No. 474

Email from Ken Hill, Dated November 30, 2002

Subj:	**additional input on RBDD - letters sent to state and federal politicians**
Date:	11/30/2002 3:18:39 PM Pacific Standard Time
From:	rioahso@snowcrest.net
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

The Federal government is again planning to usurp California states rights, against the wishes of many northern California voters, and remove a small dam from the Sacramento Rilver.

The Bureau of Reclamation (BOR) is planning the removal of the Red Bluff Diversion Dam (RBDD) in the very near future. The BOR has been led to believe that the RBDD is the cause of the decline and possible endangerment of the King salmon from the Sacramento River.They are basing their beliefs on inaccurate and outdated statistics and appear to be unyielding in their determination to follow thru with the dams removal in difference to thousands of citizens who have signed petitions in protest of its removal and to the updated facts that show it is not the cause of salmon decreases. The RBDD was built over 40 years ago in the l960's. It raises the river level approximately 22 feet and with the fish ladders on both sides of the dam it has never been a deterrent to fish migration. A back up of migrating salmon below the dam has never been reported in all these years. It should be noted that the Coleman fish hatchery north of Red Bluff, on the Sacramento River, in 1999,2000.2001, had more salmon arrive via the river, past the dam, than could be processed, and the hatchery processes thousands of salmon a season. The excess fish were given to canaries which package the salmon and the hatchery in return is given one of every three cans packaged, which are in turn given to state and federal institutions for their consumption. Seasons will vary, but there is no shortage of salmon in the Sacramento River.

The BOR now proposes to remover the diversion dam, install ten to twelve more high intake irrigation pumps, dig a very large forebay in the river bottom, under the pumps to supply them with river water. Then turn on the electricity and send water down the already existing diversion canal. A giant step forward claims the BOR. We now just open the gates to the diversion;no canal and let the law of gravity do its thing. The BOR has already installed 3 test pumps at a cost of $50 million dollars (the projected cost had been 5 to 25 mil) and has already experience mechanical difficulties and shut downs, and incurred electrical bills that are astronomical in a time of energy shortages and budget deficits. Putting more high pressure pumps that will require daily shut down to remove the dead fish that have been sucked into the protective screens, the very fish that they are trying to protect, is not the answer. If it's not broken, don't try to fix it. The present system of delivering water to the water districts below Red Bluff has been a very effective for over 40 years, it is low maintenance, it requires very little energy, and is low cost of operate. Let's try to keep it that way.

Ken Hill - P.O.Box 815, R.B.

474-1

474-1 See Response to Comment 473-1.

No. 475

Subj:	**Red Bluff Diversion Dam**
Date:	11/30/2002 8:46:01 PM Pacific Standard Time
From:	trout@snowcrest.net
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

Subject: Red Bluff Diversion Dam

Our vote would be to leave the gates up year around. The City of Red Bluff does not need "Lake Red Bluff" to survive. Business is booming up here and there does not seem to be one bit of difference whether the gates are up or down. Redding seems to grow and grow. They do not have a "Lake Redding". As far as water for irrigation, let those farmers install their own pumps. If they don't have enough ground water for that, then they shouldn't be farming there in the first place.

In your decision, you need to look at the big picture. The dam has done more damage to fish than any other source. Just take it out or leave the gates up and see what happens for the next few years. That would be the wise choice.

475-1

Fred and Carol Richelieu
10611 65th Ave.
Los Molinos, CA 96055

Email from Fred and Carol Richelieu, Dated November 30, 2002

475-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 476

Subj: **Red Bluff Dam**
Date: 12/1/2002 7:36:59 PM Pacific Standard Time
From: cessna@snowcrest.net
To: tcweterman@aol.com
Sent from the Internet (Details)

My friends and I all agree that the dam should remain as it is. Between people and fish we all weigh in favor of people over fish and a dam in place, over tearing it down. If you doubt the correctness of this decision please go to Klamath Falls and ask if people should come above sucker fish.
Bill Heins

476-1

Email from Bill Heins, Dated December 1, 2002

476-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 477

Subj: **Comments on DEIS/EIR for RBDD Fish Passage Improvement Project**
Date: 11/30/2002 8:42:03 AM Pacific Standard Time
From: bgfong@msn.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Mr. Bullock:

Several members of the California-Nevada Chapter of the American Fisheries Society have jointly prepared DRAFT comments on subject document, which await approval by the Chapter Executive Committee at our next meeting to be held on December 3, 2002. Because of the importance of the fish passage issue at RBDD and the complexity of the project, I would like to request a time extension to send our final comments to you by no later than Friday, December 6, 2002. Your help in granting this extension will be appreciated!

477-1

Chuck Knutson, President
California-Nevada Chapter, American Fisheries Society
(916) 441-4144,)916) 445

Email from Chuck Knutson, Dated November 30, 2002

477-1 The time extension request was granted. Comments have been accepted.

No. 478

Letter from Donald B. Koch, Dated November 27, 2002

+530-225-2381 DFG REDDING 336 P02 NOV 27'02 15:57

State of California - The Resources Agency
GRAY DAVIS, Governor

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
601 Locust Street
Redding, CA 96001
(530) 225-2300

November 27, 2002

Mr. Art Bullock, General Manger
Tehema Colusa Canal Authority
P.O. Box 1025
Willows, California 95988

Mr. Michael J. Ryan, Area Manager
Northern California Area Office
U.S. Bureau of Reclamation
1639 Shasta Dam Boulevard
Shasta Lake, California 96019-8400

Gentlemen:

The Department of Fish and Game (Department) has reviewed the Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) for the Fish Passage Improvement Project, Red Bluff Diversion Dam. The Tehama-Colusa Canal Authority (TCCA) and the U.S. Bureau of Reclamation (Reclamation) propose to implement modifications to the structure and/or operation of the Red Bluff Diversion Dam to minimize the impacts of the dam on upstream and downstream migration of juvenile and adult anadromous fish while improving the reliability of agricultural water supply in the canal system.

Red Bluff Diversion Dam has been identified by Reclamation and cooperating fishery agencies as one of the major causes of the decline in salmon and steelhead in the upper Sacramento River (USBR 1985). Providing unimpeded fish passage to anadromous fish at Red Bluff is crucial as more than 75 percent of the naturally spawning fall-run chinook salmon spawn upstream of the dam. More importantly, the entire population of winter-run and spring-run chinook natal to the Sacramento River must pass the diversion dam without delay for reliable reproductive success. This is because Red Bluff is the downstream limit of temperature control for Shasta Dam (USBR 1991). In addition, the same is true for populations of salmon natal to the river's tributaries above the diversion dam as there are discrete times when the river's tributaries are accessible to salmon due to flow and temperature. Safe downstream passage is impeded by the diversion dam because the tailrace and lake created

No. 478

by the dam provide for species that prey on juvenile salmon, significantly reducing their overall survival rates. Over the past decade the passage problem was eliminated for a discrete portion of the anadromous fish population present during the seasonal removal of the diversion dam; however, some portions of the anadromous fish population still require passage improvement because they encounter the dam.

The project is part of the CalFed Program and the DEIS/EIR for the project tiers from the CalFed Programmatic EIS/EIR. Although most of the action alternatives in the document meet the program objectives of the CalFed Environmental Restoration program and its Multispecies Conservation Plan, there are significant exceptions that will be described in detail later.

We concur that it is feasible for a pumping plant with state of the art fish screens to supply the agricultural needs without adversely impacting any of the biological resources in the project area. The alternatives employ different pumping plants and fish passage facilities depending on when and how long the diversion dam is installed. The fish facilities proposed for each of the alternatives are described in the table below:

Alternative Description	Dam	Ladders
No Action – Existing ladders	5/15 to 9/15	Two @ 676 cfs*
Four months w/dam and improved ladders	5/15 to 9/15	Two @ 1,631cfs
Four months w/dam and fish bypass	5/15 to 9/15	One @ 800cfs + 1000 cfs bypass
Two months w/dam and improved ladders	7/1 to 8/31	Two @ 1,631cfs
Two month w/dam and existing ladders	7/1 to 8/31	Two @ 676 cfs
No dam year round	none	none

*cfs is cubic feet per second

GENERAL COMMENTS:

Environmental Decision Making Process

Reclamation has not identified a preferred alternative. TCCA has identified a preference for the large pumping plant associated with the no dam alternative; however, TCAA does not have a clear preference for fish facilities under any type of combined alternative approach. The U.S. Fish and Wildlife Service (USFWS) Draft Coordination Act Report, with which the Department concurs, identifies the no dam alternative as the most certain remedy that fully meets the CalFed program objectives. This report identifies the reduced dam installation of two months a year either with or without enlarged fish ladders as

478-1

Letter from Donald B. Koch, Continued

478-1 The commentor is correct. USFWS is preparing an updated Fish and Wildlife CAR and will issue the update prior to final design.

No. 478

Letter from Donald B. Koch, Continued

the next best alternative that provides needed fish passage improvement. The alternatives using the current dam installation of four months with fish ladders or a fish bypass for fish passage only offers less than substantial improvement in fish passage. The bypass fish passage device was considered experimental with less than substantial improvement in fish passage.

In order to assist in the decision making process, we have focused our comments on applying the best available information to the biological and institutional criteria pertinent to decision making for this project. We believe the pertinent criteria include achieving:

(1) Congressional mandates requiring Red Bluff Diversion Dam to "minimize fish passage problems" in the Central Valley Project Improvement Act (CVPIA) action specific to Red Bluff Diversion Dam (CVPIA section 3406(b)(10)), and the goal to restore the fishery and double populations of anadromous fish (CVPIA 3406 (b)(1));

(2) Elements in the Record of Decision for the CalFed Programmatic EIS/EIR pertinent to minimizing fish passage problems at the Red Bluff Diversion Dam, species recovery and restoring ecosystem function in the upper Sacramento River (enumerated in USFWS Draft Coordination Act Report for the Fish Passage Improvement Project).

(3) Support timely recovery of species listed under State and Federal acts as threatened or endangered as well as species of special concern as developed in the CalFed Multispecies Conservation Plan and National Marine Fisheries Service Sacramento River Winter-run Chinook Recovery Plan (1997);

(4) Purpose and need statement for reliable fish passage improvement in the DEIS/EIR

No. 478

Letter from Donald B. Koch, Continued

The following matrix summarizes our conclusions on whether or not each alternative can be expected to attain the criteria described above:

Alternatives	Purpose and Need Statement	CVPIA Minimization of Passage Problems	CalFed multi-species conservation plan milestones	Provide Timely Recovery of listed species	CalFed Riparian habitat objectives
No Action-Four-Month Dam	not reliably attained	not attained	not attained	not attained	not attained
Four-Month Dam; Enlarged Ladders	not reliably attained	not attained	not attained	not attained	not attained
Four-Month Dam; Bypass	not reliably attained	not attained	not attained	not attained	not attained
Two-Month Dam; Enlarged Ladders	attained	attained	Attained	attained	not attained
Two-Month Dam; Existing Ladders	attained	attained	Attained	attained	not attained
No Dam – Year-round	attained	attained	Attained	attained	attained

The evidence supporting conclusions in the matrix includes biological analyses in the DEIS/EIR and other past documentation. Attached is a pertinent summary of the analysis from the DEIS/EIR (see Attachment 1) displaying estimated adult fish passage improvement for each alternative compared to the no Action Alternative. Past documentation includes: the USFWS Planning Aide Memorandum for the project, Draft Coordination Act Report for the Fish Passage Improvement Project, Final Supplemental Coordination Act Report for Red Bluff Diversion Dam, CalFed Ecosystem Restoration Plan and Multispecies Conservation Plan, and relevant literature on accepted design standards for fish passage facilities.

No. 478

Letter from Donald B. Koch, Continued

No Dam Alternative (No.3): Conclusions in the matrix indicate that the "no dam alternative" is the environmentally superior alternative. It has the highest certainty of achieving the timely recovery of listed species with respect to the operation of the diversion by all measures. An alternative that has high certainty for reliable passage is equally certain to provide uninterrupted diversion capability for out of stream uses of water due to its regulatory certainty. The no dam alternative is the only one that provides the valuable attribute of a functioning riparian corridor in one mile of public land along the Sacramento River.

Two-Month Dam Alternatives (Nos. 2A and 2B): The "two month dam alternative" yields up to 137 percent improvement in passage over "No Action" for spring-run chinook versus a 157 percent increase with "no dam" (Attachment 1). For winter-run chinook and steelhead, the improvements yielded by the "two month dam alternative" are similar to the "no dam alternative". Reducing the dam installation to two months is expected to eliminate the tendency for predatory fish like Sacramento Pikeminnow to congregate below the dam during their migration period because there will be no dam present during any of their migration period. This avoids the negative impact on the survival of downstream migrant anadromous fish that is influenced by the presence of the dam.

We believe the two-month alternative provides an overall level of improvement for adult and juvenile listed species that is significant, because it minimizes upstream and downstream fish passage problems to the point it supports their timely recovery. This alternative is consistent with the recommendations for passage improvement for winter-run chinook in the National Marine Fisheries Service Sacramento River Winter-run Recovery Plan (1997) and the Department's recommendations in the Status Review of Spring-run Chinook in the Sacramento River Drainage (1998). In addition, the two-month dam alternatives provide for the passage of adult green sturgeon, a candidate species that finds fish ladders ineffective for passage (U.S. Army Corps of Engineers 1991). Considering the small population of these fish and limited understanding of their life history, passage should be managed such that population of reproductive adults is not separated by the diversion dam. In small populations it is essential that the individuals of each sex be able to find each other (Soule 1986) especially if there is differential migration timing among the sexes.

Although the dam is installed for the two months of July and August, there is minimal effect on the assemblage of native anadromous fish because of minimal migration rates in these months. Evidence of this is indicated by the minimal difference in passage improvement between the two-month dam and no

No. 478

Letter from Donald B. Koch, Continued

dam alternatives (Attachment 1). A riparian corridor is precluded with this alternative due to inundation of the river banks for two months of the growing season.

Four-Month Dam Alternatives (Nos. 1A and 1B): The alternatives leaving the dam in for four months and constructing enlarged fish ladders on both river banks are not expected to substantially improve fish passage on a reliable basis (USFWS Planning Aide Memo). There are sizable portions of important anadromous fish populations encountering the dam in May and June including the adult spring-run, the late migrating segment of the winter-run chinook and green sturgeon. During May and June there are flow events sufficiently large to make the enlarged fish ladders unreliable in terms of meeting the accepted basic standard for being able to attract fish to the ladders. This basic standard targets a maximum delay of three days using a design that produces attraction flow at the two ladder outlets constituting 10 percent of the river flow (Kattapodis 1992, USFWS 1997, DWR 2001; USFWS 1984). More stringent standards are sometimes considered or required for Pacific salmon (Katapodis 1992). In a review of the passage problem at Red Bluff Diversion Dam, Reclamation concluded (USBR 1985) that delays to upstream migration of Pacific salmon are considered unacceptable and should be avoided. The existing ladders are estimated to delay adult chinook salmon for up to 21 days which exceeds the basic design standard sevenfold and a stringent standard twentyfold. New ladders cannot be enlarged to the point they reliably overcome the large exceedances in standards documented in the existing condition nor can they convey ten percent of the river flow during high runoff events in the spring. In addition to ladder effectivness, reliability is affected by the way water passes under the Red Bluff Diversion Dam gates creating a condition known as a hydraulic jump which disorients fish migrating upstream and impedes passage especially at flows in excess of 10,000 cfs (USBR 1985).

Reproductive failure occurs when spring-run chinook and late migrating winter-run chinook end up spawning below Red Bluff because they are unable to pass the diversion dam. Spawning in marginal areas below dams is a problem associated with passage problems at dams (Kattapodis 1992). For these two populations, the only spawning habitat in the Sacramento River that reliably maintains water temperatures suitable for survival of early life stages of these salmon (U.S. Fish and Wildlife Service 1999) is upstream of Red Bluff (U.S. Bureau of Reclamation 1991, U.S. Fish and Wildlife Service 1990). There are also spring-run chinook natal to the tributaries upstream of Red Bluff Diversion Dam that may loose access to their natal tributary by very short delays at the dam during the warmer months when low flows and thermal barriers can develop

No. 478

Letter from Donald B. Koch, Continued

quickly at the terminus of tributaries . A chronic loss of spawners from the small and remnant populations found in these tributaries can decrease the sustainability of the populations at a genetically viable level. The Interim Biological Opinion for the Central Valley Project identifies passage delay at Red Bluff Diversion Dam as one of the main limiting factors affecting the likelihood of survival and recovery of spring-run chinook (National Marine Fisheries Service 2002).

The expected inadequate reliability of enlarged ladders, leads us to believe the four-month dam alternatives will not be capable of attaining a timely recovery for the listed species or candidate species. Although fish ladders may stabilize the weak populations or segments of populations (in the case of winter-run chinook), the stabilizing influence will not adequately minimize the fish passage problem to the point it can support needed recovery and attain CVPIA and CalFed objectives in such a crucial part of the ecosystem. In previous environmental decision making processes Reclamation has taken into account on how reliable an action is in terms of its ability to support recovery of listed species, such as in the Shasta Dam temperature control device decision. This final EIS concluded the powerhouse bypass alternative stabilized but did not support recovery; while the selected alternative of the temperature control device supported recovery of listed species (USBR 1991 Appendix D).

The Central Valley Project Improvement Act specifically calls for a remedy for the fish passage problem at Red Bluff Diversion Dam. Such listed remedies are to be "fully implemented" for Central Valley project mitigation to be deemed complete. The operation of the Central Valley Project must meet all obligations under the Federal Endangered Species Act. It is not appropriate to leave any parts of the CVP with unmet mitigation; especially in crucial reaches of the upper Sacramento River designated by the California legislature as a prime salmon and steelhead spawning area (Fish and Game Code Section 1505).

