

## **3.2 Responses to Groups and Organizations Comments**

This section includes copies of comment letters from interest groups and organizations and corresponding responses. Comment letters are arranged alphabetically by group acronym or name.

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Katie Blank

From: Jessica Martini Lamb [Jessica.Martini.Lamb@scwa.ca.gov]
Sent: Monday, January 31, 2011 1:13 PM
To: Katie Blank; estuaryproject
Cc: Records
Subject: FW: The Russian River Estuary Management Project:Draft Environmental Impact Report
Follow Up Flag: Follow up
Flag Status: Flagged

From: Pamela Conley [mailto:pamcon@comcast.net]
Sent: Monday, January 31, 2011 1:08 PM
To: Jessica Martini Lamb
Subject: The Russian River Estuary Management Project:Draft Environmental Impact Report

Sonoma County Water Agency
Attention: Jessica Martini-Lamb
404 Aviation Blvd.
Santa Rosa, CA 95403

January 31, 2011

Re: The Russian River Estuary Management Project: Draft Environmental Impact Report released on December 15, 2010

Dear Ms. Martini-Lamb,

The Biological Opinion has determined that the Water Agency should implement several actions to modify existing water supply and flood control activities in the Estuary Management Project to enhance better conditions for juvenile salmonids and steelhead.

I have sat in on a couple of public hearings regarding this Draft Impact Environmental Report (DEIR) proposal and listened to many of the public concerns. And I have several questions I would like to have answered.

My biggest concern is the lower flows to the Russian River and the impact it will have on the environment upstream. California Environmental Quality Act (CEQA) requires that the "whole" of a project must be considered in one EIR. However, the DEIR claims that its major purpose is to address the requirements of the Biological Opinion written and issued by NMFS with only the specification of taking in consideration the closing of the estuary and concern for flooding. How can the closing of the estuary NOT take in consideration the fish, birds, animals, and humans upstream from Forestville to Duncan Mills?

G\_ACA-1

The purpose of proposing lower flows in the Russian River downstream is to prevent flooding of a few properties in Jenner while keeping the mouth closed. These lower flows will affect the river as far upstream as Vacation Beach. Why then, does the DEIR only study the upstream area of Duncans Mills?

G\_ACA-2

If the Sonoma County Water Agency (SCWA) proposes lower flows, how can they not consider exacerbated serious water qualities such as agricultural pesticide runoff from the wineries, poor septic tank leakage, and algae blooms that can be extremely toxic to fish, birds, animals, and humans upstream and ignore the law of CEQA to study the project as a "whole"?

G\_ACA-3

There are several other species of fish that live in the Russian River besides the salmonids and steelhead and these fish live there all year. These fish are considered a part of the "whole" of the Russian River and would be subject to poor water quality as stated in the paragraph above if lower flows were implemented. How will lower flows to these

G\_ACA-4

# Comment Letter G\_ACA

seven species of fish be affected upstream? Again, how can these seven species not be considered part of the "whole" of this project upstream?

G\_ACA-4  
cont.

There is a colony of seals located near the designated closure where the work would take place. The seals come here to rest and have their babies. These seals are the ambassadors of Jenner and bring tourists from all over the world to see them. They would certainly be disturbed by all the heavy machinery and work being done to close the bridge. Seals are a part of the "whole" of this considered project in this DEIR and they are located in the estuary not further upstream. How then can they not be considered in this report?

G\_ACA-5

According to National Marine Fisheries Services (NMFS), they are suggesting examples that have worked in the Santa Cruz area of California that have provided optimal habitat for the fish and their success are the models of this project. However, many of the lagoons' watersheds in the Santa Cruz area are much shorter in length than the Russian River. Furthermore, none of the examples from these watersheds in the Santa Cruz area given by NMFS have the urban/agriculture impact that the Russian River does. Why hasn't each of these example watersheds' differences been individually compared to the Russian River?

G\_ACA-6

At the public meeting I attended in Jenner on January 18th, several people I talked to and who addressed the Board, discussed a mutual distrust and suspicion regarding this project. Many residents in our community believe that this is just the first step to lower the flows of the Russian River for future development and agriculture needs. How can the SCWA, NMFS officials and supervisors alleviate these doubts to the community? It would be in their best interest to attempt to do so. If people from other areas stop coming to the Russian River for recreation, it would be economically devastating to the smaller cities including Guerneville, Monte Rio, and Duncans Mills. If it was discovered that it was a water grab, can Sonoma County afford several lawsuits that would definitely happen if our community was devastated with the loss of tourism in these hard economical times?

