



December 9, 2009

Bob Williams
Department of Fish and Game
601 Locust Street
Redding, CA 96001
Email: ShASTADEIR@dfg.ca.gov

Dear Mr. Williams:

Please find attached comments on the Draft Environmental Impact Report for the proposed Shasta River Watershed-Wide Permitting program proposed by the California Department of Fish and Game and the Shasta Valley Resource Conservation District.

California Trout is a statewide conservation organization dedicated to protect and restore wild trout and steelhead waters throughout California. California Trout operates a field office in Mt. Shasta and has worked specifically on the Shasta River watershed since 2000. California Trout has served as a member of the statewide Coho Salmon Recovery Team and the Shasta-Scott Recovery Team (SSRT).

We are supportive of the Program to develop a watershed wide permitting process to implement coho salmon recovery tasks and facilitate compliance of agricultural activities and restoration projects with the California Endangered Species Act (CESA). For the program to succeed, however, several fundamental issues must be addressed.

- A revised DEIR must adequately describe the Program, analyze the significant environmental impacts of the Program and undertake a legally sufficient study of alternatives to the ITP.
- Mitigation measures proposed in the revised DEIR must address the primary factor leading to the decline of coho salmon –summer rearing water temperatures.
- The Incidental Take Program should not memorialize or provide any explicit exemption for landowners to comply with Fish and Game Code, including but not limited to Section 5937.

We are confident the above issues can be addressed and believe on the whole the Program presents Shasta Valley stakeholders with the most viable alternative for complying with state and federal law, protecting individual rights, sustaining an agricultural economy, improving habitat and water quality conditions and recovering coho salmon populations.

Sincerely,

Curtis Knight
Mt. Shasta Area Program Manager

CALIFORNIA TROUT COMMENTS ON SHASTA RIVER WATERSHED-WIDE PERMITTING PROGRAM

Introduction

California Trout appreciates the opportunity to comment on the California Department of Fish and Game's (Department) Shasta-Scott River Watershed-Wide Permitting Program (Program). California Trout is a statewide conservation organization dedicated to protect and restore wild trout and steelhead water throughout California. California Trout operates a field office in Mt Shasta and has worked specifically in the Shasta River watershed since 2000. California Trout currently serves as a member of the statewide Coho Salmon Recovery Team and the Shasta-Scott Coho Recovery Team (SSRT).

We recognize the primary purpose of the Program is to enable Agricultural Operators to continue routine farming and ranching activities in the Program Area and SVRCD's restoration project implementation, while avoiding, minimizing, and mitigating for take of coho salmon that might occur incidental to the activities, in accordance with Fish and Game Code, 1600 *et seq*, and California Endangered Species Act.

We generally support DFG's programmatic approach to develop a watershed wide permitting process to facilitate compliance of agricultural activities and restoration projects with the California Endangered Species Act (CESA). The Program as described, however, falls short of adequately mitigating for covered activities and provides insufficient detail about the nature of the proposed ITP. The description of the program is vague and speculative and therefore violates CEQA's core principles. The DEIR violates CEQA because: a) it fails to adequately describe the Program, b) it fails to analyze the significant environmental impacts of the Program and c) fails to undertake a legally sufficient study of alternatives to the ITP.

CEQA defines an EIR as primarily "an informational document." Pub. Res. Code 21061. An EIR's main purpose is to "inform public agency decision makers and the public generally of the significant effects, and describe reasonable alternatives to the project. CEQA Guidelines 15121(a). This environmental review document fails to fully and accurately inform decision-makers, and the public, of the environmental consequences of their actions. The CEQA guidelines define "project" as "the whole of an action, which has a potential for resulting in a either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." Id. 15378 (a). CEQA guidelines require the DEIR to analyze the environmental impacts of the Program as a whole, and propose adequate mitigation measures to address those impacts.