In the four-month dam alternative with the bypass option there is less improvement than with the enlarged ladders and less certainty because it is experimental. In addition, during the annual shut-down of the device, fish that are in there at the time could get stranded as they follow receding waters across the large irregular surfaces.

No. 478

Letter from Donald B. Koch, Continued

Decision Making for Funding the Selected Plan

The elements of CVPIA and the CalFed Record of Decision pertaining to this Fish Passage Improvement Project oblige the CalFed agencies to select alternatives that have fisheries and ecosystem benefits called for in supporting programmatic documents. It is important to note that the Biological Opinion for CalFed Programmatic EIS/EIR identified annual amounts of funding for projects supporting timely recovery of threatened and endangered species. When considering the funding of projects having costs that represent a significant portion of the annual allotment for supporting recovery of species, like the fish passage improvement project (approximately 80 million dollars), it is essential to be reasonably certain the investment is effective in supporting species recovery. This type of scrutiny is necessary to meet the milestones in the Multispecies Conservation Plan. Based upon our analysis we recommend selection of the no dam alternative. However, should Reclamation determine it is necessary to closely balance among competing authorized project purposes, the two-month dam alternatives with or without the ladder is a suitable selection that in our opinion would be expected to warrant consideration for funding from the CalFed Ecosystem Restoration Program or CVPIA. We recommend against the four-month dam alternatives based on the findings they do not minimize fish passage problems (per CVPIA) to the point it supports recovery of listed species (CalFed Record of Decision and Endangered Species Act).

Economic Analysis of the Fishery

We understand that Reclamation's decision making process will also require an examination of the cost and benefits of the alternative according to required principles and guidelines. We believe it is necessary to develop an extensive economic analysis of the fishery improvement benefits for the region over the long-term. This analysis should address the entire region where the anadromous fishery is utilized for sport or commercial purposes. Unfortunately, the environmental document omitted any quantitative description of the economic benefits for anadromous fisheries, stating they are too speculative. Based upon previous experience, we believe these benefits are not too speculative to consider. For example, economic benefits of the fishery improvements were described as a cumulative effect in the CalFed Programmatic EIS/EIR and included in the CVPIA Programmatic EIS. They were also analyzed at the project level in the region for the Shasta Dam Temperature Control Device.

No. 478

Letter from Donald B. Koch, Continued

Fishery benefits are an authorized purpose of the CVP (Central 3406 (a) (2)) with a congressionally assigned priority that is higher than other activities examined for economic consequences in the DEIS/EIR. Specifically, the authorized CVP purpose of power production (Section 3406 (a) (2)) is a lower priority than mitigation protection, and restoration of fish and wildlife; and the single day of drag boat race lacks both a specific authorization as a CVP purpose and an assigned priority. Also we note for the two-month dam installation alternatives, only the drag boat race schedule is impacted--not the drag boat race itself as stated in the document. It is technically feasible to conduct a drag boat race in July and August on Red Bluff Lake as well as any time on other lakes in the region within the Red Bluff trading area. Historically, nitro drag boat race schedules have shifted among all the venues. Given the fact that any action implemented at Red Bluff Diversion Dam would not take effect for several years, lead time is available to work out schedules. Ultimately, the nitro drag boat race should be balanced according to the authorized purposes of the CVP and their priorities assigned in the relevant Federal acts. Appropriate levels of mitigation could be considered under California Environmental Quality Act.

We believe the fishery economics analysis can be accomplished without much additional effort. We have researched the economic methodology for fisheries improvement that Reclamation and the Fish and Wildlife Service applied on the Shasta temperature control device (USBR 1991, USFWS 1990). This methodology is applicable and should require little effort to update. Documents have been provided to the consultant to the lead agencies and we are available to assist in adapting this analysis. The temperature control device and fish improvement projects are very similar in that they affect the same segment of the anadromous population and have a similar scale of estimated cost and potential fishery benefits. The USFWS also completed an economic analysis of the fishery affected by Red Bluff Dam in 1984 (USFWS 1984).

An additional economic consideration is that the fishery benefits from hundreds of millions of dollars invested in fishery habitat upstream of Red Bluff (including the temperature control device and Iron Mountain Mine remediation) cannot be realized unless fish passage problems at Red Bluff Diversion Dam are fully minimized.

Department of Fish and Game angler surveys document significant effort in the Central Valley sport fishery, primarily focusing on chinook salmon. The most recent report available (DFG 2001) shows that anglers expended over 1.5 million hours fishing for chinook salmon to harvest over 93,000 fish. Over half of this salmon fishing effort was in the upper Sacramento River (Colusa to

No. 478

Redding). The ocean sport and commercial fishing comprises an additional effort that is part of the region for this resource and is larger and more valuable than the in river fishery. Selecting a fish passage improvement alternative at Red Bluff Diversion Dam that supports timely recovery of the listed stocks of anadromous fish would contribute to the eventual relaxation of angling regulations once there is recovery. The removal of fishing closures would produce more angling effort during the longer seasons as well as increased harvest. More anglers should mean more money being spent and thus improved local economies in the region.

Time Period for Selected Management Action

The DEIS/EIR makes it clear that the enlarged fish ladders would become a permanent feature of the project. It is also clear that the dam is not going to be decommissioned and would be permanently maintained as a unit of the Central Valley Project. Those alternatives reducing dam installation to two months or year-round lack a clear description of how many years the action would last. We recommend this description be included along with a description in the adaptive management program indicating how overarching management of dam installation relates to active and passive adaptive management activities. Specifically, how the management of dam installation might change with development of new information, reliable fish passage technology; or perhaps changes in the status of the listed species, should be specified.

SPECIFIC COMMENTS:

Section 1.2.3, Legislative and Management History, Page 1-7. Include the Central Valley Project Improvement Act. Specifically the section specifying fish passage problems at Red Bluff Diversion Dam should be minimized, anadromous fish populations should be doubled and mitigation of the Central Valley Project is not considered complete until all the actions specified in CVPIA are complete. } 478-2

Page 1-8, Paragraph 2. It is appropriate to disclose that in the past the fish ladders were modified and monitored and there were no substantial improvements in fish passage(USBR 1994). } 478-3

Letter from Donald B. Koch, Continued

478-2 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

478-3 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

+530-225-2381 DFG REDDING 336 P12 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Eleven
November 27, 2002

Page 1-8, Paragraph 3, Sentence 2. The word "barrier" is not adequately descriptive where a dam impedes or prevents passage of a part of a fish population under certain conditions. As a universal comment for the document we recommend using the nomenclature described in the Fish and Game Code specific to passage of dams in this reach of the Sacramento River. Regarding passage conditions for fish, it is inconsistent with the California Fish and Game Code (5901) to "construct or maintain in any stream in (the) District (that includes Red Bluff Diversion Dam), any device or contrivance which prevents, impedes, or tends to prevent or impede, the passing of fish up and downstream". The term barrier should be replaced with impeded passage or partially prevent passage as appropriate.

More explanation is required up front in the document to present a clear and consistent explanation of the nature and extent of the fish passage problem as related to the provisions of CVPIA specific to the diversion dam. Regarding passage conditions for salmon, Reclamation concluded (USBR 1985) that: "The impact of delay on upstream migrating salmon varies depending on the race of fish, the season of the year, climatological and hydrological conditions, etc. Generally, delays to upstream migrating adult salmon are considered unacceptable and should be avoided". In addition to the ladders the dam impedes passage as described by Reclamation (USBR 1985): "Water passing under the Red Bluff Diversion Dam Gates creates a condition known as a hydraulic jump which disorients fish migrating upstream.... Flows in excess of 10,000 cfs may impede the migration of adult salmon upstream past Red Bluff Diversion Dam."

478-4

Additional discussion on fish passage at the diversion is included in the comment for page 3-14.

Page 2-8, Stony Creek Diversions Section. We recommend disclosing any water right constraints that limit reliability of the diversion.

478-5

Page 2-26, Last paragraph, First sentence, Adaptive Management Section. We recommend the sentence be changed to reflect the fact that the uncertainty here is the diversion structure's interaction with the fish populations, not the inherent uncertainty of fisheries. As an overall comment for the section, it would be helpful to discuss active versus passive adaptive management. This section focuses on active adaptive management in a series of experiments . There should be a discussion of the management overlay in the form of the selected alternative and associated effectiveness monitoring to provide passive adaptive management.

478-6

Letter from Donald B. Koch, Continued

478-4 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

478-5 Water diversions at Stony Creek have been allowed under Reclamation's existing water right.

478-6 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR. Adaptive management would be further developed in subsequent cooperative fashion with the federal and state regulatory agencies.

+530-225-2381 DFG REDDING 336 P13 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Twelve
November 27, 2002

Page 3-5, Last Paragraph, Life History and Habitat Requirements Section. We recommend discussing the habitat requirements of water temperatures suitable for spawning and incubation for winter-run chinook and spring-run chinook. These have been established for the upper Sacramento River (USFWS 1999). Reproductive failure occurs when spring-run chinook and late migrating winter-run chinook end up spawning below Red Bluff because they are unable to pass the diversion dam. Spawning in marginal areas below dams is a problem associated with passage problems at dams (Kattapodis 1992). For these two populations, the only spawning habitat in the Sacramento River that reliably maintains water temperatures suitable for survival of early life stages of these salmon (U.S. Fish and Wildlife Service 1999) is upstream of Red Bluff (U.S. Bureau of Reclamation 1991, U.S. Fish and Wildlife Service 1990). There are also spring-run chinook natal to the tributaries upstream of Red Bluff Diversion Dam that may lose access to their natal tributary by a short delay at the diversion dam during the warmer months when low flows and thermal barriers can develop quickly at the terminus of the tributaries. A chronic loss of spawners from the small and remnant populations found in these tributaries can decrease the sustainability of the populations at a genetically viable level. The interim biological opinion for the Central Valley Project identifies passage delay at Red Bluff Diversion Dam as one of the main limiting factors affecting the likelihood of survival and recovery of spring-run chinook (National Marine Fisheries Service 2002). 478-7

Page 3-14, Paragraph 1, Sentence 7 at Reference to CDFG, 1998. Correct the misquote in this sentence referencing to the Department of Fish and Game Status Report to the Fish and Game Commission (Commission) on Spring-run Chinook Salmon. The sentence states "the existing fish ladders at Red Bluff Diversion Dam **may be** inefficient in passing spring-run Chinook salmon." The Department's report to the Commission states: "the fish ladders at Red Bluff Diversion Dam **are** inefficient in passing spring-run chinook salmon". This discussion should include the limitations of fish ladders in a river the size of the Sacramento in relation to the ladders ability to reliably meet the accepted fish passage standard for flow capacity sizing as discussed in the General Comments. 478-8

Page 3-27, Paragraph 3, Sacramento Pikeminnow Section. This section should disclose the relevant facts included on page 3-52, Paragraph 2. 478-9

Page 3-33, Methodology for Fishtastic Model: The DEIS/EIR should disclose the limitations of the model being used and why it is appropriate as an analysis technique for purposes of environmental documentation. The model is able to 478-10

Letter from Donald B. Koch, Continued

478-7 See Thematic Response No. 3. Water temperature is a critical factor affecting survival and growth of Central Valley Chinook salmon. Elevated water temperatures affect pre-spawning egg survival, embryo and alevin survival, swimming performance, and growth of fry following suboptimal water temperature exposures. For spring-, winter-, and fall-run Chinook, effects on adults being blocked or delayed from reaching temperature-suitable habitats in the upper reaches of the Sacramento River upstream of RBDD can have significant adverse impacts to their annual recruitment rates and populations. The implication to adult spring-run and to winter-run Chinook salmon being blocked or delayed by RBDD are that these adults would be unable to reach their natal spawning areas or attempt to spawn in suboptimal water temperature habitats areas downstream of RBDD. In the case of the early arriving fall-run adult Chinook, delays at RBDD could also result in these fish spawning in marginal spawning areas downstream of the dam in areas of marginally suitable water temperatures in the autumn months. Cold water released from Shasta Dam for temperature control can be limited in quantity, especially in dry water years, jeopardizes the extent of habitat areas suitable for spawning, incubation, and emerging for Chinook salmon fry. The NMFS's BO (1993) specified that a daily average water temperature of ≤ 56°F from April 15 to September 30 for the protection of egg incubation and ≤ 60°F for protection of post-emergent fry during October should be met from Keswick Dam to the Bend River Bridge. These water temperature "targets" have been established from the research of the effects of water temperature on Chinook salmon, including Sacramento River Chinook salmon. USFWS (1999) conducted water temperature investigations with Sacramento River fall- and winter-run Chinook salmon embryos, alevins, and fry and confirmed that the ≤ 56°F temperature requirement between Keswick and Bend Bridge should be retained. RBDD-caused delay and blockages of Chinook salmon reaching these habitat areas of suitable temperature conditions adversely affects their populations and hinders the recovery of those species listed under ESA.

No. 478

Letter from Donald B. Koch, Continued

478-8 One of the major limitations to ensuring effective passage within fish ladders on large rivers is providing sufficient attraction flow to the ladders. According to NMFS's guidelines and criteria for designing fish passage facilities for anadromous salmonids in the Pacific Northwest, ladder attraction flows from the fishway entrance should be between 5 and 10 percent of the high-design passage flow for rivers with mean annual discharges exceeding 1,000 cfs. Generally speaking, the higher the percentage of total river flow used for attraction into the fishway, the more effective the facility will be in providing upstream passage. The design criteria for the two improved fish ladders considered in the DEIS/EIR used a maximum river flow for fish ladder operation of 20,000 cfs. Through expansion of AWS, the improved fish ladders in the DEIS/EIR have a combined (right and left bank ladders) attraction flow of approximately 1,630 cfs. This combined attraction flow (1,630 cfs) is approximately 8 percent of the high-design passage flow of 20,000 cfs. This attraction flow percentage falls within NMFS's general guidance of between 5 and 10 percent of high-design passage flow. A consideration in fish ladder design is the biological effect of migration delay. Under current conditions, with the existing fish ladders, the average delay times are estimated to be as great as 21 days or more, and significantly exceeds the general recommendation that delays should be less than 3 days to avoid biological effects. The existing ladders have total attraction flows of approximately 776 cfs, or approximately one-half of that designed for the new improved fish ladders (1,630 cfs). Therefore, it is logical to conclude that although doubling the attraction flows for the new ladders might reduce delay times for salmon passing the new ladders, this might not sufficiently reduce the passage delays necessary to meet acceptable standards (<3 days).

478-9 Adult Sacramento pikeminnow migrate upstream in the spring months to spawn. However, after the RBDD gates go in, passage of these fish is dependent on use of the fish ladders. This species can and does readily pass through the existing fish ladders at RBDD, but pikeminnow remaining downstream following gates-in operations tend to congregate below the dam. Thus, operation of RBDD under the Reasonable and Prudent Alternatives specified in the Winter-run Chinook Salmon BO (NMFS, 1993), which specified that the gates

No. 478

Letter from Donald B. Koch, Continued

478-9, cont'd

may not go in prior to May 15, has significantly reduced the impacts of pikeminnow predation on juvenile salmonids. However, there continues to be a congregation of predators, including pikeminnows, downstream of RBDD under existing conditions. Tucker (1998) found that during sampling in 1994 to 1996, the largest catch/per unit effort (26 percent of annual total) of Sacramento pikeminnow occurred at RBDD during June, during gates-in operation.

478-10

See Thematic Response No. 1. The use of the *Fishtastic!* analysis tool is appropriate for comparing overall average-year effects and benefits of the proposed project alternatives and is suitable for a NEPA and CEQA analysis. As stated in the introduction to the approach and assumptions in Attachment B1 of Appendix B to the DEIS/EIR, the tool was developed to calculate an **average** (emphasis added) annual index of fish passage efficiency at RBDD. Also as stated in Attachment B1, the tool was not intended to predict actual changes in numbers of individuals or populations. Finally, the tool's function was to distinguish differences between project alternatives under average or "typical conditions." Because of the many generalized assumptions that were necessary to create and make this tool functional, specific detailed effects and benefits were unable to be identified. For example, small but biologically vital variabilities in the annual time of passage and proportion of presence for each species at RBDD was unable to be captured in the temporal distribution "lookup" tables used in the analysis tool. As a result, the calculated annual passage efficiency index was an average or "typical" value, and did not discriminate annual differences of passage efficiencies due to run timing, wet- or dry-year conditions, or other environmental variables. As a result of this type of "average" or "typical year" index value output, key biological information might have been "lost" in the analysis results. For example, where the analysis of the benefit of Alternative 2A determined that there was 9 percent improvement in the annual passage efficiency index for endangered winter-run Chinook salmon compared to the No Action Alternative, it does not provide the specific details of the remaining impact to the species as a result of conditions under this alternative. In contrast to the results generated by the DEIS/EIR analytical tool for discriminating project effects and benefits useful for the purposes of NEPA and CEQA, fishery managers would not find the tool useful for managing winter-run

No. 478

Letter from Donald B. Koch, Continued

478-10, cont'd

Chinook salmon in the upper Sacramento River watershed. For example, although the *Fishtastic!* analysis indicated benefits of Alternative 2A, the alternative would continue to impact the last portions of the winter-run adult population attempting to pass RBDD when the gates are in during July and August. This portion of the run, although it is a small percentage of the entire run passing RBDD, it is a biologically important component of the winter-run spawning population. For management of this species under ESA and other state and federal mandates, the inability to discriminate impacts to this species limits the usefulness of the *Fishtastic!* tool.

