

PCFFA NEWS



NEWS RELEASE

from the

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California Concludes That Federal Irrigation Withdrawals and Low Flows Were Primary Cause of Klamath Salmon Kill

Redding, CA -- The California Department of Fish and Game (DFG) released a report today finding that excessive federal water diversions from the Klamath River were the primary cause of a massive fish kill in the Klamath River in September and October 2002. The report confirms what Tribal biologists, fisheries scientists and commercial fishermen have been saying all along -- that massive amounts of water taken out of the Klamath River by the Bureau of Reclamation to irrigate the federally subsidized Klamath Irrigation Project are systematically dewatering the lower Klamath River and rapidly killing off one of the most valuable salmon fisheries in the west coast, causing enormous economic losses to coastal and fishing-dependent communities.

The 63-page report, "September 2002 Klamath River Fish Kill: Preliminary Analysis of Contributing Factors," states among other conclusions:

"The DFG concludes that low flows and other flow related factors (e.g., fish passage and fish density) caused the 2002 fish kill on the lower Klamath River. Furthermore, of the conditions that can cause or exacerbate a fish kill, flow is the only factor that can be controlled to any degree. Flow is regulated by upstream reservoirs operated by the USBR [U.S. Bureau of Reclamation] on both the Klamath and Trinity rivers." (Pg. 54)

“September 2002 was unique compared to other low flow years when adult fish kills did not occur in the Klamath River basin. September flow releases from Iron Gate Dam in 2002 (provisional data) were the lowest on record when returning numbers of fall Chinook salmon were at average or above average levels.” (Pg. 54)

“When looking at the longer period of record since 1951, higher average September flows than in 2002 occurred in 92% of the years.” (Pg. 54)

Nor were unusually high water temperatures nor any toxic chemical spills occurring at that time that would have helped explain the fish kill, as was initially claimed by upper basin interests in an attempt to deny low flows as a cause:

“Water temperatures in the Klamath River were not unusually high during September 2002 when compared to historic data.... Sampling of the lower Klamath River in September 2002 confirmed that no toxic substances were present at concentrations to have caused the fish kill.” (Pg. 57)

“The September 2002 fish kill was caused by a combination of high densities of adult fish in the lower Klamath River (due to low flows and possibly inadequate fish passage) and warm water temperature conditions which are typical for this time of year. (Pg. 57)

The report also makes it very plain that the low flow conditions established by the Bureau of Reclamation with the concurrence of the National Marine Fisheries Service (NMFS) in its 2002-2012 Biological Opinion are very likely to result in additional fish kills in the future:

“There is a substantial risk for future fish kills on the Klamath River considering that pathogens are always present, temperatures are normally at levels that can cause disease, and under the 2002 BO [Biological Opinion] flow prescription, a moderate sized run of salmon and steelhead can generate high enough densities in the lower Klamath River to result in a major fish kill.” (Pg. 57)

Over 33,000 adult salmon, including hundreds of federally protected coho, died before they could spawn when officials with the federal Bureau of Reclamation diverted too much of the Klamath River to upstream farmers. The DFG concluded that sheer lack of water in the river caused lethal conditions and overcrowding for salmon.

“The DFG concludes that low flows restricted fish passage and increased fish density thereby causing the 2002 fish kill on the Lower Klamath River.” (*DFG Cover Letter 1/3/03 conveying the Report to Dave Sabo, US Bureau of Reclamation*)

The returning fish then crowded together in a few "thermal refugia," spots where cooler tributaries brought colder water into the river. Naturally occurring infectious bacteria and

parasites that are normally under control when water is cooler and fish are less stressed then swept through the stressed and densely concentrated fish like wildfire in a classic epidemic pattern, killing nearly all and seriously weakening the rest before any could get to spawning grounds. It was not until water temperatures were reduced and more water was flushed down the river by federal agencies on an emergency basis that the fish could begin moving upriver to spawning grounds, by which time losses were already very high. Roughly 25 percent of the entire year's Chinook spawners died in the immediate fish kill, with much of the remainder weakened.

Conservation groups, commercial fishermen, tribal biologists and California Fish & Game biologists had warned federal officials all summer that low river flows in the Klamath could seriously damage the fishery. The California report finds that this is exactly what happened.

“The current federal water plan ignores science and instead relies on guess-work, wishful thinking and voluntary measures,” said Glen Spain of Pacific Coast Federation of Fishermen’s Associations Northwest Office in Oregon. “This is a water plan for killing fish. Why should farmers have all the water they need while coastal fishing-dependent communities and fishing families wind up with dead fish and dry rivers?”

At the time of the fish kill, federal officials insisted that it was wrong to point to federal water diversions from the Klamath Basin Project as the culprit, even while releasing previously stored water to ease the problem. Today's report lays all doubt aside. Upper Klamath Basin flows from the Klamath Project typically account for about one-third of total flows at the estuary during September. Klamath Project irrigators and some federal officials have also tried to blame the fish kill on poor water conditions in the Trinity River, the Klamath River’s main tributary. However, Trinity River flows were at the highest level they had been in decades during September 2002.