Coho Salmon in the Shasta Valley

The coho salmon that return to the Shasta and Scott Rivers are unique in the distance they travel to spawn. Coho salmon runs travel 180 plus miles up the Klamath River to spawn in the Shasta and Scott Rivers and are important stocks for future fish reintroduction efforts above the Klamath Dams. Fish passage is requirement of PacifiCorp's as part of the relicensing of five dams on the Klamath River,

either through dam removal or fish ladders. The loss of these unique stocks of fish will compromise the ability of remaining coho stocks to successfully colonize the area above Iron Gate Dam.

The estimated numbers of adult coho salmon returning to the Shasta River are low and decreasing. Fish population biologists and geneticists have established that effective population sizes of less than 50 fish result in a high risk of extinction in the short term. Over the long-term sustainability of genetically robust fish populations requires effective population sizes of more than 500 fish.¹ Two of the three cohorts of coho salmon returning to the Shasta River are in immediate risk of extinction based on the above criteria and the third is less than half the number of returning adults needed to maintain long-term sustainability. See Table 1.

Table 1. Department of Fish and Game adult coho salmon return estimates to the Shasta River 2001 - 2007.

Year	Shasta River Adult Coho Return Estimates	Cohort
2001	291	1
2002	86	2
2003	187	3
2004	373	1
2005	69	2
2006	45	3
2007	255	1

The recent decline of cohort 3 is of particular concern. In 2003, 187 adult coho salmon returned to the Shasta River. Three years later in 2006, the progeny of the 2003 run only returned 45 adult salmon. This trend for cohort 3 follows what has previously happened to cohort 2. Both cohorts appear to be sliding towards extirpation in the Shasta River.

Juvenile coho currently over summer in the Shasta River in only a few cold water spring refugia habitats associated with Big Springs Creek and Parks Creek. These rearing areas are extremely important to protect and restore. Opportunities exist to expand these cold water refugia areas to increase the amount of suitable over summer rearing habitat in the Shasta Valley. The Program should identify covered activities that impact these cold water springs and define appropriate enhancement and mitigation measures for these important rearing areas. The protection and enhancement of these springs, which are located on only few properties, should be the top priorities of the Program.

¹ Nelson, K., and M. Soulé. 1987. Genetical conservation of exploited fishes. Pages 345-368 in N. Ryman and F. Utter, editors. Population genetics and fishery management. University of Washington Press, Seattle, Washington.
 Allendorf, F. W., and N. Ryman. 2002. The role of genetics in population viability analysis. Pages 50-85 in S. R. Beissinger and D. R. McCullough, editors. Population viability analysis. University of Chicago Press, Chicago, USA.
 Hilderbrand, R. H., and J. L. Kershner. 2000. Conserving inland cutthroat trout in small streams: how much stream is enough? North American Journal of Fisheries Management 20:513-520.

Jeopardy

The Department defines “jeopardy” as “the probable extirpation of any coho salmon cohort” (Jeopardy definition (A-34/5). The ITP states that the Permit “may be terminated by the Department at its sole discretion if circumstances or new information provides evidence that continued program implementation may result in jeopardy to coho salmon...” (A-34).

The population data in Table 1 indicates that jeopardy may already apply. The Program as a whole could lead to the continued jeopardy of coho salmon because it permits activities that contribute in part to the current decline. We request that the DEIR define jeopardy and permit termination criteria based on measurable goals and objectives.

Coho Salmon Limiting Factors to Production in the Shasta Valley

The DEIR and proposed mitigation and enhancement measures do not adequately address the key limiting factor for coho salmon survival in the Shasta River—warm summer time stream temperatures for rearing juvenile coho salmon. Mitigation measures that do not address warm summer time temperature will not adequately mitigate for take. More importantly lack of mitigation measures that do not address warm summer stream temperatures will result in the continued decline of coho salmon in Shasta River and inevitably more stringent regulatory measures. The DEIR makes no mention of temperature reduction as a “Physical Change Likely to Result from the Program.” Mitigation measures for ITP activities do not address the primary limiting factor for coho salmon production and abundance – summer rearing stream temperatures.² Unless mitigation measures lead to decreased water temperatures throughout the Shasta River, coho salmon will continue to decline.