G\_ACA-7

West Sonoma County is the environmental conscience of Sonoma County. We have many environmental leaders who have volunteered time and money to protect our part of the county from poor timber harvest plans and degradation of our small bit of paradise here in West Sonoma County. There are many strong environmental leaders who have lived here a long time. Why haven't the SCWA and NMFS encouraged some of these leaders to step forward and present ideas? One of these leaders is Brenda Aldelman from Russian River Watershed Protection Committee. After studying this river for over 30 years she knows more about this river than anybody else. She and many spoke at the January 18th meeting. But my question is, will she or any others be called to come forth and participate?

G\_ACA-8

The big question is can the goals of this plan actually work? Many people spoke at the public meeting. There was a descendant of the Pomo community who spoke about getting rid of the barrier of the old remains of a train track in order to bring a natural state to the estuary. Larry Hanson, from Forest Unlimited stated the same suggestion. This plan has been brought up in my living room by my husband and others who have lived here for years. The estuary projects' success will depend on the outcome. My question is what if it doesn't work? Will the loss of river, tourism, and economy, not to speak of the loss of wildlife upstream be worth the loss if it doesn't work? Survival of the fish is most important but fish and the entire ecosystem and human interaction must be considered.

G\_ACA-9

In closing, I would like to plead with you to follow the CEQA law to study the DEIR not just as an estuary closing, but consider the impact it will have on the Russian River as a "whole." You can not have an estuary for fish without a river. A river can not happen without the creeks, the song birds can not survive where there is no river that flows into an estuary that feeds the seagulls and harbor seals. And a tourist community can not survive with low flows that prohibit swimming, fishing, canoeing, and kayaking. Everything to the river and estuary are connected. Please, follow the CEQA law to consider the lower impacts of the Russian River as a "whole" to this project.

G\_ACA-10

Sincerely,

Pamela Conley  
Austin Creek Alliance

## Austin Creek Alliance, Pamela Conley, January 31, 2011

- G\_ACA-1 For a discussion related to the flows in the Russian River, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. For a discussion of the geographic extent of the project area analyzed under the Estuary Management Project please refer to **Master Response 2.2, Project Description and Impact Analysis**, in **Chapter 2, Master Responses**.
- G\_ACA-2 For a discussion related to the flows in the Russian River, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. Please refer to **Master Response 2.2, Project Description and Impact Analysis**, in **Chapter 2, Master Responses**, for a discussion related to the geographic extent of analysis.
- G\_ACA-3 For a discussion of the relationship, and cumulative effects to water quality of the Estuary Management Project to the proposal to lower minimum instream flows as required by the Russian River Biological Opinion, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, and **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**.
- G\_ACA-4 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. With respect to fisheries, Draft EIR Section 4.5, Fisheries, includes an analysis of potential impacts to Endangered Species Act-listed and non-listed fish species. The Draft EIR concludes that there will be a beneficial increase in potential rearing habitat availability for juvenile salmonids. The analysis found that localized effects from the Estuary Management Project to fish managed under the Coastal Pelagic and Pacific Groundfish Fisheries Management Plans, as well as other marine fish species and macroinvertebrates that use portions of the Estuary, are unlikely to represent a substantial adverse affect. Therefore, impacts are considered less than significant. Please refer to Impact 4.5.2, Habitat quality on page 4.5-22 of the Draft EIR. Impact 4.5.2 finds that management of the Estuary could result in changes in water quality conditions which could be stressful for rearing salmonids, special status, and other native fish species inhabiting the Estuary. However, Impact 4.5.2 is found to be less than significant.
- G\_ACA-5 Draft EIR Section 4.4, Biological Resources evaluated the potential impacts on pinnipeds occupying the beach haulout site noted by the commenter. Please refer to Impact 4.4.1, Special-Status Plant and Animal Species, Marine Mammals, on page 4.4-69. Additionally, the Draft EIR evaluated the potential impacts on pinnipeds occupying the beach haulout site, as well as haulouts located within the mainstem of the Russian River Estuary. For this assessment, refer to Impact 4.4.8, Protected Marine Mammals, on page 4.4-79 of the Draft EIR.