The Klamath River Basin was once the third largest salmon producing river system in the U.S. The salmon and steelhead runs in the Klamath Basin, even though seriously damaged by similar water problems in the past, still provide a bare living for commercial fishermen, sport fishing guides, native tribal members, and coastal communities from Ft. Bragg, California to southern Oregon. However, fishing has been severely curtailed in the last decade as an emergency conservation measure, and tens of millions of dollars have been spent in the lower Klamath River trying to restore salmon habitat. Lack of water in the river, by Bureau of Reclamation design, however, undercuts all these restoration efforts and can lead to massive fish die-offs. Such die-offs are increasingly common in the lower river because of meager water flows released by the Bureau of Reclamation from Iron Gate Dam, though this year’s staggering die-off hit a devastating new record for losses.

At about the time the fish kill occurred, Earthjustice filed a lawsuit against the ten-year federal irrigation plan that caused the ecological disaster, on behalf of commercial fishermen, conservation groups and Congressman Mike Thompson, whose northern

California district's coastal communities were hard hit economically by the fish kill. The irrigation plan is badly flawed and ignores the best available science that tells managers how much water to leave in the river. The flawed 10-year plan was only approved after the government overruled its own scientists who insisted that the Bureau's proposed low flows would damage the river ecosystem and the salmon fishery. The current Bureau of Reclamation water plan in fact provided only about 75 percent of the flows below Iron Gate Dam during September 2002 that were deemed "bare minimums to prevent extinction" during the 2001 near-record drought.

PCFFA is lead plaintiff in the lawsuit (*PCFFA et. al. vs. U.S. Bureau of Reclamation* (Northern California District at Oakland, Civil No. C02-2006-SBA)), and represents the interests of commercial fishing families downriver and both up and down the coast who can no longer make a living fishing salmon. The region from Fort Bragg, CA to Coos Bay, OR has been all but completely closed to commercial fishing since 1992 as an emergency conservation measure to protect weakened Klamath Basin salmon. Fishermen are particularly upset at having to bear enormous economic sacrifices while the Bureau of Reclamation continues "business as usual" for Klamath Project irrigators even in a dry year, such as 2002.

"This report confirms that the Bush Administration killed over 33,000 salmon," said Kristen Boyles, an Earthjustice attorney representing PCFFA and other in the lawsuit. "And the horrifying truth is that the tragedy on the lower Klamath River could be repeated unless the plan for federal irrigation is overhauled."

Earthjustice attorneys point out that the Bush White House has also suppressed two key scientific studies that address how much water to leave in the river and what uses of the water offer the greatest regional economic benefit. A draft of the economic study obtained by Earthjustice shows the greatest economic benefit to the most people can be obtained by keeping the water in the river where it belongs rather than diverting it to a small number of farmers. A major flow study by Dr. Thomas Hardy commissioned by the U.S. Department of Interior is also more than a year overdue, and is being delayed because it says that salmon need more water in the river than the Bureau of Reclamation wants to release.

PCFFA has called on the Bush White House to release the studies so that the best information will be available to decision makers and to the courts. The California Department of Fish and Game also stated in its cover letter to the Report its recommendation that the Hardy Flow Study be finalized and its recommendations implemented.

For the CDFG report see: <http://www.pcffa.org/KlamFishKillFactorsDFGReport.pdf>.

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Attachment: 2002 Flow Regimes for the Klamath Project Operations

THE 2002 COHO FLOW REGIMES

FOR KLAMATH PROJECT OPERATIONS IN THE BUREAU OF RECLAMATION'S FINAL BIOLOGICAL ASSESSMENT (BA) OF 2/25/02

TABLE 1: Comparison of Phase II Hardy Study Flows to Final 2002 Bureau of Reclamation Flows at Iron Gate Dam (IGD) (in cfs) – 2002 classed as a “dry year”

Time Step	Phase II Flows ¹ 50% Level	BuRec BA ² (Above Av.)	BuRec BA (Below Av.)	BuRec BA (Dry Yr)	BuRec BA (Critically Dry Yr)	2001 Biop Min. Flows ³
Oct	1470	1345	1345	879	920	
Nov	1710	1337	1324	873	912	
Dec	2030	1387	1621	889	929	
Jan	2400	1300	1334	888	1101	
Feb	2720	1300	1806	747	637	
Mar 1-15	3400	1953	2190	849	607	
Mar 16-31	3400	2553	1896	993	547	
Apr 1-15	3300	1863	1742	969	874	1700
Apr 16-30	3300	2791	1347	922	773	1700
May 1-15	3100	2204	1021	761	633	1700
May 16-31	3100	1466	1043	979	608	1700
June 1-15	2300	827	959	741	591	2100
June 16-30	2300	934	746	612	619	1700
July 1-15	1530	710	736	547	501	1000
July 16-31	1530	710	724	542	501	1000
Aug	1250	1039	1000	647	517	1000
Sep	1350	1014	1300	749	722	1000

Source: Bureau of Reclamation Draft 2002 Biological Assessment, pages 45 and pages 66-67.

¹ Phase II or ‘Hardy Study’ flows are those minimal flows recommended for coho salmon recovery by the scientific team doing the current multi-agency flow study of the Klamath Basin system, which represents the best available science to date on in-stream flow salmonid requirements. We used the 50% Exceedance Level for these numbers as the mid-range for an average water year for purposes of comparison. The Bureau claims that these studies do not apply to them and therefore have not factored these flow levels into their Biological Assessment.

² These are flow averages. Flow minimums, under the Bureau’s current plan outlined in the Biological Assessment, can be considerably less, down to as little as 400 cfs for a ‘dry’ or ‘critically dry’ year.

³ Considered by NMFS in the 2001 Biological Opinion as the minimum flows necessary to prevent extinction during the midst of the record drought of 2001.