Key Issues

The Department may authorize take by a permit provided: 1) it is incidental to a lawful activity; 2) the impacts of the authorized take are minimized and fully mitigated; 3) the permit is consistent with any regulations adopted pursuant to Fish and Game Code 2112 and 2114; 4) there is adequate funding to implement the minimization and mitigation measures, and to monitor compliance with and the effectiveness of those measures; and 5) issuance of the permit will not jeopardize the continued existence of the species (Fish and Game Code 2081, subs (b)(c).

Based on the above criteria we have the following concerns:

1. The Program cannot memorialize or provide any other explicit exemption for compliance with Fish and Game Code. The Program potentially provides explicit exemption of unlawful activities and dams. For example, Dwinnell Dam currently does not comply with Fish and Game Code Section 5937 and 5901. Incidental Take Permits cannot be issued for structures that do not

² Jeffres, et al. 2007. Baseline assessment of salmonid habitat and aquatic ecology of the Nelson Ranch, Shasta River, California, Water Year 2007. J. Mount, P. Moyle and M. Deas, Principal Investigators, UC Davis Watershed Center.

provide enough flow downstream of the diversion to keep fish and good condition and provide adequate fish passage. The violation of existing Fish and Game Codes is a primary factor in the decline of coho salmon in the Shasta Valley.

2. Law enforcement is paramount to the success of the ITP. The DEIR must fully analyze impacts and assure that compliance with applicable laws and regulations is adequately monitored by the Department. Adequate compliance and enforcement processes as well as funding for staffing need to be clearly identified in the document. The Department should not agree to keep wardens off the streams they are responsible for protecting. Allowing farmers and ranchers in the Shasta and Scott Valleys to deny river and stream access to Fish & Game officials and the public is contrary to state law and should not be considered.
3. The level of take must be numerically defined for each activity and mitigations to address the anticipated take must also be individually defined with clearly measurable criteria included in the document.
4. Adequate funding does not exist to implement the minimization and mitigation measures; and to monitor compliance with and the effectiveness of those measures. Public funding of mitigation measures will be difficult unless these mitigation measures go the extra step to not only mitigate for take but go beyond the strict legal requirements and include mitigation measures that address coho recovery needs. Public funding should not be used for mitigation purposes but should be used for “recovery” purposes. Diverse funding mechanisms for all measures should be identified and include the contributions from applicants. Program Funding (3.1-27) states that CDFG and SVRCD anticipate that grants, cost shares and loans will offset some or all of the costs of the Program. It further states that “it is likely the Program will result in minimal net cost to participating Agricultural Operators”.
5. Mitigation measures need to be fairly distributed among all users in accordance with their level of take. Large irrigation districts should be responsible for mitigating for the large impact they have on the river. For example, the Montague Irrigation District irrigation operations impact the mainstem Shasta River flow and fish passage, Parks Creek flow and fish passage, and Big Springs Creek through groundwater pumping at the Pasey Pumps. The mitigation and enhancement measures for these activities should match the “take” these activities have.
6. We challenge determination of baseline conditions. We understand that the “DEIR analyzes the physical, project-related changes to the ‘baseline’ the Program could cause; changes do not include the environmental impacts caused by historic, ongoing activities that predate the determined ‘baseline’. Consequently, CESA does not mitigate for those changes.” Current baseline conditions, however, include activities that are illegal and contributing to the decline of coho salmon. The baseline was established while illegal diversions and activities were occurring and therefore do not represent true baseline conditions. Further, pre-project baseline data is

essential for evaluating potential project impacts before project approval. The DEIR must include adequate pre-project baseline data.