+530-225-2381 DFG REDDING 336 P14 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Thirteen
November 27, 2002

compare relative differences in performance of the alternatives in a consistent fashion. Limitations should include those derived from the assumptions in the model and the models sensitivity.

Although we believe the model has sufficient sensitivity to serve as a decision making tool for the National Environmental Quality Act and California Environmental Quality Act, we do not believe the model is sufficiently sensitive to disclose significant impacts to listed species for the Biological Analysis in the Appendix of the DEIS/EIR. For example there are significant impacts to the late migrating component of the winter-run chinook population that are not disclosed when viewing an index that averages impacts for the entire population. The winter-run recovery plan (NMFS 1997) recognizes the need to consider the impacts the diversion dam causes to this late migrating portion of the population. The discussion in the DEIS/EIR should distinguish between the intended application of the Fishtastic model for environmental decision making--versus the inappropriate application of this model to general fishery management and especially the management of species listed as threatened and endangered species.

478-10, cont'd

Significance Criteria, Page 3-34: The designation of "no measurable impact" means the model lacks sufficient sensitivity to measure or detect a response in less than plus or minus 10 percent of the index. This means when a reviewer is comparing two estimated values they could be 20 percent different and represent a similar actual value as described above. With respect to California Environmental Quality Act and the California Endangered Species Act it cannot be concluded the impact to less than 10 percent of a population is not significant, and a 20 percent decrease in performance would be especially significant. Concentrating an adverse affect on one segment of the population has more harmful biological consequences than spreading the adverse affect evenly over the entire population. This concept is applied in Reclamation's Upper Sacramento River Temperature Task Force when the cold water reserves are budgeted to benefit winter-run chinook spawning over the entire period, even though total survival can be increased by allocating more cold water at the peak spawning period at the expense of the late spawning period. It is recognized that each segment of the population having certain timing for migration and spawning represents a life history strategy relating to survival under dynamic hydrological and climatological conditions. For example, an early spawning component would be more resistant to surviving extreme dry hot conditions and a later component more resistant to late spring floods that scour redds.

478-11

Letter from Donald B. Koch, Continued

478-11 In the significance criteria discussion on page 3-34 of the DEIS/EIR, it is stated that under CEQA, any adverse impact to state-listed species would be considered significant, and mitigation would be necessary to reduce impacts to less than significant levels. This also is applicable under CESA. As the purpose of the project was to improve fish passage at RBDD, all alternatives were developed so that they would benefit fishery resources attempting to migrate past RBDD. Therefore, in regards to operational effects of fish passage at RBDD, the results of the fish passage index calculations for all alternatives were expected to result in benefits to fish migration, and any differences between an alternative and the No Action was a measure of the extent of that benefit. In the DEIS/EIR where adverse construction impacts were indicated for any alternative, any adverse impact identified would be significant and would require mitigation to reduce that impact to less than significant, as required under CEQA and CESA.

+530-225-2381 DFG REDDING 336 P15 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Fourteen
November 27, 2002

Page 3-35, Paragraph 2, Last Sentence and bolded comment in the right margin stating. "No alternative resulted in significant (measurable) adverse impacts to adults of any of the native anadromous species": Strike the word significant and use the word measurable per comment for page 3-34. 478-12

Page 3-43, Operations Related Impacts. It is stated that there would be no significant adverse impacts on fishery resources under alternative 1A. We believe the operation of this alternative would have significant impacts according to the model output indicating the dam would still impede or prevent, or tend to impede or prevent the movement of spring-run chinook and late migrating winter-run chinook fish upstream (per Fish and Game Code Section 5901). In addition; it could indirectly impact species, such as spring-run and winter-run chinook, if the currently limited funds available for timely recovery of listed species are used for actions not expected to provide for recovery or just stabilize the populations.

In order to facilitate environmental decision making it is necessary to disclose if the operation of the alternative meets the purpose and need statement and the milestones in the CalFed multispecies conservation plan that part of the Cal Fed Record of Decision as well as the requirements of CVPIA. We do not believe the operation of this alternative attains these criteria as described in the General Comments. 478-13

With respect to mitigation, the Central Valley Project Improvement Act calls for a specific remedy for the fish passage problem at Red Bluff Diversion Dam. The act requires that remedies for problems such as the diversion at Red Bluff be "fully implemented" in order for the Central Valley Project to be deemed to meet the mitigation, protection and restoration purposes established (CVPIA 3406(b)(1)). In addition, the operation of the Central Valley Project must meet all obligations under the Federal Endangered Species Act. This language establishes the need for the DEIS/EIR to disclose how the alternative addresses any unmet mitigation such as impeding passage of a portion of a native population of anadromous fish.

The DEIS/EIR should develop a suggested mitigation monitoring plan for the mitigation needs developed for this alternative per CEQA.

Operations Related Impacts, Page 3-43. Same as Page 3-43 with the following addition: Use of a bypass instead of fish ladders is expected to require mitigation for the take of listed fish species due to the high potential for stranding when the structure is shut-down. The structure is irregular and not reliable compared to the time tested designs. Overall there is less certainty due to the experimental 478-14

Letter from Donald B. Koch, Continued

478-12 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

478-13 One purpose of the TCCA Fish Passage Improvement Project, as stated on page 1-2 of the DEIS/EIR, is to "substantially improve the long-term ability to reliably pass anadromous fish and other species of concern, both upstream and downstream, past RBDD." This project purpose may differ somewhat from the goals and objectives articulated in the CVPIA legislation and the CALFED Programmatic EIS/EIR ROD. Section 3406 (b) (10) of the CVPIA directs the Department of the Interior to develop and implement measures to minimize the fish passage problems for anadromous fish at RBDD. The project's purpose to "substantially improve fish passage" as opposed to the CVPIA's goal to "minimize fish passage problems at RBDD" are not equivalent. USFWS in their Draft Fish and Wildlife CAR (Appendix I to the DEIS/EIR) states that existing conditions do not meet the objectives of Section 3406 (b)(10) of CVPIA because of unmet needs for improvements for the passage of spring- and winter-run Chinook salmon. USFWS further finds in the CAR that Alternatives 1A and 1B would also not meet CVPIA Section 3406 (b)(10) objectives to minimize the fish passage problems at RBDD. USFWS does find in their CAR that Alternatives 2A and 2B provide "substantial benefits to fish passage," but further recommends that an AMP be developed to monitor the progress of those alternatives should one of those alternatives be chosen for implementation. Finally, USFWS finds that Alternative 3 meets the CVPIA objective identified in Section 3406 (b) (10) for minimizing the fish passage problems at RBDD as well as meeting objectives in CVPIA 3406(b) (1) (A) to prioritize projects that restore natural channel and riparian habitat values. USFWS in the CAR also addresses the project alternatives in regards to their meeting the goals and objectives identified in the CALFED ROD, CALFED Multiple Species Conservation Plan, NMFS's Winter-run Chinook Salmon Recovery Plan, CDFG's Spring-run Chinook Salmon Status Review, and the Department of the Interior's AFRP. In the CAR, USFWS finds that Alternatives 2A and 2B meet goals identified in the programs listed above in permanently providing unimpaired passage between the migratory corridor below RBDD to river reaches that constitute the sole spawning populations of winter- and spring-run Chinook salmon that are natal to the mainstem Sacramento River. In addition, in the CAR, USFWS finds that Alternatives 2A and 2B meet goals

No. 478

Letter from Donald B. Koch, Continued

478-13, cont'd identified in the programs listed above to permanently provide unimpaired passage between the migratory corridor below RBDD and the unique tributary spawning areas for winter-run salmon natal to Battle Creek and spring-run salmon natal to Battle, Beegum, and Clear Creeks. Finally, the CAR identified Alternatives 2A and 2B as meeting goals of those programs listed above to increase survival of juvenile winter- and spring-run Chinook salmon produced in the Sacramento River and its tributaries upstream of RBDD by reducing the level of predation by preventing fish from congregating below RBDD while removing the disorienting effects of the hydraulics at the dam. For the Gates-out Alternative (Alternative 3), USFWS in the CAR finds that in addition to the benefits listed above for Alternatives 2A and 2B, Alternative 3 would meet the goals of CALFED, AFRP, and CVPIA in restoring 2 miles of riparian habitat along the mainstem Sacramento River; restore floodplain and flood processes on 1 mile of the mainstem Sacramento River to a more natural level; and establish aquatic, wetland, and riparian floodplain habitats including SRA cover. Regarding the necessity to develop a mitigation monitoring plan for Alternative 1A as suggested by the comment, it would seem that because the analysis of improvements to fish passage indicated that this alternative does not meet the project's "purpose" to "substantially improve fish passage," it would be unnecessary to develop a mitigation monitoring plan, because it would be unlikely that this alternative would be selected for implementation. The CAR would be updated to include the selected project.

478-14 Alternative 1B with a bypass around RBDD likely would be viewed as more experimental than an alternative using conventional fish ladder technology. If Alternative 1B were selected for implementation, any BO issued by NMFS or USFWS would identify and address specific conservation measures or recommendations and requirements, including monitoring necessary to ensure take of any species under ESA is minimized. Alternative 1B is not the selected alternative.

+530-225-2381 DFG REDDING 336 P16 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Fifteen
November 27, 2002

nature of the bypass structure and the use of unconventional materials to construct pools and weirs. Additional mitigation or modification may be required during as the mitigation monitoring documents problems with the structure. } 478-14, cont'd

Water Quality, Page 3-91, Last paragraph: The discussion is not entirely correct regarding temperature reduction at Red Bluff since 1990. According to the biological opinion and the final EIS for the Shasta temperature control device, the location of Red Bluff some 67 miles downstream of Shasta Dam makes it too distant to be reliably and significantly influenced by temperature control operations at Shasta Dam. The final EIS also discusses the relationship between storage, runoff and river flows and the resultant temperature regime in the river. On average the last decade had favorable storage and/or runoff conditions that produced what the DEIS/EIR attributes to operation of the temperature control device. In addition, there were other temperature management actions prior to 1990 that make comparisons irrelevant. We recommend stating that Red Bluff is too far downstream for Shasta Dam temperature control operations to have a reliable or significant effect. } 478-15

Mitigation 1A-BR9, page 3-184 and Table 4.6-1. Under Impact 1A-BR9: valley elderberry longhorn beetle (page 3-160), the document states "Shrubs E28 through E33 occur in the staging area south of the proposed conveyance pipeline. Multiple exit holes were observed in the shrubs in this area." In Mitigation 1A-BR9 the document should include a statement that, if these plants cannot be avoided and it is determined that valley elderberry longhorn beetle are present, an incidental take permit or take statement must be obtained from the U.S. Fish and Wildlife prior to transplanting. Table 4.6-1 should also be amended to include this statement. } 478-16

Mitigation 1A-BR11, page 3-184 and Table 4.6-1: The document states "Prior to the start of construction activities, the two platforms supporting osprey nesting would be removed." The document should state, "...all three platforms that can support osprey nesting would be removed." According to Figure 3.4-4, all three of the nesting platforms are within the footprint of the project. Although only two nesting platforms were found to be active during the 2002 surveys, the third nesting platform would become the only available nest site representing a potential construction impacts to the species. Table 4.6-1 should also be amended to address the removal of three platforms. } 478-17

Section 4.3 Irreversible and Irretrievable Commitments of Resources and Significant Impacts that Would Remain Unavoidable Even After Mitigation, page 4-16. The last sentence of the second paragraph states "The following impacts } 478-18

Letter from Donald B. Koch, Continued

478-15 Your comment has been noted. The amount of effect that the Temperature Control Device has on water temperature at Red Bluff is difficult to determine. However, release schedules from Shasta Dam play a major role in determining water temperature at Red Bluff, and the Temperature Control Device affects operations at the dam by allowing for graduated temperature control in the river. Therefore, the Temperature Control Device does influence temperature at Red Bluff, albeit in a secondary fashion.

478-16 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

478-17 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

478-18 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

+530-225-2381 DFG REDDING 336 P17 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Sixteen
November 27, 2002

are identified as potentially significant and unavoidable." At the end of the information regarding each impact the document should state whether or not the impact is significant and unavoidable or less-than-significant following mitigation.

478-18, cont'd

Table 3.5-1: This table should be put into an annual basis to allow determination of the annual percent change. It is difficult to understand the data. During May, June and September, it is predicted when the dam is removed and there miles of river are in the vicinity of Red Bluff: boat use will decrease to less than one boat per day, jet ski use will be zero, and less than one person a week will swim. The Department's creel census data shows that the river reaches in the vicinity of Red Bluff supports more than one boat per day in the summer months. During the summer, the river in the vicinity of Redding supports raft rental businesses that could not exist if boat use for river reaches in the vicinity of towns in the region averaged one boat per day. As described in the document, regardless of the installation of the dam, there is limited swimming use in the upper Sacramento River region of the project area. This is because summer river water temperatures between Redding and Red Bluff since the completion of Shasta Dam ranged between the mid-50 to upper 60 degrees F. For this reason we recommend that swimming not be included in the significance criteria for the recreation analysis in the DEIS/EIR. The description of swimming use in the DEIS/EIR implies that it is not a significant recreational activity due to the water temperatures. Jet ski use in the river in Redding occurred at such a high level that the City of Redding proposed an ordinance to control their use. Jet ski users apparently decided the river was valuable enough for their sport that it was worth responding with litigation to maintain that use.

478-19

Page 3-292, Paragraph 5, last sentence. This sentence states: "From this, it can be concluded .... that increased loads from Alternative 2A would have an insignificant effect on Western's Power marketing, except in winter." Does this mean there are loads that exceed the significance criteria in the winter? If so how can there be a conclusion impacts to power resources would be less than significant? This comment applies to other sections of the report where it occurs for all alternatives expanding the gate operation.

478-20

Page 3.10, Socioeconomics Section. This section is missing an extensive quantitative discussion of economic effect of the project related to fishery improvements. As discussed in the General Comments there are several sources that have compiled fish improvement analyses relevant to the region affected by what is titled: "Fish Passage Improvement Project". Significance criteria need to be developed for the fisheries improvements that are related to the CVPIA and CalFed Programmatic EIS/EIR. This section needs significance

478-21

Letter from Donald B. Koch, Continued

478-19 See DEIS/EIR Figure 3.5-3.

478-20 The projected power usage indicates a percentage change that would be greater than existing conditions in the winter months. This effect is likely a result of relatively low power usage in recent years at the dam during the winter months. These changes are considered to be less than significant.

478-21 The analysis conducted for the EIS/EIR does not include a projected fishery population increase that might result from the project, because populations are affected by so many factors outside of the influence of this project. As noted in DEIS/EIR Section 3.10, Socioeconomics, page 3-306, "At this time, it is difficult to predict whether the build alternatives in and of themselves would result in substantial improvements in fish survival rates, but the potential exists." Accordingly, no significance criteria were developed.

+530-225-2381 DFG REDDING 336 P18 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Seventeen
November 27, 2002

criteria for the other elements that are being analyzed. It is recommended the significance criteria give weight to how the authorization of the Central Valley project recognizes and prioritizes the use being analyzed.

478-21, cont'd

Cumulative Impact Analysis, Page 4-12, Last paragraph, Second to the last sentence: The sentence states that all the actions were designed to meet the objectives of the CalFed programmatic EIS/EIR identified for the diversion dam. In addition it states the diversion dam was identified in CVPIA. It is necessary to make further findings in both the Cumulative Effects section and the decision making sections of the DEIS/EIR. We find that, although there was an effort made to design the alternative to attain the objectives in CalFed and CVPIA, the design effort did not include what we consider to be all the pertinent items nor did it fully attain the objectives in those programs as discussed in the General Comments section.

478-22

Recreation Sections Table 4-6-1. It would appear from the table that some of the major impacts are mitigatable. It is understandable there is an economic loss from not having the drag boat races, but those numbers are from confidential information and it is possible the event could be rescheduled or relocated somewhere else in the region. CEQA considers recreational impacts on a regional basis and the region should be larger than just Lake Red Bluff. It would be appropriate for the DEIS/EIR to clearly address CEQA Recreation Guideline sample questions:

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

We believe it is important that the document disclose the fact that the Sacramento River at Red Bluff is designated by the State as navigable water and a public way under Section 105 of the Harbors and Navigation Code. This designation is significant for recreation that includes angling by boat and rafting. There is significant commerce and economic value associated with guided angling trips and raft and canoe rental for river float trips. The navigability issue was examined when the project was first proposed and the analysis is included in the original project documents. The analysis considered installation of boat locks and selected installation of a boat ramp above and below the dam. The removal

478-23

Letter from Donald B. Koch, Continued

478-22 Your comment has been noted. By providing a facility that would be able to operate year-round, the lead agencies are proposing a project that would be capable of attaining the objectives noted by the commentor.

478-23 The analysis of recreational effects at RBDD was conducted with an emphasis on local effects. If the boat drags were moved to a nearby location, regional effects would likely be less.

+530-225-2381 DFG REDDING 336 P19 NOV 27'

No. 478

Messrs. Art Bullock and Michael J. Ryan
Page Eighteen
November 27, 2002

of the dam is a significant improvement to the navigability of a public way that is used for commerce and the impacts and benefits should be disclosed and compared for each alternative.

478-23, cont'd

Impact summary Tables 4-6-1 Recreation Section and also in the Socio-economic Section under the heading "3. Gates-out." There is a description under both sections that begins with "Fish-runs". The paragraph following this description states: "the potential for positive economic impact is uncertain and should be viewed as speculative." We do not believe this is an adequate or correct analysis of the economic and recreation impacts of the "Fish Passage Improvement Project" on the fishery. We recommend using the measures outlined in the General Comments section of this letter to adequately address this deficiency for each of the alternatives.