- G\_ACA-6 Please refer to **Master Response 2.3, Project Feasibility, in Chapter 2, Master Responses**. The Draft EIR includes the Russian River Biological Opinion by reference; other estuary studies and examples are presented in research as part of the Biological Opinion.
- G\_ACA-7 The Russian River Biological Opinion analyzed the impacts of the Water Agency's water supply, flood channel maintenance, and Estuary management activities on listed salmonid species, and the incidental take statement in the Russian River Biological Opinion covers all such activities. The specific project objectives of the Estuary Management Project are established in Draft EIR Chapter 2.0, Project Description (page 2-11), and include providing enhanced rearing habitat for juvenile salmonids within the Russian River Estuary and minimizing flood hazard. The project objectives do not include lowering flows for future development or agricultural needs, which are not proposed as part of the project. Please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses**.
- G\_ACA-8 The Russian River Biological Opinion represents over 10 years of collaboration during the consultation process by federal nexus under Section 7 of the Endangered Species Act, involving USACE, Water Agency, NMFS and CDFG. The Section 7 consultation process under the Endangered Species Act formally includes regulatory agencies; however additional outreach to collaborate with the public and local agencies has been conducted over the past fourteen years. The environmental leaders referenced in the comment letters were included on the distribution list and invited to scoping meetings. Please refer to **Master Response 2.8, Public Review Process, in Chapter 2, Master Responses**, for discussion of scoping and public review processes implemented for the Estuary Management Project EIR.
- G\_ACA-9 Please refer to **Master Response 2.3, Project Feasibility, in Chapter 2, Master Responses**, for a discussion of the feasibility of success of the proposed project. The modification of existing remnants of the jetty at the mouth of the Russian River was considered in the Draft EIR. Please refer to Draft EIR Chapter 6.0, Alternatives Analysis, Section 6.4.5 beginning on page 6-8.
- G\_ACA-10 Refer to **Master Responses 2.1, Relationship to Other Biological Opinion Elements, and 2.6, Recreational Impacts, Socioeconomic Impacts, and Mitigation Feasibility, in Chapter 2 Master Responses**.



P.O. BOX 215  
POINT ARENA, CA 95468

February 10, 2011

Sonoma County Water Agency

Attn: Jessica Martini-Lamb  
404 Aviation Blvd.  
Santa Rosa, CA 95403  
BY EMAIL

Subject: Comment - Estuary Management Project DEIR

Coast Action Group requests that you address the following issues arising from the “ Russian River Estuary Management Project: Draft Environmental Impact Report” released by your Agency on December 15, 2010.

We are concerned with the separation of the Estuary Project DEIR from the Fish Habitat Flows and Water Rights Project (Fish Flow Project). The environmental impacts of the two projects are interrelated and should be reviewed in one document. Separation of consideration of the effects of these two projects is inconsistent with CEQA.

Lower river impacts from Dry Creek downstream should be fully explored and analyzed in the Estuary Project DEIR. CAG objects to the failure to consider effects the Estuary Project on “Fish Habitat Flows and Water Rights Project” (Fish Flow Project). The purpose of both projects is to fulfill requirements of the Biological Opinion (BO), which in part demands that river flows be managed to allow construction and maintenance of an estuary lagoon that will provide improved habitat for threatened fish (mainly steelhead) without flooding a few low-lying Jenner properties. The Fish Flow Project (FFP) is inexorably linked to the Estuary Project through the BO and should therefore be addressed in one environmental review. Furthermore, proposed changes of minimum flows at Hacienda from 125 cubic feet per second (cfs) to 70 cfs has had no other stated purpose than the prevention of flooding two buildings in Jenner when the mouth is closed and the lagoon rises to a level of 9’ or higher. (The preferred project maintains estuary levels at 8’. No buildings would be flooded at this level, making the necessity for low flow highly questionable.) Also, there is no serious proposal (as required under CEQA Alternatives Analysis) to lift and/or move these buildings out of the floodway. (See Mitigation Measure on page 4.2-20) The stated purposes of both projects is to fulfill requirements of the Biological Opinion (BO), which assumes that river flows must be managed to allow formation of an estuary lagoon to provide habitat for threatened fish.