7. The area of above Dwinnell Dam should be included in the geographic scope of the Program. The geographic scope of the project is limited to the area below Dwinnell Dam because coho salmon cannot access historic spawning grounds in the estimated 23% of the Shasta River watershed above the dam due to lack of fish passage facilities. To be in compliance with Fish and Game Code 5901 Dwinnell Dam must provide fish passage. Coho salmon and other anadromous fish cannot access this area because of an illegal structure. Fish would have access to the upper watershed and take activities above the dam would be required to participate in the program if Dwinnell Dam was a legally permitted structure. Additionally, current coldwater diversions above Dwinnell Dam from Carrick Creek, Beaughton Creek, Boles Creeks and the Upper Shasta River divert cold spring water sources from entering the Shasta River system and denying the system what it needs most—inputs of cold water during the summertime. Collectively Beaughton, Boles and Carrick Creeks contribute at least 15 cfs of cold spring water during the summer and this cold water rarely reaches the mainstem Shasta or Dwinnell Dam because of diversions that should be included in the Program.

Specific Comments by Section

Project description

1. Project Description 2.1.2 Objectives of Program Participants
 - a. DEIR must analyze and define success for each program participant.
 - b. Existing objectives in DEIR are vague and lack measurable indicators.
 - c. How does the Program evaluate success for Program Participants?
2. Project Description 2.3.3 Mitigation Obligations of SVRCD: Flow Enhancement Mitigation 2: Improve Baseline Instream Flows Via Water Efficiency Improvements (2-21)
 - a. This section requires identification of reaches but not measurable objectives for meeting “aquatic habitat improvement”. The DEIR must identify measurable objective for “aquatic habitat improvement”.
 - b. Contingency plan for dry years – (2-21) requires a plan to “incorporate the best available information on both surface and groundwater (where relevant) to minimize the likelihood that critical coldwater flows to the Shasta River and its tributaries are impaired”. The DEIR must define where groundwater is “relevant” and clearly describe what actions would be used to minimize impairment activities.
 - c. To what extent will mitigation measures increase baseline in-stream flows?
 - d. What constitutes success for flow enhancement?
 - e. Where will funding come from for water efficiency projects?
3. Project description 2.3.3 Habitat Improvement Mitigation 2: Instream Habitat Improvement structures
 - a. DEIR fails to address the issue of temperature in relation to habitat improvement

- b. Physical habitat improvement projects such as “20 in-stream structures” do not constitute adequate mitigation measures unless linked to measurable temperature reductions
 - c. Who will fund these structures?
- 4. Project description 2.3.3 Habitat Improvement Mitigation 3: Riparian Planting
 - a. DEIR does not address past attempts at riparian planting.
 - b. DEIR does not address affects of soil conditions, and impaired flow regime on successful riparian regeneration
 - c. Planting may fail without improvements in flow regime
 - d. Where will funding come from?
- 5. Project Description 2.3.4 Monitoring and Adaptive Management Program
 - a. DEIR fails to address adequately how SVRCD will monitor to determine whether sub-permittees are fulfilling the terms and conditions of their sub-permits
 - b. DEIR fails to address adequately how SVRCD will determine the effectiveness of the avoidance, minimization, and mitigation measures outlined in the ITP
 - c. DEIR fails to address adequately the conflict between SVRCD’s lack of regulatory authority and their role in reporting non-compliance. The Program forces SVRCD to compromise their relationships with constituents which may lead to program failure
- 6. Project Description 2.3.5 SVRCD Reporting Requirements
 - a. DEIR fails to analyze adequately the financial, human and technical capacity of SVRCD to carry out these reporting requirements
- 7. Project Description 2.3.6 Department of Water Resources Obligations under Sub-permit
 - a. DWR will implement the Shasta River Decree pursuant to provisions of the California Water Code in the adjudicated portions of the Shasta River Watershed.
 - b. As part of that responsibility, DWR water master will verify that each sub-permittee is in compliance with their respective water rights.
 - c. A water right verification program must include verification of quantity, place of use, and timing of water right use.
 - d. How will DWR verify that each sub-permittee is in compliance with respective water rights?
 - e. How will DWR verify compliance during periods when water-master is not working?
 - f. What data will be recorded in proposed data base?
 - g. Does DFG have authority to direct DWR to “reduce or cease” diversion and or change timing or manner of diversion?”
- 8. ITP Additional Avoidance and Minimization Obligation A: Water Management
 - a. Lacks measurable objectives
 - b. Need adequate review of baseline data to determine in-stream flow objectives
- 9. ITP Additional Avoidance and Minimization Obligation C: Fish Passage Improvements
 - a. Are all sub-permittees required to provide fish passage within 5 years?
 - b. Does this include MWCD?