478-24

Thank you for your consideration of our comments. If there are any questions regarding our comments, please contact Environmental Specialist Harry Rectenwald at (530) 225-2368.

Sincerely,

for Donald B. Koch
Regional Manager

cc: Mr. Michael Tucker
National Marine Fisheries Service
650 Capitol Mall, Suite 8-300
Sacramento, California 95814

Ms. Aondrea Bartoo
and Mr. Bart Prose
US Fish and Wildlife Service
2800 Cottage Way, Room W-2606
Sacramento, California 95825

Mr. Jim Smith
US Fish and Wildlife Service
10950 Tyler Road
Red Bluff, California 96080

Mr. Max Stodolski, Chief
US Bureau of Reclamation
Post Office Box 159
Red Bluff, California 96080

Mr. Ralph Hinton
Department of Water Resources
2440 Main Street
Red Bluff, California 96080

Ms. Laura Fujii
US Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco California 94105

Attachment

Letter from Donald B. Koch, Continued

478-24 Your comment has been noted. See Response to Comment 478-21 for information relating to the possible recreational benefits of increased fish populations and the associated increase in angling opportunities.

+530-225-2381 DFG REDDING 336 P20 NOV 27'

No. 478

Letter from Donald B. Koch, Continued

Messrs. Art Bullock and Michael J. Ryan
Page Nineteen
November 27, 2002

bc: Mr. Mitch Farrow
California Advisory Committee on Salmon and Steelhead Trout
P.O. Box 291
Trinidad, California 95570-0291

Messrs. Randal C. Benthin,
SteveTurek, Phil Warner
and Harry Rectenwald
Department of Fish and Game
601 Locust Street
Redding, California 96001

Mr. Doug Killam
Department of Fish and Game
P O Box 578
Red Bluff, California 96080

Mr. George Heise
Native Anadromous Fish and Watershed Branch
830 S Street
Sacramento, California 95814

Rectenwald:pm S:\Harry\ARTBULLOCK1.doc

Letter from Donald B. Koch, Continued

No. 478

Attachment 1

Source: Fish Passage Improvement Project
Draft DEIS/EIR Appendix B
After Page B-10

+530-225-2381 DFG REDDING 336 P21 NOV 27'

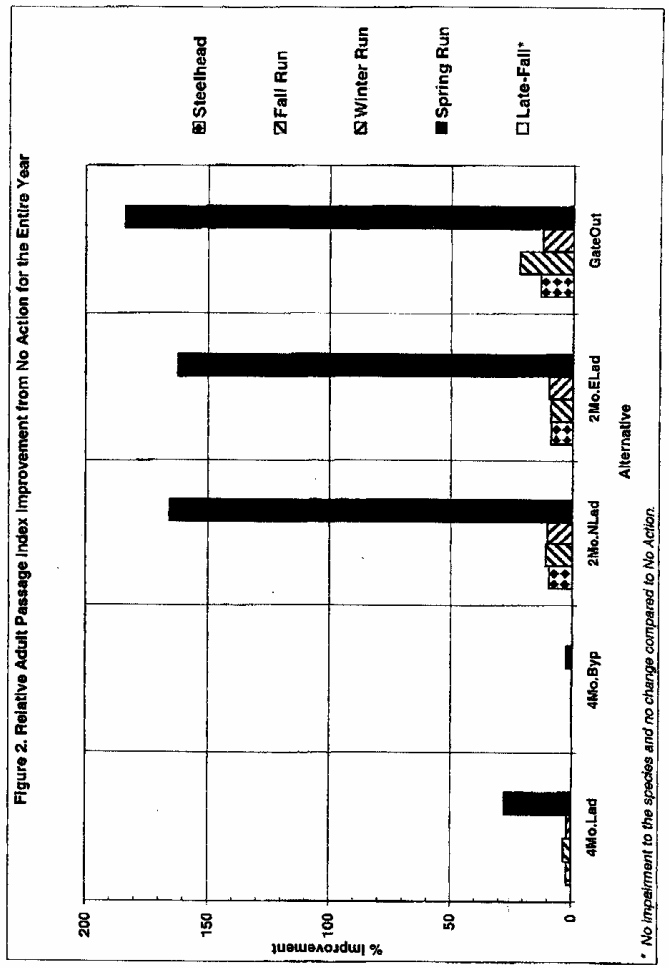


Figure 2. Relative Adult Passage Index Improvement from No Action for the Entire Year

No. 478

Letter from Donald B. Koch, Continued

REFERENCES

California Department of Fish and Game. 2001. Angler Survey -1999 Central Valley Salmon and Steelhead Harvest Monitoring Project. Fisheries Program Branch, Sacramento, California

California Department of Fish and Game. 1998. Report to the Fish and Game Commission: A Status Review of the Spring-Run Chinook Salmon (Oncorhyncus Tshawytscha) in the Sacramento River Drainage. Candidate Species Status Report 98-01. Fisheries Program Branch, Sacramento, California

California Department of Water Resources. 2000. Battle Creek Salmon and Steelhead Restoration Project Fish Ladder and Fish Screen Features. Inskip Diversion Eagle Canyon Diversion Preliminary Engineering Concepts Technical Report. Northern District Office, Red Bluff, California

Katopodis, Chris. 1992. Introduction to Fishway Design. Freshwater Institute, Central and Arctic Region, Department of Fisheries and Oceans, Winnipeg, Manitoba, Canada. In: US Fish and Wildlife Service, 1997, Fish Passageways and Diversion Structures Course Book, Presented by National Conservation Training Center, Branch of Aquatic Resources, Shepherdstown, West Virginia.

Soule, Michael E. 1986. Conservation Biology: The Science of Scarcity and Diversity. School of Natural Resources, University of Michigan. Sinauer Associates, Inc. Sunderland, Massachusetts. 560pp

U.S. Army Corps of Engineers. 1991. Fisheries Handbook of Engineering Requirements and Biological Criteria. North Pacific Division, Portland Oregon.

U.S. Bureau of Reclamation. 1985. Central Valley Fish and Wildlife Management Study: Fishery Problems at Red Bluff Diversion Dam and Tehama-Colusa Canal Fish Facilities. Mid-Pacific Region Sacramento, California. 109pp.

U.S. Bureau of Reclamation. 1997. Hydraulic Field Evaluation of the Right Abutment Fish Ladder at Red Bluff Diversion Dam. Red Bluff Diversion Dam Fish Passage Program.

U.S. Bureau of Reclamation. 1991. Shasta County, California. Planning Report/Final Environmental Statement, Shasta Outflow Temperature Control. Mid Pacific Region, Sacramento, California. Final Statement No. : FES-1991

No. 478

Letter from Donald B. Koch, Continued

REFERENCES CONTINUED

U.S. Bureau of Reclamation. 1990. Shasta County, California, Planning Report/Final Environmental Statement, Appendixes To Shasta Outflow Temperature Control, Mid Pacific Region, Sacramento, California. Final Statement No. : FES-1991

U.S. Fish and Wildlife Service. 1990. An Analysis of Fish and Wildlife Impacts of Shasta Dam Water Temperature Control Alternatives. Fish and Wildlife Coordination Act Report, United States Department of the Interior Fish and Wildlife Service Region 1 Sacramento, California. 62pp.

U.S. Fish and Wildlife Service. 1998. Effect of Temperature on Early-life Survival of Sacramento River Fall- and Winter-run Chinook Salmon. U.S. Fish and Wildlife Service Report, Northern Central Valley Fish and Wildlife Office Red Bluff, California. 41pp.

U.S. Fish and Wildlife Service. 1984. Evaluation Report of the Potential Impacts of the Proposed Lake Red Bluff Water Power Project on the Fishery Resources of the Sacramento River. U.S. Fish and Wildlife Service Division of Ecological Services Sacramento, California

U.S. Fish and Wildlife Service. 1997. Fish Passageways and Diversion Structures Course Book, Presented by National Conservation Training Center, Branch of Aquatic Resources, Shepherdstown, West Virginia

U.S. Fish and Wildlife Service. 1998. Supplemental Fish and Wildlife Coordination Act Report--Red Bluff Diversion Dam and the Tehama-Colusa Canal. Region 1 Sacramento, California.

U.S. National Marine Fisheries Service. 1997. NMFS Proposed Recovery Plan for the Sacramento Winter-run Chinook. Southwest Region Long Beach, California.

No. 479

Message

Page 1 of 6

Subj: **Informal Comments on Draft EIS/EIR for RBDD Fish Passage Improvement Project**
Date: 11/27/2002 8:51:04 AM Pacific Standard Time
From: hintonr@water.ca.gov
To: tcwaterman@aol.com
CC: MUrkov@CH2M.com
Sent from the Internet (Details)

By now Art Bullock has received the Department of Water Resources' formal comments on the Draft EIS/EIR for the Red Bluff Diversion Dam Fish Passage Improvement Project. This email provides informal comments on minor issues and editorial suggestions. I am providing these additional comments as a resource specialist on the TAG and SWG, and these comments may/or may not represent the official views of DWR.

Executive Summary

Page iii – 2nd bullet following third paragraph: Delete "only". } 479-1

Page viii – Fishery Resources, line 5: Add "occurs" following the word "rearing". } 479-2

Page x – Third paragraph: The water level rises about 14 feet, rather than 12 feet (252.5-238.5) = 14.0 } 479-3

Page xi – Second paragraph, third line: Replace the word "below" with "better than" } 479-4

Page xiii – Third paragraph, last sentence: "No mitigation has been identified that would reduce this impact". Mitigation is possible and should be identified; some ideas are provided in DWR's formal comments and in the Section 3.5 comments in this email. } 479-5

Page xiii – Sixth paragraph, fourth and fifth sentence: Add the words "and docks" following the words "boat ramps" in both sentences. } 479-6

Page xiii – Sixth paragraph, sixth sentence: "No mitigation is available to offset these impacts". Again, DWR's formal comments and the Section 3.5 comments in this email provide some ideas for mitigation. The two public and two semi-private boat ramps that would no longer be usable could be replaced by a new public boat ramp in River Park that would allow access to the river at a wide range of flows. } 479-7

Page xvi - sixth paragraph, end: Add " or roughly $7,000 to $31,000 per property". } 479-8

Page xviii - Traffic and Circulation, second paragraph, last sentence: A traffic control plan is not likely to mitigate these impacts to less than significant. See comments on Section 3.14. } 479-9

1.0 Introduction

Page 1-4 – Legislative and Management History – 1937 – Central Valley Project Authorization: Does this 1937 act really require the USBR to submit a detailed feasibility plan to President Truman? Or just to "The President"? In 1937 they couldn't have known that Truman would become President eight years later. } 479-10

Wednesday, November 27, 2002 America Online: Tcwaterman

Email from Ralph Hinton, Dated November 27, 2002

479-1 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-2 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-3 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-4 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-5 Recreation impacts are socioeconomic in nature. Under CEQA, no indirect effects have been associated or identified as a result of the primary socioeconomic impact, so mitigation has been proposed. The lead agency under NEPA is not required to mitigate, and at this time, no mitigation has been formally proposed.

479-6 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-7 See Response to Comment 479-5.

479-8 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-9 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-10 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

No. 479

Message

Page 1-7 – Third paragraph: This passage suggests that recreation was recognized as a project benefit, although traditionally it was not considered a project purpose in those days. } 479-11

Page 1-7 – Project Setting, first paragraph: The lake is cited as 4 miles long in other references (Pages 3-189, 3-222). I think I have seen 6 miles in some other places. } 479-12

2.0 Description Alternatives

Page 2-1 – Third paragraph, fourth bullet: Cost may have been a secondary screening criteria, but the Draft EIS/EIR has no cost information on the various alternatives. Cost information developed to date should be presented in the EIS/EIR to aid the decision-makers. } 479-13

Page 2-10 – 4-month Bypass Alternative: This alternative requires an amendment to the Mendocino National Forest Land and Resource Management Plan, which may not be forthcoming, because the USFS opposes this Alternative. } 479-14

3.0 Environment and Environmental Consequences

Page 3-14, fourth line: Replace "and" with "at". } 479-15

Page 3-14, second paragraph: Nearly 10 years have passed since the gate operation was changed to 9 months gates-out, 3 months gates-in. This has improved fish passage for the bulk of the winter-run and fall-run chinook salmon and steelhead adults. The greatest remaining effect on adult passage is to spring-run chinook. Conditions for downstream migration of the same species has also improved, although large numbers of winter-run and late-fall chinook and steelhead downstream migrants pass during the gates-in period. Has there been any measurable increase in the populations of these species during the past 10 years that could be attributed to the revised gate operation? This would go a long way to convince skeptics that opening the gates year around is important to fish passage and might help increase fish populations. } 479-16

Page 3-27, Rainbow Trout: How are adult rainbow trout differentiated from adult steelhead. (Size or appearance?) } 479-17

Page 3-28, third paragraph: "In recent times, flow reductions caused by dams and diversions have increasingly prevented splittail from upstream access to the large rivers, and the species is now restricted to a small portion of its former range; however, during wet years, they migrate up the Sacramento River as far as RBDD." This sentence is misleading in context. I assume it is a general statement about splittail migration in large rivers in the Central Valley. But, it is then tied to a specific statement about the Sacramento River. I doubt that flows have been so reduced in the Sacramento River that splittail are unable to migrate up the Sacramento at any time. } 479-18

Page 3-36, Table 3.2-6: Spring-run Chinook Salmon, 4-month Improved ladder Alternative: Change Effect from "No Measurable Benefit" to "Measurable Benefit". } 479-19

3.3 Water Resources

Page 3-73: fourth paragraph: "The difference in the pre- and post-RBDD flows reflect both the natural variations in winter rainfall and evolving operational changes during the summer months." I question this statement. It is more likely that this change is simply a reflection of } 479-20

Email from Ralph Hinton, Continued

479-11 DEIS/EIR page 1-6 (previous paragraph) states the following: "Recreation is not specifically identified in the report's purpose and need statement."

479-12 Thank you for your comment. Text has been revised to describe lake Red Bluff as 6 miles long.

479-13 The last cost estimate for this project was made more than 4 years ago. During that time, costs for construction of major projects has risen substantially, and the nature of cost estimates is that they are in constant fluctuation. A cost estimate update has been proposed, but no such estimate is available at this time.

479-14 USFS has submitted formal comments to address this alternative.

479-15 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-16 The direct correlation of responses of winter- and late-fall-run Chinook salmon populations to a specific action such as reduced RBDD gates-in time are nearly, if not, impossible. Since the passage of the CVPIA and actions of CALFED have occurred over the last decade or more, scores of projects and actions have been implemented to enhance and restore habitat conditions and provide access to isolated habits throughout the Sacramento River watershed upstream of RBDD. To determine the increment of benefit to these individual actions/programs or even changes in other influences (e.g., ocean conditions) is difficult. Clearly, recent increases in winter-run Chinook salmon spawner escapements have occurred, especially since approximately 2001. Winter-run Chinook salmon spawner escapement in the decade of 1970-1980 averaged approximately 25,000 spawners per year. In the decade from 1981-1991 the winter-run escapement averaged just 3,400 spawners per year, and in the period from 1992 through 2000, escapement declined further to an average of just 1,300 spawners per year. However, in the period from 2001 through 2005, the annual winter-run Chinook salmon spawner escapement has averaged approximately 9,400 adults, a seven-fold increase over that of the previous decade. Similarly, for late-fall-run Chinook salmon, the spawner escapement from 1971-1980 averaged approximately 15,300 spawners per year. In the decade from 1981-1991, the late-fall-run annual escapement diminished to approximately 10,300 spawners per year, and in the period from 1992 through 2000, escapement declined slightly further

No. 479

Email from Ralph Hinton, Continued

479-16, cont'd to an average of 10,000 spawners per year. However, in the period from 2001 through 2005, the annual late-fall-run Chinook salmon spawner escapement has averaged approximately 20,000 adults, a doubling of that of the previous decade. These are positive signs of improvement in population numbers for these two species, but attributing these improvements to reduced periods of gates-in operation at RBDD is not possible.

479-17 The commentor ask how rainbow trout are differentiated from adult steelhead. The CDFG manages the sportfishery in the Sacramento River, and for the purposes of distinguishing steelhead from resident rainbow trout, considers any rainbow trout greater that 16 inches that is caught in anadromous waters to be a steelhead. Anadromous waters would include all of the mainstem Sacramento River downstream of Keswick Dam including the vicinity of RBDD. The NMFS, for management under ESA, considers only the anadromous portion of Central Valley steelhead populations and are discrete from the resident rainbow trout populations within their range in the Central Valley. These anadromous steelhead are listed threatened and are known as the Central Valley DPS steelhead, and includes naturally produced steelhead and those anadromous populations originating from the CNFH and Feather River Hatchery on Battle Creek and the Feather River, respectively.

479-18 The Sacramento splittail was once distributed in lakes and rivers throughout the Central Valley. They were found as far north as Redding. Splittail are no longer found in this area and are limited by RBDD in Tehama County to the downstream reaches of the Sacramento River. In the Sacramento River system, splittail are rare in the main river channel upstream of the Delta, although large individuals are caught in the lower river during spring. Presumably, these splittail are on a spawning migration, and it is likely that in many years, spawning concentrates in the reach of the Sacramento River below the confluence with the Feather River. During wet years, the shallow flooded areas of the Yolo and Sutter Bypasses might also be important for spawning. Splittail have disappeared from much of their native range because dams, diversions, and agricultural development have eliminated or drastically altered much of the lowland habitat these fish once occupied. Access to spawning areas or upstream habitats is now blocked by dams on the

No. 479

Email from Ralph Hinton, Continued

479-18, cont'd large rivers because splittail seem incapable of negotiating existing fishways. As a result, they are restricted to water below RBDD on the Sacramento River.

