality and flow criteria setting processes conclude. This amounts to potentially approving complete disruption of the Estuary’s ecosystem before determining what the basic clean water and flow needs are for salmon and the other species, and before determining what the impacts of that project will be.

It’s a classic case of putting the cart before the horse. It’s bad policy, it’s probably illegal, and it’s going to kill fish.

Tell the California State Water Resources Control Board to complete the flow criteria and the water quality control plan before deciding whether to allow DWR to build the intakes by writing:

Mr. Tom Howard
Executive Director, State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Threat 2: Coordinated Operating Plan for State & Federal Projects

The US Bureau of Reclamation (Bureau) regularly reviews the long-term plan (Plan) that governs operations of the Central Valley plumbing projects. This plan identifies potential harms to salmon from operation of the plumbing, and explains the agencies’ actions to reduce those harms.

Remember that the plumbing projects include all of the dams, pumps and canals that collect and divert water from northern California salmon streams to southern California water agencies.

The projects harm salmon in several ways: by reducing the instream flows that allow baby salmon to safely migrate to the ocean and the adults to return; by cutting off about 70% of salmon’s historic spawning and rearing range with dams; by entraining fish in diversions and eviscerating them in pumps; and many more ways.

Thus, it is crucial to the fishery that the Bureau uses the Plan to accurately assess how the plumbing projects have historically been harming salmon so that it can implement the right protective measures that will maximize the number of salmon that make it to the ocean.

The Plan is currently under review, but it seems that the Bureau isn’t accurately documenting how the California Central Valley plumbing projects harm salmon. For instance: (1) The Bureau isn’t using the latest scientific reports to document how decreased streamflow will affect salmon survival; (2) It isn’t looking at the impact of the Projects on salmon fry and parr, despite the fact that salmon at those life stages are often the majority of out-migrating juveniles; (3) It failed to identify temperature control problems, such as those at Shasta Dam in 2014 that caused 95% mortality of the winter run Chinook, and potentially 98% of the fall run Chinook natural spawners, as significant adverse impacts that would require specific mitigation measures.

Although comments on the Bureau’s draft Environmental Impact Statement for the Plan were due on 29 September, there may be another opportunity for public input after the Final EIS issues. Stay tuned to: www.usbr.gov/mp/BayDeltaOffice/Documents/ito.html

Threat 3: The Westlands Water Deal

Westlands Water District sits on the southwest side of the San Joaquin Valley and provides irrigation water to 600,000 acres of farmland that likely wouldn’t exist without the plumbing system conveying water from Northern California salmon streams. That farmland is actually old seafloor, which happens to be covered with selenium, a toxic salt.

Westlands is the largest user of water exported from Northern California, and has probably the most powerful lobbying voice in Californian water politics.
Back in 2006, a judge ordered the Bureau to provide drainage pipes and wastewater treatment to Westlands, whose agricultural runoff was polluting the San Joaquin River with selenium.

Probably due to the expense and environmental burden of installing the drainage, the Bureau never got around to it. Instead, Westlands and the Bureau secretly negotiated a settlement that they announced in September, 2015.

This is a sweetheart deal. Westlands would be absolved of a $350 million debt that it would have had to pay to the Bureau for construction of new parts of the Central Valley plumbing system. In turn, Westlands “takes over responsibility” for the drainage project, but in name only: there are no performance requirements that Westlands must meet.

And the kicker is that Westlands gets a permanent contract to receive a massive amount of additional water from Northern California. Unlike every other similar agreement, that new water contract is not reviewable. So despite what might be happening in the future, like drought, climate change, extinctions, or the biological collapse of the SF Bay Delta Estuary, we can’t go back and tell Westlands that they get less than the contracted amount of water in a given year.

Westlands does have to retire about 100,000 acres of farmland under the deal, but a lot of this acreage was already fallow because of selenium. Moreover, the Department of the Interior has known for years that retiring 300,000 acres was the appropriate solution, not just installing new pipes.

This deal stinks. Not only will it deprive Sacramento River fall Chinook of much-needed water as they migrate through the Estuary, there is also a great likelihood that selenium will continue to pour through the San Joaquin River into the Estuary, tainting the young fish rearing there. And as water flow continues to decrease through the Estuary (because of drought, tunnels and water contracts), those toxins will all be present in higher concentrations, increasing their impacts.

This settlement still requires Congressional approval. While that provides an opportunity to kill the deal, it doesn’t necessarily provide much hope of doing so. By the terms of the agreement, Congress has to approve it by January 2017.

You can get involved by contacting your Congressional delegation and telling them to fight against this secret deal that will kill salmon and kill jobs: visit www.contactingthecongress.org to find the members of your delegation.

Conclusion

This is just one fishery, and these are just three of the many threats to California Central Valley salmon. But they illustrate the rule that the number of fish in the ocean is directly related to the amount of fighting, politicking and legislating over inland resources.

Stay apprised and involved with the issues facing your fisheries. You might not know where they’re coming from next, but they could come back to haunt you unless these problems are addressed.

*FN*

Tim Sloane is Executive Director of the Pacific Coast Federation of Fishermen’s Associations (PCFFA). You may contact him at tsloane@jfrfish.org. PCFFA’s Home Page on the Internet is at: www.pcffa.org.