- c. Who will fund design, construction and maintenance of fish passage improvements for MWCD?
10. ITP Additional Avoidance and Minimization Obligation J: Dwinnell Dam and the Montague Water Conservation District (MWCD)
- a. Avoidance and Minimization of negative effects of MWCD and Dwinnell Dam are inadequate
 - b. Where will funding come from for feasibility study?
 - c. Investigating “possibility” of providing fish passage is inadequate
 - d. MWCD must provide passage pursuant to Fish and Game Code 5937 and 5901
 - e. Permit should not be issued until these issues are explored thoroughly
 - f. DEIR should address legality of Dwinnell Dam under Fish and Game Code

Environmental Settings, Impacts and Mitigation Measures

11. Environmental Setting Section (3-2)

- a. In establishing baseline conditions the DEIR does not consider that illegal activities may be occurring. Illegal actions cannot be considered baseline. If it is determined the baseline included illegal activities the baseline must be reassessed.

12. Impact 3.2-4, *The program could result in an increase in the extraction of groundwater, which could contribute to decreased baseflows and increased ambient water temperatures in the Shasta River and its tributaries (less than significant).*

- a. Groundwater impacts are not clearly defined in the document and therefore are not adequately mitigated. The document claims a less than significant impact from extraction of additional groundwater with no mitigation measures required (S-12, 3.2-4 – also see S-14 3.3-2). “Groundwater dynamics exert a strong influence on the volume and quality of surface flow in the Shasta and its tributaries.” (3.2-8). In spite of this statement there is no groundwater component of the Program. Monitoring of additional wells, groundwater extraction and groundwater levels as well as potential relationships with surface flow must be included.
- b. Groundwater supply may be used as alternative means to satisfy stock water demand from Oct-Dec. Will the quantity of stock water use be verified?
- c. Increases in extraction of groundwater may lead to reduced base flow and increased temperatures
- d. Groundwater assessment or basin management plan needed

13. Dams and Impoundments 3.2-13

- a. How does Dwinnell dam and other impoundments affect temperature throughout the river?
- b. No mention of temperature in this section

14. Water Quality 3.2-19

- a. Important research excluded from section.
- b. Should include Jeffres 2007, Baseline Assessment of Salmonid Habitat and Aquatic Ecology of the Nelson Ranch, Shasta River, California Water Year 2007.

15. Impact 3.3-2, *Increased extraction of groundwater could contribute to decreased baseflows and increased ambient water temperatures in the Shasta River and its tributaries, thereby impacting coldwater fish habitat (less than significant)*

- a. What is the relationship between groundwater and surface water throughout the Shasta Valley?
- b. How does this relationship affect coldwater fish habitat and coho salmon?

16. Impact Analysis 3.3-47

- a. DEIR claims it is expected that the overall amount of water diverted in the Program Area will decrease at certain times of the year.
- b. By how much will diversions decrease, where and when?

Cumulative Effects and other Required Topics

1. Cumulative Effects 4.2.3 Biological Resources: Fisheries and Aquatic Habitat

- a. The DEIR fails to address the cumulative effect on coho salmon of high temperatures and poor water quality throughout the project area
- b. How do current average maximum daily temperatures affect coho salmon?
- c. Proposed mitigation will not reduce average maximum temperature and therefore will not reduce the effects of the Program to less than significant