479-19 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-20 This statement might have been misinterpreted. The purpose of the statement was NOT to suggest that the development of RBDD had anything to do with changing flows in the Sacramento River. But rather, to suggest that there have been changes in the Sacramento River flows since the construction of RBDD (1964).

It is quite possible that the Trinity River diversions played a part in the changing trends of the Sacramento River flow since 1964, as well as other factors such as agricultural demands throughout the northern Sacramento Valley, the completion of Oroville Dam, the re-operation of Shasta Dam (CVPIA, 1991), and perhaps weather patterns.

No. 479

Message

the Trinity River diversions to the Sacramento Valley during this time. The RBDD operation doesn't significantly change flows in the Sacramento River. } 479-20, cont'd

Page 3-74, fourth paragraph: Write out "CHO" and explain what it is. Most people will not recognize CHO without explanation. } 479-21

Page 3-86, first bullet: "Place within a 100-year flood hazard area structures or vegetation that would impede or redirect flood flows." } 479-22

Page 3-90, Impact 3-WR2: Hydrology and Water Management: Alternative 3 is likely to cause increased riparian growth in the footprint of the former Lake Red Bluff. As noted in DWR's formal comments this could increase flood levels and this potential impact should be evaluated in the Final EIS/EIR. } 479-23

3.4 Biological Resources

Page 3-118, first paragraph: There are also many non-native invasive plants in the local riparian zone, including star thistle, sticky weed, tree-of-heaven, pyracantha, and pampas grass. Even the blackberry is thought to be a non-native invasive species. } 479-24

Page 3-142, last paragraph: Perhaps the large number of Mexican free-tail bats living in this large building could provide a recreational opportunity. Many people visit Carlsbad Caverns to view the bats emerging from the cave at night. Perhaps an interpretive program could be developed by the Discovery Center to educate the public and students about these bats. } 479-25

Page 3-179, 3: Gates-out Alternative, second paragraph: In addition to star thistle, many other non-native species are likely to invade these areas, based on what is present in the current riparian area. A vegetation management program is needed to ensure that the resulting riparian vegetation is primarily native species that would provide additional wildlife habitat. The current riparian area at the Sacramento River Recreation Area has not been well managed, as demonstrated by the ill-advised "thinning" program last spring. However, there is a wonderful opportunity here if a good management program can be established. } 479-26

3.5 Recreation

Page 3-191, Figure 3.5-1 and 3-195, Figure 3.5-3: These graphs visually suggest quite clearly the magnitude of recreation on the Sacramento River at Red Bluff with and without Lake Red Bluff. Recreation use dependent on the lake may be slightly greater than you estimated in Table 3.5-2 and Figure 3.5-6, but clearly at least two-thirds of the recreation occurring at Lake Red Bluff could occur along or on a flowing river in the same area. The EIS/EIR should make that point. However, your estimates may not fully credit the scenic value of nearby water provided by the lake and the current ease of access to the lake. Without some mitigation, there would be limited and more difficult access to the river with the gates out. In addition, the estimated "gain" in non-lake dependent or improved recreation without the lake (Figure 3.5-6), is a bit of a stretch. This seems to reflect people who ride dirt bike or all-terrain vehicles, or just walk in the footprint of Lake Red Bluff when the gates are out. The USFS tries to restrict off-roading in this area, and certainly people could walk on the paths just as well as on the lake bottom. However, overall, I think your evaluation of the recreation uses and the potential impacts are very good. } 479-27

Page 3-219 and 3-220, Alternatives 2A and 3: As discussed in DWR's formal comments, these } 479-28

Email from Ralph Hinton, Continued

479-21 "CHO" is defined in DEIS/EIR Section 2.0, page 2-8. It does not need to be defined again.

479-22 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-23 Potential reduction of flood-carrying capacity of the Sacramento River in the vicinity of the project was evaluated for impacts of the proposed facilities. Hydraulic analysis of the Sacramento River water elevations during flood conditions was completed during evaluation of the proposed alternative to assure there was no increase in water levels. River bathymetric surveys and photogrammetric land surveys were used to develop a Digital Terrain Model (DTM) and extract cross sections of the river and floodplain.

The proposed project facilities are physically set back from the current western bank. The alignment of the fish screen approximates the current, almost vertical, bank; and the forebay and pump station does not extend into the Sacramento River channel and, therefore, will not impose a reduction of conveyance capacity by virtue of the structures themselves (fish screen, forebay, and pump station).

On the other hand, it is quite possible that the present river and floodplain (bypass channel) conditions have already changed flood levels in or near the City of Red Bluff since the last FEMA study was completed. Evaluation of the existing flood elevations relative to the published Federal Emergency Management Agency (FEMA) maps was not part of the EIS/EIR scope.

During final design, the existing main channel Sacramento River bathymetry and floodplain will be surveyed again. These data will be used to evaluate the existing flood elevations with and without the proposed facilities. The existing riparian growth and sedimentation conditions in the bypass channels will be an integral part of the characterization and understanding of the channel hydraulics.

What the potential project impacts might be on flood elevations in the "future" due to riparian growth along the eastern floodplain is somewhat speculative and dependent on assumptions to the changes in the bypass channels.

It appears the commentor is suggesting that conveyance capacity in the vicinity of the project will be impacted by post-project riparian growth because of the elimination of Lake Red Bluff during 4 months of the year. Furthermore, with additional riparian growth in the bypass channels, the deposition of sediment might increase.

No. 479

Email from Ralph Hinton, Continued

479-23, cont'd Although this is physically possible, it is also possible that during high flood stages the bypass channels could scour, and riparian growth could be reduced.

The potential changes to riparian growth in the bypass channels (floodplain) and their impacts can be evaluated with currently available hydraulic models by adjusting the "expected" channel and overbank roughness.

479-24 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-25 Thank you for your comment. Your comment has been noted. No response is required.

479-26 The commentor is correct. An appropriate riparian management plan should be included in the final project.

479-27 Thank you for you comment. Your comment has been noted. No response is required.

479-28 See Response to Comment 479-5.

No. 479

Message

suggested mitigation actions are inadequate. Generally, they could be characterized as "just get used to it". There are a number of actions that could be taken to mitigate the loss of recreation on Lake Red Bluff with Alternatives 2A and 3. Providing better access to the river and reducing the visual impacts caused by the proposed project should be the focus. I sent Mike Urkov a copy of the Recreational Trails Feasibility Study prepared for Tehama County in 2000. This report provides conceptual proposals for trails that could tie other trails around the City of Red Bluff with existing trails at the Red Bluff Recreation Area. DWR's formal comments provide several other specific ideas, which should be discussed further at future TAG and SWG meetings. Those actions with merit and local support could be included in the Final EIS/EIR

479-28, cont'd

3.10 Socioeconomics

Page 3-315, third paragraph: The extent of potential decline in property values with the loss of Lake Red Bluff is somewhat uncertain, but important to local property owners. The Draft EIS/EIR discusses the potential loss of the Nitro National drag boat races and potential economic losses from reduced lake-dependent recreation and tourism in great and specific detail. The loss in property value potentially would be a similar magnitude and so should be discussed in the Final EIS/EIR.

479-29

The EIS/EIR contains the information needed to make more specific conclusions, and it should do so. Property owners would lose more than just a view of Lake Red Bluff for a few months. For many, the view of the river would not be nearly as good (or as visible) as the view of the lake. The Raging Fork Riverfront Grill is an obvious example. The restaurant diner's view of the lake is replaced with a view of a large gravel bar when the gates are open. The riparian vegetation screen along the river will certainly change. The existing vegetation may die, or willows may become so dense there is no longer a view of the river. When the gates are open and the lake is gone, there is an ugly "bath tub ring" view throughout the area inundated by the lake. People with boat docks (about 21) would lose the use of their dock and boat access to the lake from their property. The docks would not provide direct access to the river, as they did to the lake.

479-30

Page 3-18, Table 3.10-14: Here are some specific conclusions derived from the information presented in the EIS/EIR. There are 88 residential and small commercial properties on the lake, with an assessed value of $15.4 million. The EIS/EIR suggests a potential decline in value of 4 to 18 percent. This suggests a potential decline in property values of $616,000 ($7,000 per property) to $2,772,000 ($31,500 per property). These are pretty large impacts to individual property owners. Obviously, the specific loss for each property would depend on its particular view and whether or not there is a boat dock on the property. A more detailed breakdown could be made of the impact on city properties versus the unincorporated county properties, because the properties and potential impacts are different. There is not likely to be a sudden decrease in property values if the gates are open permanently. Certainly, the properties would not be reassessed at a lower value. Rather, the properties would likely sell for less in the future than they would otherwise. (Page 3-315, second paragraph). So, the loss in property tax revenue to the city would not be immediate, but would be about one percent of the above declines in property value over the long term, or about $6,000 to $28,000 annually.

479-31

Page 3-322, 3: Gates-out Alternative: DWR's formal comments provide some ideas for mitigation of scenic values and public access to the river which would help to mitigate the identified socioeconomic impacts to property values and recreation use.

479-32

C

Email from Ralph Hinton, Continued

479-29 See Response to Comment 479-5.

479-30 See Response to Comment 479-5.

479-31 See Response to Comment 479-5.

479-32 See Response to Comment 479-5.

No. 479

Message

Page 5 of 6

3.12 Aesthetic and Visual Resources

The discussion, summaries, and photographs in this section do an excellent job of explaining and visually depicting the aesthetic and visual impacts of the proposed project. } 479-33

3.14 Traffic and Circulation

Page 3-482-Mitigation 1A-TC1: A traffic control plan is not likely to mitigate heavy vehicle damage to Altube Avenue, as noted above on the page, so repaving when the project is complete should be recommended as mitigation. } 479-34

4.0 Other Impacts and Commitments

Page 4-11, Integrated Storage Investigations Program: DWR's staff on this program provided a number of editorial suggestions on this section and Table 4.1-1, to bring them up-to-date with the current status of the investigation. Rather than indicate all of the suggested revisions it is probably easier to provide a corrected version. Please replace the text in the Draft EIS/EIR with this:

4.1.12 Integrated Storage Investigations Program, Specifically the North-of-the- Delta Offstream Storage Investigation

The North-of-the-Delta Offsream Storage could result in offstream reservoir capacity of up to 3.0 million acre-feet north of the Bay-Delta in the northern Sacramento Valley. The study of offstream storage north of the Delta was authorized by Proposition 204 and has been identified in concept through the CALFED Integrated Storage Investigations program. The storage concept was further developed through the 2000 CALFED Programmatic EIR/EIS (PEIR/EIS). The PEIR/EIS resulted in the adoption of a long-term comprehensive program to restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento-San Joaquin River Delta system and its tributary watersheds. The NODOS is a specific action that would implement, in part, the Preferred Programmatic Alternative adopted by the PEIR/EIS.

The objectives of NODOS are as directed in the PEIR/EIS Record of Decision and consist of enhanced water management flexibility in the Sacramento Valley, reduced water diversion from the Sacramento River during critical fish migration periods, increased reliability of supplies for a significant portion of he Sacramento valley, additional storage, and operational benefits for other CALFED programs (including Delta water quality and the Environmental water Account). Specific details on the beneficiaries of these objectives, conditions under which diversion could occur, means of conveyance, associated costs to beneficiaries for acquiring the water, and other implementation and operational details are being developed.

The NODOS is currently undergoing separate environmental analysis and feasibility study. The state lead agency is DWR and the federal lead agency is USBR. Multiple federal, state, and local agencies have also been identified as participants in the analysis and study process, in addition to interested members of the public. Public scoping was conducted from October 2001 through January 2002. The DEIR/EIS and the Feasibility Study are expected to be available to the public in June 2004. It is expected that a ROD will be certified in August 2005.

Alternatives to the project, including a Preferred Alternative, are currently undergoing development. In addition to a No Project Alternative (existing conditions) and a No Action } 479-35

Wednesday, November 27, 2002 America Online: Tcwaterman

Email from Ralph Hinton, Continued

479-33 Thank you for your comment. Your comment has been noted. No response is required.

479-34 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

479-35 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

No. 479

Condition (anticipated 2030 conditions if the project is not approved), the possible project alternatives as presented in the Notice of Preparation/Notice of Intent are summarized in Table 4.1-1.

The NODOS EIR/EIS will analyze a specific implementation action for program elements previously identified in the PEIR/EIS and therefore will tier from the programmatic document. The NODOS EIR/EIS will specifically identify the benefits and impacts of the proposed offstream storage project and determine the significance of these impacts. Initial evaluation and scoping have identified that potential impacts may occur to environmental resources and socioeconomic conditions as a result of the construction and operation of surface storage, diversion and conveyance facilities associated with the NODOS. Table 4.1-2 summarizes the environmental resources and socioeconomic conditions that could be affected. The degree of the impact and potential mitigation if the impact is found to be significantly adverse is being developed as part of the EIR/EIS process.

} 479-35, cont'd

Page 4-13, Table 4.1-1: Delete the two sentences describing the subalternatives for Sites and Newville Reservoirs. These concepts are no longer being considered.

} 479-36

Thanks for the opportunity to work with CH2M-Hill and the representatives of the resource agencies in preparing this EIS/EIR. It has been a struggle to review all this information, but the data and analysis you have compiled should help those responsible for making the important decisions make the right choices.

Ralph Hinton

Email from Ralph Hinton, Continued

479-36 Text has been revised to address this comment. See text change in Section 2.0 of this FEIS/EIR.

No. 480

Red Bluff Diversion Dam

Subj:	**Red Bluff Diversion Dam**
Date:	11/26/2002 5:27:35 PM Pacific Standard Time
From:	Mregi@frk.com
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

PLease do not divert more water than what is presently being diverted. I have performed studies in college with the whole estuary system of the delta and not to mention how it affects the ecology and watershed all the way up to the Red Bluff area. I don't believe a dissertation would be valid at this writting, but please take a moment to understand everyone's side of this issue.

How will this affect my quality of life and standard of living? Well if could only show my son what it is like to catch a Steelhead or a freakin legal Salmon not only would I be happier, but the whole way I try to teach the next generation by example is really getting difficult when there are no fish to show for it. I could go on with the quality of the water, it's visibility etc, but please again, listen to the people who boat in it, swim in it, fish in it, hunt out of it and lastly, look back at the meliniums and see that actually leaving the real estate alone actually has balanced itself out year after year, decade after decade, melinium after meliniums.

480-1

Someone who cares about ALL of it !

Manny Regi
Account Administration
Franklin Templeton Investments
mregi@frk.com

Email from Manny Regi, Dated November 26, 2002

480-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.8, Agricultural Resources, for further information pertaining to this comment.

No. 481

Subj: **Public Comment For The Fish Passage Improvement Project**
Date: 11/26/2002 6:12:59 PM Pacific Standard Time
From: Danimal@tco.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

The greatest cause for concern in the debate over the operation of the Red Bluff Diversion Dam is the debate itself.
Also, I see no reason to mitigate any economic loss to Red Bluff, when a restored Sacramento River fishery will more than make up for it!

There is absolutely no question that the Red Bluff Diversion Dam negatively impacts people, from Redding to San Francisco and many communities all along the pacific coast. Thousands of hours of sound scientific study, not to mention basic common sense all prove it. The Red Bluff Diversion Dam alters normal fish migrations, it seriously limits fish population increases, and threatens some fish species with extinction. Anytime that the gates on the dam are lowered into the river it creates improved habitat for predatory fish, specifically the pike minnow. There are no alternatives, and there are no options. For the greatest good of all, the dam gates must be kept out of the river all the time!

Anyone who has spent very much time in and around the Sacramento River, in Red Bluff, knows there is something wrong. For approximately six miles above, and one mile below the diversion dam the Sacramento River is almost totally devoid of native non migrating fish like bass, catfish, and trout. While immediately above and below the dam there exists an extremely alarming abundance of pike minnow. This unnatural state of affairs has existed, and proliferated, since the diversion dam began operating. The dam has negatively impacted my life by making "wild", native, gamefish species, virtually non existent throughout the entire Sacramento River ecosystem. Don't take my word for it, ask around, talk to the older generations who fished before the dam!

The very best proof of how bad the fishing on the Sacramento River has become, is found in the California Department of Fish and Game regulations. At no time during the year is anyone allowed to keep any wild trout from approximately five miles above Red Bluff Diversion Dam, all the way to the Carquinez Bridge. The U.S. Fish and Wildlife Service knows how bad the diversion dam is, that's why they endorse the gates out all the time

I would be willing to talk about the subject of mitigation, but there is absolutely nothing to mitigate about. The economic benefit of a restored fishery has never been factored in to Red Bluffs tax revenue loss. I know a lot of people from Red Bluff, who travel to the Klamath and Trinity Rivers, because the trout, salmon, and steelhead fishing is better there. They spend a lot of money there, to enjoy a fishery that they could have in there own backyard. In all probability, the town of Red Bluff would be better off economically, without the dam. The Sacramento River can be a world class fishing river, and Red Bluff sits in the very best place to cash in on it. The trade off of a restored year round fishery, would benefit Red Bluff much more, than a two day drag boat race that only benefits a few people and businesses.

Any talk about how the river will always look like a gravel pit disgusts me. After forty years of being poisoned, polluted, rip rapped, and dammed is anyone surprised that the river looks bad. It's to bad people can't envision the river returned to its tree lined grace, with deer and other wildlife, finally able to relax in a Red Bluff river habitat.

Stop the operation of the dam now, and set up some temporary pumping facility while you build the new pumping system.Everyone knows the dam is a bad deal. We need to let the river start healing itself as soon as possible, the sooner the better!

