Photo courtesy of California Department of Fish and Game

Water wars

California king salmon losing political, environmental battles

By Lisa Duchene

Paul Johnson won't let go of California's king salmon fishery without a fight — but the odds are working against him. The president and owner of Monterey Fish Market in Berkeley and on San Francisco's Pier 33 explains: "[California king salmon] is part of our whole social fabric — an icon, making that connection between the ocean, the rivers, the mountains and the people."

From the early 1990s to 2007, when California kings, also known as the fall run of chinook salmon, migrated from the Pacific to their spawning grounds in the Sacramento River Delta, the fishery off the Northern California and Oregon coasts thrived. King salmon drove sales at seafood markets and restaurants across the region.

When the fishery collapsed and managers canceled the 2008 and 2009 seasons, the most severe salmon restrictions in West Coast history, local coastal economies lost 1,823 jobs and $118.4 million in income compared to the 2004 and 2005 seasons, according to Jeffrey Michael, director of the Business Forecasting Center at University of the Pacific in Stockton, Calif. Monterey Fish Market's profits took a 35 to 40 percent hit, says Johnson.

This year, there will be an abbreviated California salmon season July 1 to 4 and 8 to 11. Along the Northern California coast, in addition to those eight days, fishermen will have a chinook quota of 18,000 fish for the final two weeks of this month and 9,375 fish in August.

Although forecasts for this year's Columbia River salmon runs are promising, prospects appear grim for a return to stable and robust runs of California kings — leaving a gaping hole not only in Johnson's seafood case of local salmon, but also for other U.S. seafood buyers seeking wild salmon. The more sources to choose from, the more affordable pricing is, notes Johnson, who also wrote the book "Fish Forever."

The book on California's kings is not about overfishing. Rather, this story is almost entirely out of the fishermen's hands. Federal scientists have identified, as factors in the collapse, unfavorable ocean conditions and the chinook's general weakness to withstand those conditions.

Federal scientists say a reliance on hatchery-raised fish has weakened stocks.

Over the past 150 years, as the Sacramento River Delta has been re-engineered and the chinook has lost habitat, the fall chinook run grew increasingly reliant on hatchery stock and lost genetic diversity, say scientists.

"The habitat has been thoroughly trashed," says Chuck Tracy, salmon staff officer for the Pacific Fishery Management Council. "It's been simplified and there's basically no place for naturally produced fish to exist anymore. Everything's been diked and leveed and straightened out. There are very few areas where salmon can reproduce naturally in the Sacramento River system. That's the pool of genetic resources that the stock as a whole needs to pull on and the hatcheries can use to replenish their genetic stock. Because there's no habitat left for natural fish, it's raised in a hatchery and becomes homogenous in a hurry."

For much of the last year, Californians have battled over rights to water in the Sacramento River Delta. Johnson supported the National Marine Fisheries Service, fishermen and environmentalists who argued in court in favor of restrictions on pumping freshwater from the Delta to farmland and communities in the southern part of the state, while water districts and agri-businesses argued to keep their water allocations.

The Central Valley water districts and agri-businesses prevailed. The recent battle began in June 2009 when NMFS issued a biological opinion declaring the water pumping jeopardized the Sacramento's endangered winter

and spring-run chinook runs, along with some populations of steelhead, green sturgeon and killer whales. The resulting restrictions led to a drop of about 7 percent in diverted water in 2009.

The pumping controls — aimed at aiding the winter and spring runs, but also expected to help fall chinooks — coincided with a third straight year of drought, and led to a drop in agricultural production in the San Joaquin Valley, resulting in about 2,000 job losses and $150 million in lost income, according to Michael of the University of the Pacific.

Water districts representing more than 20 million California residents and the agricultural industry went to court, seeking a temporary restraining order on this season's pumping restrictions.

On May 26, the judge ruled in the water districts' favor, nixing the restrictions for the last week of May and first two weeks of June. U.S. District Court Judge Oliver Wanger said NMFS had failed to provide a reasoned and scientifically justified basis for selecting the specific restrictions.

Prior to the biological opinion and lawsuit, a team of federal scientists led by Steven Lindley, an ecologist at NOAA's Southwest Fisheries Science Center, investigated the 2008 collapse of the chinook fall run, but did not identify the water pumping as a major factor. More significant, said the scientists, is the loss of shallow-water rearing habitat since levee construction and conversion to agriculture that has removed all but about 5 percent of the 1,300 square kilometers of Delta tidal wetlands.

"The biggest problem with the state and federal water projects is not that they kill fish at the pumping facilities, but that by engineering the whole system to deliver water from the north of the state to the south while preventing flooding, salmon habitat has been greatly simplified," according to the report.

The Lindley team reported to the Pacific Fishery Management Council that ocean conditions — weak upwelling, warm sea surface temperatures and low amounts of food — were the primary culprit in the collapse, but that the salmon lacked the genetic diversity and fitness to endure those conditions, due to the habitat loss.

The report also noted that climatic conditions in the Pacific are intensifying into more dramatic shifts that will likely affect the weakened California kings, which are at the southern end of their range.

"We can expect to see more booms and busts in this fishery in the future in response to variation in the ocean environment," reported the scientists.

Tracy and the Pacific Council are confident a little fishing will be OK this year, even though the chinooks are declining. Fishermen, buyers and conservationists are organizing and working to speak up for the salmon, says Johnson. "I would feel terrible if I was part of the generation that allowed this magnificent fish to go extinct," he says.

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