481-1

Thanks For Your Time,
Dan Miller
Red Bluff
(530)527-5697

Email from Dan Miller, Dated November 26, 2002

481-1 The commentor states that: "…immediately above and below the dam there exists an extremely alarming abundance of pike minnow. This un-natural state of affairs has existed and proliferated, since the diversion dam began operating." Although pikeminnow are still known to congregate downstream of RBDD when the gates are in, as noted in Response to Comment 457-9, pikeminnow populations downstream of RBDD during gate-in periods have diminished nearly four-fold since the implementation of the 1993 BO for Winter-run Chinook Salmon. The commentor states that CDFG regulations state that at no time during the year is anyone allowed to keep any wild trout from approximately 5 miles upstream of Red Bluff to the Carquinez Bridge. That statement is inaccurate. The CDFG sportfishing regulations state that: "for the mainstem Sacramento River from the Deschutes Road Bridge (Redding) to 500 feet upstream of the RBDD during April 1 through August 30, 1 wild trout per day may be taken."

No. 482

Subj: **Raising gates at Red Bluff diversion dam.**
Date: 11/26/2002 3:22:29 PM Pacific Standard Time
From: Jim.D.Carter@Saint-Gobain.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Mr. Art Bullock,
You can add me to the list of supporters for the 3 D "gates out" alternative for the red Bluff diversion dam. I think it makes good sense and will benefit
much more than it will hurt.
Thanks,

Jim Carter
Estimating Dept.
6341 San Ignacio ave.
San Jose, CA 95119
Tel.(408) 284-5866
Fax (408) 733-7027
Jim.D.Carter@Saint-Gobain.com

482-1

Email from Jim D. Carter, Dated November 26, 2002

482-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 483

STATE OF CALIFORNIA - THE RESOURCES AGENCY
GRAY DAVIS, Governor

DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT
2440 MAIN STREET
RED BLUFF, CA 96080-2356

November 18, 2002

Mr. Arthur R. Bullock
General Manager and Chief Engineer
Tehama Colusa Canal Authority
Post Office Box 1025, 5513 Highway 162
Willows, California 95988

Dear Mr. Bullock:

This letter provides the formal comments of the Department of Water Resources on the Draft EIS/EIR for the Fish Passage Improvement Project at the Red Bluff Diversion Dam. We have participated in the planning process and development of the EIS/EIR as a member of both the Technical Advisory Group and the Stakeholder Working Group. We fully support the stated purpose of this project to substantially improve the reliability of both fish passage and water supply at the Red Bluff Diversion Dam.

The Department does not recommend a specific "preferred alternative" for this project. Rather, DWR supports an alternative that best balances fish passage and water supply reliability, which may be some modification or combination of the specific alternatives described in the Draft EIS/EIR. } 483-1

The Department's formal comments will focus on four topics; potential flood issues, the ability to count anadromous fish populations above RBDD, energy availability and costs, and recreation issues and potential mitigation at Lake Red Bluff.

One of the benefits described for Alternative 2, which would reduce the gates-in period to two months, or Alternative 3, which would provide gates-out year-round, would be a potential increase in riparian vegetation in the existing Lake Red Bluff footprint. The 1992 USBR Appraisal Report (page IV-7) indicates there are about 234 acres within the fluctuation zone of Lake Red Bluff, so this would be the area subject to increased growth. This vegetation would include both native and invasive introduced species, based on the species present today in the Lake Red Bluff area. } 483-2

From an aesthetic and wildlife standpoint, this increased growth would have both beneficial and detrimental effects. More significantly, additional vegetation in the floodplain could cause a measurable increase in water surface elevations in the Red Bluff area during high water events. } 483-3

Improvement of Sale Lane and construction of the Bell Mill Shopping Center some years ago both placed considerable fill in the floodplain. In addition, gradual urban development and growth of vegetation during the last 35 years in several overflow channels due to high ground water levels caused by Lake Red Bluff has reduced the flood capacity of these bypass channels. The presence of Lake Red Bluff also has allowed deposition of a considerable amount of cobbles and sediment in the floodway, especially just below the Antelope Boulevard Bridge. } 483-4

Letter from Dwight P. Russell, Dated November 18, 2002

483-1 Thank you for your comment. Your comment has been noted. No response is required.

483-2 Thank you for your comment. Your comment has been noted. No response is required.

483-3 Additional riparian growth is probable in the floodplain if the Gates-out Alternative is chosen. To build a new pump station, significant river modeling will be required to address fluvial geomorphology and channel maintenance. This modeling task will likely include input from FEMA, the State Reclamation Board, and other permitting agencies.

483-4 Potential reduction of flood-carrying capacity of the Sacramento River in the vicinity of the project was evaluated for impacts of the proposed facilities. Hydraulic analysis of the Sacramento River water elevations during flood conditions was completed during evaluation of the proposed alternative to assure there was no increase in water levels. River bathymetric surveys and photogrammetric land surveys were used to develop a DTM and extract cross sections of the river and floodplain.

The proposed project facilities are physically set back from the current western bank. The alignment of the fish screen approximates the current, almost vertical, bank; and the forebay and pump station does not extend into the Sacramento River channel and, therefore, will not impose a reduction of conveyance capacity by virtue of the structures themselves (fish screen, forebay, and pump station).

On the other hand, it is quite possible that the present river and floodplain (bypass channel) conditions have already changed flood levels in or near the City of Red Bluff since the last FEMA study was completed. Evaluation of the existing flood elevations relative to the published FEMA maps was not part of the EIS/EIR scope.

During final design, the existing main channel Sacramento River bathymetry and floodplain will be surveyed again. These data will be used to evaluate the existing flood elevations with and without the proposed facilities. The existing riparian growth and sedimentation conditions in the bypass channels will be an integral part of the characterization and understanding of the channel hydraulics.

What the potential project impacts might be on flood elevations in the "future" due to riparian growth along the eastern floodplain is somewhat speculative and dependent on assumptions to the

No. 483

Additional riparian growth due to the proposed project could further reduce the flood carrying capacity of the Sacramento River in the Red Bluff area. This potential impact should be evaluated following Executive Order 11988 and FEMA guidelines to determine if the reduction in capacity will increase water surface elevations. FEMA, the State Reclamation Board, Tehama County, and the City of Red Bluff should be consulted, and discussion of this potential impact should be included in the EIS/EIR. } 483-4, cont'd

Winter-run Chinook salmon counts at the Red Bluff Diversion Dam originally were the basis for determining the allowable incidental take of juvenile winter-run salmon by the State Water Project and the federal Central Valley Project pumps in the Delta. Since the change to a four-month gates-in operation in 1993, the estimates of winter-run salmon have been made mostly by less accurate indirect methods in the spawning areas above RBDD. A two-month gates-in operation or gates-out year-round would mean that only indirect methods would be available for estimating the winter-run population. } 483-5

The same concerns apply to the recently listed spring-run salmon, but the effect may be greater, because a much larger proportion of the spring-run salmon pass RBDD during the summer months. Fishery agency representatives on the RBDD TAG have indicated that the available indirect methods are adequate for estimating the populations of these two listed species. However, this issue is not mentioned in the EIS/EIR and it should be. We recommend that the EIS/EIR mention this issue and give the fishery agencies an opportunity to confirm that indirect methods are available and adequately funded to determine the population size of the listed species spawning upstream from the RBDD. } 483-6

Our SWP operations staff agrees with statements in the EIS/EIR that the proposed project is not likely to have major impacts on the energy market. However, they offered a few additional comments. The EIS/EIR estimates (Page 3-287, Table 3.9-6) that January and February energy loads for Alternative 1A are less than the No-action Alternative. This is not true; however, both loads are at or below 6 percent. It is not apparent that the Power Resources analysis considered impacts to the ancillary services market, although these impacts may be too small to be significant. Alternative 2A and especially Alternative 3 seem to increase pumping during the summer months (Tables 3.9-7 and 3.9-8). Detailed operation studies should be conducted to determine if there are any specific impacts to the SWP and CVP. } 483-7

We believe the Draft EIS/EIR is deficient in proposing mitigation for recreational impacts with respect to Alternatives 2 and 3. Either of these alternatives, but particularly the gates-out alternative, will cause the loss of boating and fishing access, swimming, water-skiing, and scenic values in the Red Bluff area. Alternative 3 will reduce economic and scenic values of private property in Red Bluff, and make three } 483-8

Letter from Dwight P. Russell, Continued

484-4, cont'd changes in the bypass channels. It appears the commentor is suggesting that conveyance capacity in the vicinity of the project will be impacted by post-project riparian growth because of the elimination of Lake Red Bluff during 4 months of the year. Furthermore, with additional riparian growth in the bypass channels, the deposition of sediment might increase. Although this is physically possible, it is also possible that during high flood stages the bypass channels could scour and riparian growth could be reduced.

The potential changes to riparian growth in the bypass channels (floodplain) and their impacts can be evaluated with currently available hydraulic models by adjusting the "expected" channel and overbank roughness.

483-5 A 2-month gates-in or a gates-out operation at RBDD would either shorten the time or eliminate the ability to directly count migrating adult winter-run Chinook salmon passing through the ladders at RBDD. However, a number of other indirect methods of estimating escapement would remain. These include aerial redd count surveys conducted by CDFG (and funded by Reclamation) and the mark-recapture carcass survey conducted jointly by CDFG and USFWS (and funded by Bay-Delta Authority, CDFG, and USFWS). The aerial redd surveys are conducted at a minimum weekly, and the objectives are to estimate escapement and spawning distribution of winter-run Chinook from Princeton to Keswick. The mark-recapture carcass surveys are conducted 7 days a week from May 1 through September 4, and the objectives are to estimate escapement and describe spawning timing, location, gender composition, and origin. Additionally, the carcass surveys evaluate the winter-run supplementation program (Livingston Stone Hatchery) and characterizations of genetics. Because of the arrival time of winter-run Chinook salmon in the upper Sacramento River, many of the early arriving adults can now pass RBDD before the counting facilities are operating. The aerial redd surveys and the mark-recapture carcass surveys presently provide escapement data for the entire period that winter-run Chinook salmon are present and are more comprehensive methods for estimating escapement and characterizing populations than are direct ladder counts at RBDD. At the present time, these programs are funded through at least 2008, and likely will continue to be funded well into the future.

No. 483

Letter from Dwight P. Russell, Continued

483-5, cont'd Reclamation anticipates a gates-in period between July 1 and the end of Labor Day weekend; TCCA has no position on changes to gate operations. The above-described indirect methods of estimating escapement would remain.

483-6 A 2-month gates-in or a gates-out operation at RBDD would also either shorten the time or eliminate the ability to directly count migrating adult spring-run Chinook salmon passing through the ladders at RBDD. Similar to those indirectly counted adults discussed in Response to Comment 483-5, numerous other indirect methods of estimating escapement for spring-run Chinook salmon would remain. These include mainstem Sacramento River aerial redd count surveys conducted by CDFG (and funded by Reclamation); snorkel surveys conducted on Beegum (CDFG, funded by CALFED ERP), Battle, and Clear Creeks (USFWS, funded by Bay-Delta Authority and CVPIA respectively); and passage monitoring at the CNFH barrier weir on Battle Creek (USFWS, funded by Bay-Delta Authority). The aerial redd surveys are conducted at a minimum weekly, and the objectives are to estimate escapement and spawning distribution of spring-run Chinook from Princeton to Keswick. The snorkel surveys are conducted thrice annually on Beegum Creek, a tributary of the Middle Fork of Cottonwood Creek, and attempts are made to count the total number of spawners annually. Snorkel surveys on Clear Creek are conducted monthly or twice monthly from April through early November from Clear Creek River Mile 1.7 to 18.1. The objectives are to determine the annual relative abundance of spring-run Chinook salmon in Clear Creek and to evaluate their temporal and spatial distribution during immigration and spawning. Snorkel surveys on Battle Creek are conducted monthly or twice monthly from May through mid-November in the mainstem Battle Creek River Mile 2.8, its confluence with the forks, and 5.3 miles along the North Fork and 2.5 miles of the South Fork. The objective is to determine the location and timing of spawning of spring-run Chinook salmon in Battle Creek. Finally, the passage monitoring at the CNFH barrier weir on Battle Creek is conducted by videotaping 24 hours a day from June 1 through July 31; and trapping for 10 hours a day, 7 days a week, from March 1 through May 31; and videotaping weir "jumpers" from August through December (many of these would be fall-run Chinook or steelhead). The objective is to estimate spawner escapement and timing, age, size, and gender of

No. 483

Mr. Art Bullock
November 18, 2002
Page 3

public boat ramps and more than 20 public and private boat docks unusable. There isn't much that can be done to replace water-skiing or the annual drag boat races, but here is a partial list of potential actions that could be taken to mitigate the other recreation losses:

1. The two boat ramps located above the dam at the Red Bluff Recreation area cannot be made functional with the loss of Lake Red Bluff. However, a new boat ramp could be constructed at the City River Park to provide boating access to the river at a wide range of flows, from say 5,000 to 25,000 cfs. There are other potential boat ramp sites just above town and near Surrey Village, but these are probably in private ownership and perhaps less desirable sites.

2. Shore fishing access could be developed in the City River Park by providing easy access to the riffle below Antelope Bridge and permanent legal public access could be provided to the riffle north of Bell Mill Shopping Center.

3. An upgrade of the public swimming pool in River Park could mitigate the loss of swimming areas in East Sand Slough.

4. Public and private docks made unusable by the project could be removed and the inundation zone restored to a natural or landscaped condition, as appropriate.

5. Scenic values could be improved by landscaping the inundation area along Lake Red Bluff, especially along the trail at the Red Bluff Recreation Area, in the City's River Park, and along private property in the area inundated by Lake Red Bluff. This strip of land was purchased by the USBR when the RBDD was constructed.

We recommend that these potential mitigation measures be discussed at future TAG and SWG meetings and any measures considered desirable and reasonable should be incorporated in the EIS/EIR.

Thank you for the opportunity to participate in the planning process for this project and the opportunity to review the Draft EIS/EIR. If you have any questions, please contact me at (530) 529-7342, or contact Ralph Hinton at (530) 529-7393.

Sincerely,

Dwight P. Russell

Dwight P. Russell, Chief
Northern District

483-8, cont'd

Letter from Dwight P. Russell, Continued

483-6, cont'd returning spring-run Chinook salmon adults. At the present time, most of these programs are funded through at least 2008, and likely will continue to be funded well into the future. These monitoring programs may be more effective in estimating spring-run Chinook salmon escapements in the upper Sacramento River watershed than by direct counts at RBDD because they are conducted at the terminal geographic locations of their respective spawning runs, thus reflecting the true numbers of contributing spawners as opposed to potential spawners as measured by direct counts made at RBDD.

Reclamation anticipates a gates-in period between July 1 and the end of Labor Day weekend; TCCA has no position on changes to gate operations. The above-described indirect methods of estimating escapement would remain.

483-7 DEIS/EIR Table ES-4 lists no significant impacts to power.

483-8 In DEIS/EIR Table ES-4, under Socioeconomic, the Gates-out option lists impacts to Fish Runs/Spending/Property Value/Quality of Life and Community Cohesion as significant. No mitigation is available. The purpose of the EIS/EIR is to disclose project impact and invite public participation and identify mitigation measure where feasible. To date, no mitigation has been proposed that would directly compensate the City of Red Bluff or private landowners for economic impacts. The listed items have been discussed in recent TAG meetings, but no concrete mitigation plan has been put on record. Under NEPA, no mitigation is required. Under CEQA, mitigation for economic losses is only required if there is a secondary impact. These mitigation proposals will be forwarded to the TAG as requested.

No. 484

Subj: **Red Bluff diversion dam**
Date: 11/26/2002 10:14:30 AM Pacific Standard Time
From: jack.meyer@ge.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Mr. Bullock,
I'm writing this letter to you to voice my support for the "Gates Out" Alternative. The Red Bluff diversion dam has had a negative impact on Salmon, Steelhead and Sturgeon runs on the Sacramento river over the past 20 years. It appears that an agreement to lowering the gates for all 12 months of the year vs. the current 8 months, which is supported by both Farmers and Fisherman is running into some concerns by Red Bluff business interests.
I reviewed the concerns of Red Bluff business concerns and while I understand these concerns, I feel the "Gates Out" Alternative is a win, win for both Fish, Farmers and Red Bluff business. Concerns over potential economic impacts will be mitigated by simply lowering the gates for the annual drag boat races. A very simple solution that addresses the needs of drag boat racers and fans. Recreational, visual and property value impacts would be short term as the river restores itself over time.
By increasing Salmon, Steelhead and Sturgeon fishing opportunities, you are bringing more revenue into the Red Bluff community. I know that for a fact since I fish the Sacramento river a couple of time a year. I spend a lot of money on Lodging, restaurants, Gas, and guide services when I visit your town.
I would like to ask for you support on this initiative.

484-1

Regards,

Jack Meyer
Remarketing Consultant
GE Global Electronics Solutions
2050 Martin Avenue
Santa Clara, CA 95050
408-986-6814 Direct
408-859-9898 Cell
408-727-6218 Fax
jack.meyer@ge.com

Email from Jack Meyer, Dated November 26, 2002

484-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 485

Subj: **Against Sacramento River Dam**
Date: 11/25/2002 11:20:16 AM Pacific Standard Time
From: sibilia@eli.org
To: tcwaterman@aol.com
Sent from the Internet (Details)

To Whom It May Concern:

Please note that I am vehemently opposed to the continued damming of the Sacramento River. By continuing the damn, more salmon and other migratory fish will die due to the blockage of the natural fish passage. Salmon and other migratory fish must migrate (thus the name, migratory). Without the natural migration, they do not reproduce and keep the supply of fish available.

The Sacramento River is the largest river in California. It helps the most in the delta and the bay. It gives fish a place to spawn and return to the ocean. What happens to the river directly affects what happens out in the ocean. Commercial and sport fishing have gone to hell due to the the river being dammed in Red Bluff and many folks are not being able to catch very many fish.

I strongly urge that the dam be removed and that the gates be removed for eternity. The more we inhibit and hurt our natural environment, the less we leave in place for our children and grandchildren.

I will actively work on all fronts - both at the political (voting, letters to Congress and relevant agencies) and the grassroots level - to see this important River flow freely once again.

485-1

--
Loretta Sibilia
Grants and Contracts Manager
Environmental Law Institute
202-939-3830 (phone)
202-939-3868 (fax)

Email from Loretta Sibilia, Dated November 25, 2002

485-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 486

Red Bluff -- Tehama County
CHAMBER OF COMMERCE
Web Page: www.redbluffchamberofcommerce.com E-mail: rbchamber@tco.net

Mr. Art Bullock, General Manager
Tehama-Colusa Canal Authority
P.O. Box 1025
Willow, CA 95988

RE: Written Comment on the Draft EIS/EIR for the Fish Passage Improvement Project published in the Federal Register on August 30, 2002

DATE: November 21, 2002

Dear Mr. Bullock:

On behalf of the 400 plus members of the Red Bluff-Tehama County Chamber of Commerce, I am writing to endorse the resolution #37-2002 of the City of Red Bluff (May 7, 2002) and to share with you the regional support for the continuation of the Red Bluff Diversion Dam in its current 4 months gates-in operating regimen.

Of the 6 alternatives proposed, the Chamber supports Alternative 1a which retains a gates-in operation for 4 months, improves the fish ladders, and provides for a pumping facility to meet the water needs of the TCCA into the future.

In support of this position, the Chamber of Commerce, for the past 6 months, circulated the following petition to submit as public comment on:

Draft Environmental Impact Statement/Environmental Impact Review for the Tehama Colusa Canal Authority Fish Passage Improvement Project at the Red Bluff Diversion Dam published in July 2002 (projected)

We, the undersigned, endorse the resolution of the Red Bluff City Council, No. 37-2002 which says in part:

"Be it Resolved that the City Council of the City of Red Bluff hereby expresses its strong, unequivocal support for leaving the gates in at the Red Bluff Diversion Dam from May 15th to September 15th of every year thus preserving Lake Red Bluff and its economic and recreational benefits for the community."

We further state that the selection of any alternative that reduces the operation of the Diversion Dam below 4 months is an unacceptable economic and community development loss extending well beyond the local community and includes: loss of tourism and the benefit of tourism expenditures that generate sales tax and occupancy tax revenue to the city and in transit; loss of recreational benefits including community events such as the Memorial Day Boat Drags, boat launching and shoreline leisure; loss of property value; degradation of parks

100 Main Street • P.O. Box 850 • Red Bluff, California 96080 • Bus: (530) 527-6220 • Fax: (530) 527-2908

Letter from Brad Helser, Dated November 21, 2002

486-1 This comment letter is duplicate to Comment Letter 456.

No. 486

Letter from Brad Helser, Continued

and community gathering amenities; negative impacts to the Red Bluff Downtown Revitalization process that included lake front attributes, amenities and pedestrian/trail access plans, and other significant impacts.

We further endorse the alternative 1-A 4-month Improved Ladder Alternative and accept the solution that includes adding pumping capacity determined to be necessary to provide reliable water to the TCCA.

We further request that any Adaptive Management Program include a provision for peer review of the recommendations of the Adaptive Management Science Team (AMST) and that the Policy Review Board be required to evaluate the AMST recommendations after peer review analysis and before recommendations are implemented.

To date, the Chamber has, and will provide if so requested, petitions with 6642 individual names. An additional 478 names are illegible and are not counted in the total of individual names. Of the total, 3,190 (48%) are from residents of Tehama County, 561 (8.4%) are from Redding and areas to the north, 346 (5.2%) are from Chico and areas to the south, 318 (4.8%) are from the San Francisco Bay Area, 198 (3%) are from the Sacramento area, 1,437 (21.6%) are from all other areas of California and 594 (8.9%) are residents from out of the State of California.

We feel it is important to recognize that concern over the loss of Lake Red Bluff goes well beyond the interests of local individuals and businesses. The regional use of this Lake cannot be minimized and its loss affects persons and businesses well beyond the local community. What analysis does the DEIS/EIR provide to demonstrate the impacts outside of the local community? Elimination or reduction in the gates operating period of the Red Bluff Diversion Dam must address the regional impacts, not just the local impacts. Please explain what measures to mitigate regional losses are contemplated? How will these losses be measured and what resources will be used to compile the record?

Thank you for the opportunity to comment on this DEIS/EIR.

Sincerely,

Brad Helser,
President, Red Bluff-Tehama County
Chamber of Commerce

cc: Max Stodolski, Bureau of Reclamation
Marshall Pike, The California Parks Company

No. 487

Subj:	**New Damn Red Bluff**
Date:	11/25/2002 8:55:20 AM Pacific Standard Time
From:	phibron@prodigy.net
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

I'm diffenently opposed to this new Damn, the only reason a damn should be built is for flood control. Anything else is completely ridiculous and not cost effective, not even considering the the effect on the envirorment. I enjoy the fishing and boating on the Sacramento River and I have no doubt that this damn will destroy that, as have other damns, but, they were necessary for Flood Control. I would like more information on this and find out who is backing this and what their justifications are. } 487-1

Thanks

Email from Unsigned, Dated November 25, 2002

487-1 No new dam is planned for the Sacramento River.

1 **No. 488**

Subj: **salmon**
Date: 11/25/2002 8:40:38 AM Pacific Standard Time
From: cat3fish@excite.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

To Whom It May Concern, I want to voice my opinion on the gates in Red Bluff. I think it's a very good idea to leave the gates up all the time. The gates have taken away far too many fish in the past, and it's time we thought about them. You could still have that stupid boat race if the gates were closed for a mere two weeks out of the year. Then with all the fish that come back you could have some type of derby like they do in Rio Vista. Just think, two events a year, twice the money from concessions. What a concept. Thanks, Bill Golden

488-1

Email from Bill Golden, Dated November 25, 2002

488-1 Thank you for your comment. Your comment has been noted. No response is required.

P **No. 489**

Subj: **Red Bluff Diversion Dam and Salmon Gates**
Date: 11/22/2002 8:42:05 PM Pacific Standard Time
From: ppdicki@pacbell.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

To whom it concerns,

I would like to see the gates in Red Bluff remain open year round. I believe this will support an increase in the spawning Salmon population. I am a sports fisherman on the Sacramento River and would rather see one good year after another, over one good year in three. 489-1

Thank you for considering my opinion.

Preston Dickinson
Chico Resident

Email from Preston Dickinson, Dated November 22, 2002

489-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 490

Subj: **Red Bluff Diversion Dam**
Date: 11/23/2002 12:50:44 AM Pacific Standard Time
From: ronmott@earthlink.net
Reply-to: ron@ronmott.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Please,

Let's start to reverse 20 years of fish run destruction and give our migratory fish species a fighting chance to reproduce themselves naturally.

The Red Bluff Diversion Dam is doing more harm than good. Look at the big picture and do the right thing. } 490-1

No Red Bluff Diversion Dam!

Ron Mott

Email from Ron Mott, Dated November 23, 2002

490-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 491

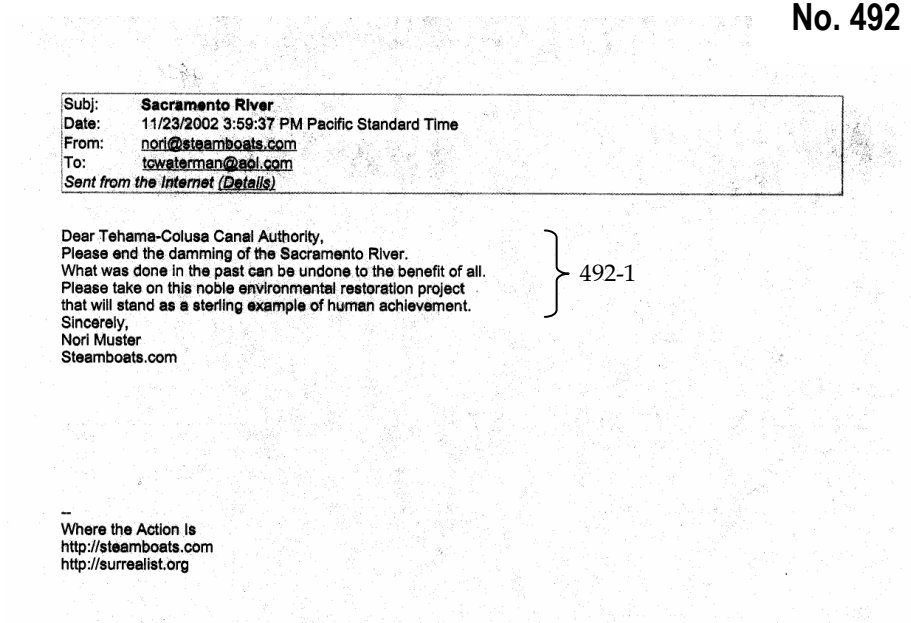
Subj: **dams**
Date: 11/23/2002 8:26:58 AM Pacific Standard Time
From: yamo@onemain.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Hello, Please help out these prized fish. my prayers and e-mails are going out. What can a average joe like myself do to make a positive impact to help the fisheries?.....Yamo } 491-1

Email from Yamo, Dated November 23, 2002

491-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 492



Subj: **Sacramento River**
Date: 11/23/2002 3:59:37 PM Pacific Standard Time
From: nori@steamboats.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Tehama-Colusa Canal Authority,
Please end the damming of the Sacramento River.
What was done in the past can be undone to the benefit of all.
Please take on this noble environmental restoration project
that will stand as a sterling example of human achievement.
Sincerely,
Nori Muster
Steamboats.com

492-1

--
Where the Action Is
http://steamboats.com
http://surrealist.org

Email from Nori Muster, Dated November 23, 2002

492-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 493

Subj: **Red bluff diversion dam gates out all the time**
Date: 11/23/2002 11:16:51 PM Pacific Standard Time
From: colin37@surewest.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

To whomever has control of the Red Bluff diversion gates,

The effect the closing of these gates have on migratory fish runs is of great concern to me as a licensed California angler. It is critical that there is absolutely no blocking of imigrating adult or imigrating juvenile salmonoids from thier natural spawning and reproduction cyles. This should be of the utmost importance when considering the use of this once unblocked magnificent drainage. The healthy cycle of this river will bring me and the dollars I and other anglers will spend while fishing and floating the Sacramento River from Redding down almost to Red Bluff.

If the decision for keeping these gates closed is made for any other reason i.e. Drag Boat races etc., than you have taken an unfortunate path for the health of this river and the spectacular fishery it's meant to be.

493-1

Regards, Colin Carr-Hall
Roseville California

Email from Colin Carr-Hall, Dated November 23, 2002

493-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 494

Email from Ray Katula, Dated November 24, 2002

Subj:	**Red Bluff Dam**
Date:	11/24/2002 9:10:35 AM Pacific Standard Time
From:	missfish_aqua@hotmail.com
To:	tcwaterman@aol.com
CC:	robertrice@juno.com, rromigh@adelphia.net, ssminnow@peoplepc.com
Sent from the Internet (Details)	

To Whom It May Concern,

In regards to construction of another Dam on the Scaramento River System I am vehemently against it. I have formerly lived and conducted scientific investigations of the fish fauna in CA and found that the fish fauna has been severely disrupted and dams are a primary component of fish population change. As Peter Moyle stated in his How to Know the Freshwater Fishes of CA book the native (should say once former) native fish populations have been changed by constructing dams, creating a better habitat for the non native sunfishes, basses and other exotics and eliminating the dynamic natural flows of a natural hydrology systems where many species have became extinct or nearly eliminated already. People should learn from their mistakes but building another dam, ecolologically speaking is not a good idea and should not be pursued. I had collected the San Jouquin River for ten years while living out there and it was pathetic. Caught plenty of Red shiners, Inland Silversides, occasional Largemouth bass and Striped bass, all non-natives but never EVER caught a native Californian fish species. That is pathetic. Interrupted water flows and profuse introductions have wiped out many native CA fish and without conisderable effort to restore natural river flows the Scaramento, where I caught one native fish species, the Tule perch, is certainly going to persist in it's downward spiral of being a natural river. Please don't dam the river, the fish need it more then agriculture irrigation or recreational users.
I have collected all over the United States of America and have never seen an ecosystem regarding fish fauna so devastated as I have in your state.
Thank you for your time and consideration.

494-1

Ray Katula, Former President of the North American Native Fishes Association.

STOP MORE SPAM with the new MSN 8 and get 2 months FREE*
http://join.msn.com/?page=features/junkmail

494-1 No new dam is planned for the Sacramento River.

No. 495

Subj: **Gates out Alternative**
Date: 11/24/2002 2:41:35 PM Pacific Standard Time
From: ari@starstream.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Mr. Art Bullock:
The salmon, steelhead, and green sturgeon runs have been declining rapidly over the past decade in the Central Valley. Mitigation measures have been made, but one of the most pressing issues is the raising of the Red Bluff diversion dam year round. With these gates raised, water can be taken at other locations, and migratory fish can make it up and their offspring down the river safely. If drag races were to take place on the river, the gates could be lowered only on those days. The plan works for everyone. With raised numbers of salmon, fishing will increase in the area, and increase the local economy. With a better economy, more money can go towards other things in the Red Bluff area. The alternative is the best way to go. Thank you for letting me express my views.
Ari

495-1

Email from Ari, Dated November 24, 2002

495-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 496

Subj:	**Gates out is better for all of us**
Date:	11/24/2002 2:50:11 PM Pacific Standard Time
From:	ari@starstream.net
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

Dear Mr. Art Bullock:
The migratory fish populations are in a decline. One of the major problems in the Central Valley is the Red Bluff Diversion Dam. If removed, salmon can reach spawning grounds more suitable for them. It is the only 100% effective way for salmon to get past the dam. 496-1
Thank You
Ari

Email from Ari, Dated November 24, 2002

496-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 497

Subj: **Red Bluff diversion Dam**
Date: 11/22/2002 11:19:59 AM Pacific Standard Time
From: HLANDS@volcano.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

The Red Bluff diversion dam is the most significant problem for fish passage in the Sacramento valley. It is time to make amends and let the river flow as it was ment to be, so all fish in the system has a decent chance for replentishing themselves. } 497-1

Thank you,
Ed Galloway

Email from Ed Galloway, Dated November 22, 2002

497-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 498

Subj: **diversion dam at redbluff**
Date: 11/22/2002 11:53:25 AM Pacific Standard Time
From: rstaub@nature.berkeley.edu
To: tcwaterman@aol.com
Sent from the Internet (Details)

Hi. I would like to lend my support to a complete removal of the Redbluff Diversion Dam gates all year. I live in Davis and frequently fish in the Sacramento River for salmon and steelhead. While this year saw a large return of salmon the overall trend is still down as is demonstrated by the listing of the winter-run chinook as endangered and the steelhead as federally threatened. The diversion dam is a major blockage to upstream and downstream migrations by anadramous fish in the Sacramento River and places unnecessary pressure on these fish species. My rights as a fisherman should be considered when making decisions on the future water quality in the Sacramento River. Thank you. 498-1

Rick Staub
Post Doctoral Researcher
Department of Nutritional Sciences and Toxicology
44 Morgan Hall
University of California, Berkeley 94720
510-642-0862

Email from Rick Staub, Dated November 22, 2002

498-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 499

Subj:
Date: 11/22/2002 10:05:04 AM Pacific Standard Time
From: seprentice@ucdavis.edu
To: tcwaterman@aol.com
Sent from the Internet (Details)

Dear Sir/Madam,

I would like to express my opposition to any attempts to further divert or dam any portion of the Sacramento River. While water conservation continues to be a pressing issue in this state, there are other much more effective and economical solutions to sourcing our water, not to mention that additional diversions will further degrade wildlife habitat and ecosystem services offered downstream. I urge you to support an alternative that maximizes the length of the gates-out period for migratory fish. As a concerned citizen, I am monitoring the issues surrounding Red Bluff Dam and will be encouraging others to do the same. 499-1

Thank you for your time.

Sincerely,

Samuel Prentice

Post Graduate Researcher, Organic Materials Review
University of California Sustainable Agriculture Research and Education Program (UC SAREP)
One Shields Avenue
Davis, CA 95616-8719 USA
ph: 530.752.7541 fax: 530.754.8550
seprentice@ucdavis.edu
www.sarep.ucdavis.edu

"Man does not live by words alone, although at times he has been known to eat them" - Adlai Stevenson

Email from Samuel Prentice, Dated November 22, 2002

499-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 500

Subj: **Red Bluff Diversion Dam**
Date: 11/21/2002 4:19:18 PM Pacific Standard Time
From: jomaha@sunset.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

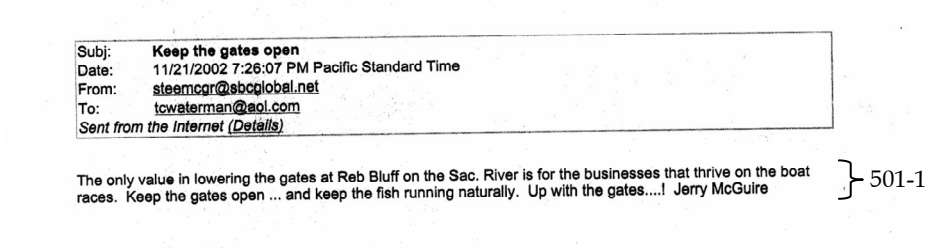
I am a citizen of California who cares about the environment and the health of our great Sacramento River. I demand that the bates of the Diversion Dam be opened all the time. Fish need to spawn and to do so they must be able to swim past Red Bluff to their upstream spawning grounds. Enough of private interests! The health of the fisheries affect millions of citizens. The drag boat races only line the pockets of a greedy few. We need a healthy waterway. We need healthy fisheries. We do NOT need a few rich machine owners and their drag boats contaminating our waters, forcing the "damnation" of the Sacramento, and killing off our fish. 500-1

John Omaha, Ph.D.
Chico, CA

Email from John Omaha, Ph.D., Dated November 21, 2002

500-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 501



Subj: **Keep the gates open**
Date: 11/21/2002 7:26:07 PM Pacific Standard Time
From: steemcgr@sbcglobal.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

The only value in lowering the gates at Reb Bluff on the Sac. River is for the businesses that thrive on the boat races. Keep the gates open ... and keep the fish running naturally. Up with the gates....! Jerry McGuire } 501-1

Email from Jerry McGuire, Dated November 21, 2002

501-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 502

Red bluff diversion dam Page 1 of 1

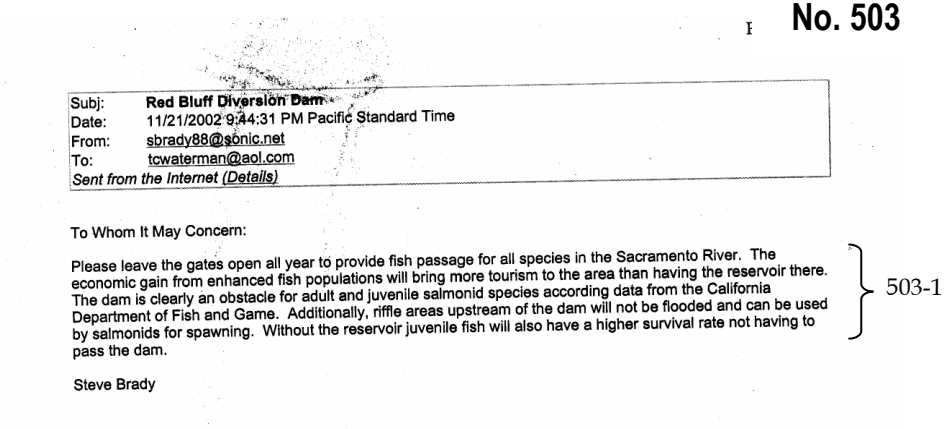
Subj: **Red bluff diversion dam**
Date: 11/21/2002 8:53:43 PM Pacific Standard Time
From: carsonwilcox@elsanconsulting.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

I think it is imperative that the powers that be realize that their decisions affect the long term health and vitality of the whole river system. Worrying about drag boat races seems to me to be a very short sighted and shallow debate when the health of endangered species is at stake. The economy does not depend on a weekend event for its life, and red bluff would make more money with a health and vital year round tourist draw then it will off of one event. The reservoir can be refilled yearly for the event if that is an option. Think about the big picture. } 502-1

Carson Wilcox
Project Manager
Elsan Associates
www.elsanconsulting.com

Email from Carson Wilcox, Dated November 21, 2002

502-1 Thank you for your comment. Your comment has been noted. No response is required.



No. 503

Subj: **Red Bluff Diversion Dam**
Date: 11/21/2002 9:44:31 PM Pacific Standard Time
From: sbrady88@sonic.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

To Whom It May Concern:

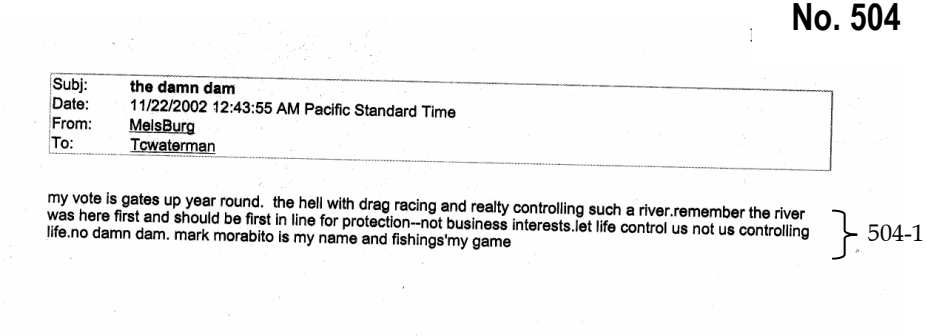
Please leave the gates open all year to provide fish passage for all species in the Sacramento River. The economic gain from enhanced fish populations will bring more tourism to the area than having the reservoir there. The dam is clearly an obstacle for adult and juvenile salmonid species according data from the California Department of Fish and Game. Additionally, riffle areas upstream of the dam will not be flooded and can be used by salmonids for spawning. Without the reservoir juvenile fish will also have a higher survival rate not having to pass the dam. 503-1

Steve Brady

Email from Steve Brady, Dated November 21, 2002

503-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.2, Fishery Resources, for further information pertaining to this comment.

No. 504



Subj: **the damn dam**
Date: 11/22/2002 12:43:55 AM Pacific Standard Time
From: MelsBurg
To: Tcwaterman

my vote is gates up year round. the hell with drag racing and realty controlling such a river.remember the river was here first and should be first in line for protection--not business interests.let life control us not us controlling life.no damn dam. mark morabito is my name and fishings'my game } 504-1

Email from Unsigned, Dated November 22, 2002

504-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 505

Subj: **Diversion Dam**
Date: 11/22/2002 7:11:41 AM Pacific Standard Time
From: machado@thegrid.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

Sirs
It is my opinion that the gates to the diversion dam should be raised 12 months of the year. We have done enough damage to the fishery resources of the Sacramento River. This is actually a chance to reverse some of the effects of our adverse actions and benefit some of the most threatened stocks. Just a reminder that the sport & commercial value of healthy fisheries far outweigh many of the other uses of Sacramento River water resources. A compromise here is being offered - let's take it so that all can benefit.
tmachado@thegrid.net

505-1

Email from Unsigned, Dated November 22, 2002

505-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 506

Subj: **Fishing over Racing**
Date: 11/22/2002 7:12:12 AM Pacific Standard Time
From: steemcgr@sbcglobal.net
To: tcwaterman@aol.com
Sent from the Internet (Details)

Once more the individual fisherman and family seem to get overrun by large money-making interests. I say leave the gates up at Red Bluff. Red Bluff and the river got along just fine prior to the building of the diversion dam and can do so once more. Who needs the races? Those who sell gasoline and those who make money from the loud, distructive(to the habitat) activities associated with the "boat drags".

If boat racing is important let Red Bluff develope "white water" races like those in Roseburg, Grants Pass, and Yuba City... they can have their cake and eat it too. They can make their money from the tourists and the salmon and steelhead will have an open passage. This would meet the needs of local fisherman, families, and the racers...!

Leave the gates up and keep the salmon and steelhead runs alive.....!

Jerry McGurie.....Chico Ca.

506-1

Email from Jerry McGuire, Dated November 22, 2002

506-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 507

Open the dams, save our resources

Subj:	**Open the dams, save our resources**
Date:	11/22/2002 9:35:32 AM Pacific Standard Time
From:	kberry@frk.com
To:	tcwaterman@aol.com
Sent from the Internet (Details)	

We have for to long a time played with the fragile ecosystem in California. It is time to give back what we have already stolen from this environment. Please consider releasing more water into the Sacramento River to let nature take it course. } 507-1

Thank you,

Ken Berry
1717 Heritage #424
Sacramento, CA 95815

Email from Ken Berry, Dated November 22, 2002

507-1 Thank you for your comment. Your comment has been noted. No response is required.

No. 508

Subj: **red Bluffs**
Date: 11/20/2002 9:03:26 PM Pacific Standard Time
From: cjonesrr@yahoo.com
To: tcwaterman@aol.com
Sent from the Internet (Details)

A diversion dam must be for some purpose other than boat races. So i am guessing irrigation or the head gates for water power or drinking water. These would seem to be a good reason for keeping the dam. As for the fish there are cycles in the number going up and coming down a stream I am guessing there is a fish ladder at this dam if not It might be a consideration.
River Rat

508-1

Do you Yahoo!?
Yahoo! Mail Plus – Powerful. Affordable. Sign up now.
http://mailplus.yahoo.com

Email from Unsigned, Dated November 20, 2002

508-1 Thank you for your comment. Responses are only given for comments that directly relate to content in the DEIS/EIR. See DEIS/EIR Section 3.8, Agricultural Resources, for further information pertaining to this comment.

No. 509

DATE: November 19, 2002

Mr. Art Bullock
Tehama-Colusa Canal Authority
P.O. Box 1025
Willow, CA 95988

RE: Written Comment on the Draft EIS/EIR for the Fish Passage Improvement Project published in the Federal Register on August 30, 2002 with comments due by extension to November 30, 2002.

Dear Mr. Bullock:

General Comments:

In the Introduction and Purpose and Need statement on page 1., the document indicates prior to completion of the Red Bluff Diversion Dam (RBDD) in the 1960's anadromous fish had unimpeded passage. With all due respect, it should say, prior to the completion of Shasta Dam in the 1930's. The statement uses a rhetorical convenience when "through the current dam site" is added as a qualifier. In reality, all other impediments to fish passage on the Sacramento River pale in comparison to Shasta Dam. All other impacts are insignificant in comparison to those caused by Shasta Dam. However, the very existence of California as the 5th largest economy in the world and the largest economy in the nation is tied inextricably to the decision, in the midst of a depression, to harness the river for the sake of future generations, knowing full well that salmon and steelhead of all races and sub-sets would be affected. The affect was not just the loss of spawning habitat, but in the actual control of the flow characteristics of the river. Since that date forward, there has been no "free flowing river" and claims by the restoration side to the contrary, that is a fact.

509-1

While Shasta Dam in an impenetrable and impassable barrier, RBDD is not. Since it's construction, the community has seen the operating program ratchet backwards from year round to 10 months to 8, then 6 and now 4 months only of gates in operation. Every reduction intended to coincide with some biologist's opinion on the failure of either the fish to figure out how to find the ladders or the failure of the engineers and biologists to adequately design ladders and control the flow through them so the fish have a less "confusing" passage.

Past Failure to Complete Recommendations to Improve Fish Passage

As long as 12 years ago, with the gates still in operation for 6 months of the year, redesign of the ladders, screens, outflow and gate operation to increase attraction flow and improve the conditions for passage was proposed in work published by David Vogel, Senior Fisheries Biologist and former head of the USFWS

CALIF PARKS COMPANIES Fax:530-529-4511 Nov 19 2002 15:54 P.02

Letter from Marshall W. Pike, Dated November 19, 2002

509-1 The commentor is correct. All other obstacles to fish passage do pale in comparison to Shasta Dam in the Sacramento River watershed.

No. 509

Red Bluff Office, to the International Symposium on Fishways in Gifu, Japan, in 1990. In part, he said replace the intake louvers with rotary drum screens, move the canal bypass outfall downstream to disperse predation and increase the flow through new fishways to reduce the delay in upstream migration.

My question: Why were only 2 of the three recommendations implemented? Why was the improved flow through new fishways left out of the remediation program? } 509-2

Decision on Baseline Affects Measurability of Outcomes

My second question has to do with the baseline assumptions about how to measure "substantial improvement in fish passage." The no action baseline incorrectly starts at the current condition to measure improvement. The project, built in the 1960's, never envisioned reduction in gates operation from 12 to 4 months. The original plan called for the diversion to be year round with the gates removed only to accommodate heavy runoff conditions or to flush sediment downstream. If 12 months of operation were the original baseline, it is quite clear that substantial improvement in fish passage has already been achieved and further economic disruption is not required to achieve every increment of improvement. Why is the true baseline for analysis of improvements in the condition of the anadromous runs marginalized by the presentation? } 509-3

Document Fails to Provide Scientific Support for Inclusion of Other Species of Concern

My next concern is for the "moving target" represented by the inclusion of "other species of concern" in the analysis. One could make a complete and compelling case that the salmon and steelhead runs are substantially improved by the 4 months gates in alternative 1A and be then subjected to repeating the process with every organism in the river. Three are noted, the green sturgeon, the river lamprey and the pacific lamprey. The biology of these fish is unknown to the researchers and to the presenters of this EIS/EIR for the some unexplained reason. This is the very definition of a Species of Concern. Now, however, given the myopic focus on removing RBDD by certain zealots in the agencies, every possible transient species in the river at any particular time is the subject of intense and foreboding speculation, not critically applied scientific study. } 509-4

Making decisions that are as drastic and complete as the elimination of the RBDD based on supposition, insupportable assumption, anecdotal information and just plain wild guessing is unconscionable and should be discounted completely by the decision makers. To do otherwise is tantamount to "prior restraint," a legal term that has long been recognized as insupportable in court case after case. What is implied by the inclusion of non-scientific speculation is that threats to the operation of the diversion dam as a primary source of irrigation water will continue. The zealots in the fishery agencies have it in mind, that if the } 509-5

CHLIF PAPKS COMPANIES Fax:530-529-4511 Nov 19 2002 15:54 P.03

Letter from Marshall W. Pike, Continued

509-2 Beginning in 1983, a 5-year study to develop methods to improve upstream (and downstream) fish passage at RBDD was undertaken. The study concluded that dam spill configuration and dam gate manipulation were ineffective in improving fish passage conditions for adult salmonids. The principal recommendations of the study included construction of a new larger fish ladder on the east side of RBDD, enlarging the size and flow capacity of the existing ladders, raising the dam gates during non-irrigation season, and establishing a permanent program to ensure proper O&M of all fish passage facilities. Problems identified with the fish ladders included constant cleaning of the auxiliary water diffusers, continuing problems with trash rack conveyors systems, and automated head gate operations being non-operational from the beginning. A center fish ladder was installed at Gate 6 beginning in 1984, and despite numerous problems due to installation and operation, this ladder has resulted in limited benefits to passing salmonids. It generally passed less than 10 percent of all salmon passing the dam. As a result of the 5-year study to improve fish passage conditions at RBDD, the dam gates were raised during the non-irrigation season beginning in 1986-1987. In 1988, a cooperative agreement was signed by Reclamation and other resources agencies to implement actions to benefit winter-run Chinook salmon (10-Point Action Program). Of the 10, 3 actions related specifically to RBDD and included raising gates at the dam, reducing predation by pikeminnow at RBDD, and developing fish passage alternatives to raising the RBDD gates. From this plan, gates-out operations expanded to gates out from December 1 to May 2 by 1990-1991, and to October 30 to May by 1992-1993. In response to the 10-Point Action Program, a Fish Passage Action Program at RBDD was begun in 1992 to develop solutions to the problems of fish passage attributed to RBDD. Reclamation, in 1992, prepared an Appraisal Report on the RBDD Fish Passage Program. In that report, Reclamation considered numerous possible passage solutions, and of these recommended that 11 be selected for further consideration. However, the information they had at that time did not allow an adequate comparison of the reasonableness of these 11 alternatives. Furthermore, as a result of the 1993 BO for the protection of adult winter-run Chinook salmon, RBDD gates-out period increased to September 15 to May 15 each year. In 1994, the entrance to the existing

No. 509

Letter from Marshall W. Pike, Continued

509-2, cont'd

west bank fish ladder was modified to improve adult fish passage conditions. Following the release of the Appraisal Report in 1992, Reclamation began a 6-year interim fish passage program to complete the research necessary to identify a reasonable, cost-effective solution to fish passage and water delivery constraints at RBDD. As part of this program, a detailed public involvement program was initiated aiming to educate and include public involvement. Because of numerous concerns identified by the public, this program was put on hold. By the late 1990s, preliminary modeling and calibration studies performed by Reclamation had provided data to begin developing fish ladder hydraulic characteristics but lacked sufficient information to fully evaluate new fish ladder concepts. A draft report of the ladder alternatives investigation, part of the fish passage program, found that ladder entrance locations, orientation, and adjacent dam gate operations influenced ladder attraction flow performance; flexibility in ladder final design would be necessary to accommodate a range of fish staging locations for new ladders; and enlarged ladders might provide significant improvement of attraction flow conditions in the RBDD tailrace during gates-in operations. During this time, additional anadromous fish species were listed as threatened under ESA. These included Central Valley spring-run Chinook salmon (1999) and Central Valley ESU steelhead (1998). Then in 1999, CH2M HILL, under contract to TCCA, began work on Phase 1 of the TCCA Fish Passage Improvement Project at RBDD, resulting in the preparation of a Prescoping Report in 2000. Finally, in 2001, green sturgeon, a fish species that is recognized to have difficulty in passing fish ladders designed for salmonids were petitioned for listing under ESA. In summary, throughout the years from when adult fish passage at the existing ladder at RBDD was first identified to be problematic to the current time, fish passage solutions, including ladder modifications and enhancements, have been investigated. It remains uncertain if a major problem of fish passage at RBDD, namely delay due to gates-in operation, would be sufficiently reduced to significantly improve passage of salmonids through new improved ladders. Furthermore, none of the ladder improvements investigated have been proven to successfully assist passage of adult sturgeon, a species of concern identified and addressed in the DEIS/EIR. As stated in the DEIS/DEIR, the federal and state resources agencies have been and continue to be hesitant to recommend enhanced fish ladders or bypasses as stand-alone solutions to solving fish passage problems at RBDD.