G\_CAG-1  
G\_CAG-2

# Comment Letter G\_CAG

Please address the following issues:

CEQA requires that the entire project be considered in one environmental document. “Low flow” as called for in the lower river is inexorably linked to the Estuary Project through the BO. It is wrong to bifurcate the process. Water quality studies and environmental analysis should be required, at a minimum, for the entire lower river from the Dry Creek convergence on down. Impacts on recreation have been completely omitted and must be addressed.

G\_CAG-3  
G\_CAG-4  
G\_CAG-5

The Estuary Project only analyzes impacts up to Duncans Mills, whereas it is stated in the DEIR that impacts from closed mouth and flow alteration affects the river as far upstream as Vacation Beach.

G\_CAG-6

Recent historic evidence shows that SCWA can not control flows at Hacienda during wet years as evidenced in 2010 when dam releases were reduced and flows averaged 260 cfs from June through September. This project is only viable during drought years when water quality impacts would be greatest. This issue should be addressed in light of BO requirements.

G\_CAG-7

The preferred project maintains estuary levels at 8'. No buildings would be flooded at this level, making low flow unnecessary for this purpose.

G\_CAG-8

The Regional Board has determined that some water quality monitoring studies in 2009 were inadequate, and that data for 2010 has not been made available to the Water Quality Control Board or the public. We have been told that the outcome of water quality studies will not be available until the EIR on “low flow project” is released in 1.5 years. All available and relevant information must be made available to the public and reviewing agencies.

G\_CAG-9

The lower river experiences serious nutrient and bacteria problems. Low flows will effect bio-accumulation of pollutants. Low flows will effect colonization by invasive plants and hydrophytes. The DEIR states that there is concern about bacteria in the Estuary during the period of the closed lagoon. There is no definitive work addressing these issues in the DEIR.

G\_CAG-10

The DEIR document does not adequately address the above noted issues with the underlying basic problem that the current environmental document is a result of segmented projects all attempting a uniform goal: saving two threatened and endangered fish species. You can not save species with such limited and segmented approach. in this DEIR.)

G\_CAG-11

Sincerely,

## Coast Action Group, Alan Levine, February 11, 2011

- G\_CAG-1 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.**
- G\_CAG-2 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, and a discussion relevant to the comment's assertion that the change in minimum flows is intended to prevent flooding, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.** The Estuary Management Project proposes a target elevation of 7 feet with a 9 foot maximum; the Reduced Project Alternative includes an 8 foot maximum. Under the Reduced Project Alternative (8 foot maximum water level), structures and beaches/property, would still be affected. As determined in the Draft EIR (Chapter 6.0, Alternatives Analysis, Section 6.7), the Reduced Project Alternative is identified as the environmentally superior alternative compared to the proposed project. It is not necessarily the "preferred alternative." For discussion regarding the consideration of an Alternative Flood Control Alternative, refer to **Master Response 2.5, Alternative Analysis, in Chapter 2, Master Responses.** Similarly, an Alternative Flood Control Alternative is presented and evaluated in Draft EIR Chapter 6.0, Alternatives Analysis.
- G\_CAG-3 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.**
- G\_CAG-4 For a discussion of the relationship, and cumulative effects to water quality, of the Estuary Management Project to the proposal to lower minimum instream flows as required by the Russian River Biological Opinion, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.** For a discussion of the geographic extent of the project area analyzed under the Estuary Management Project please refer to **Master Response 2.2, Project Description, Impact Areas, and Scope of Analysis, in Chapter 2, Master Responses.**
- G\_CAG-5 Please refer to **Master Response 2.6 Recreational Impacts, Socioeconomic Impacts and Mitigation Feasibility in Chapter 2, Master Responses,** for discussion regarding Draft EIR consideration and analysis of potential impacts to recreation. Impacts related to recreation are also described in Draft EIR Section 4.7, Recreation.

- G\_CAG-6 Please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements** and **Master Response 2.2, Project Description, Impact Areas, and Scope of Analysis**, in **Chapter 2, Master Responses**.
- G\_CAG-7 Please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, and **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**.
- G\_CAG-8 Refer to response to comment G\_CAG-2.
- G\_CAG-9 For a discussion of water quality, and analysis of best available data, please refer to **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**.
- G\_CAG-10 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.

For additional discussion related to potential Estuary Management Project impacts to water quality, including effects of nutrients, bacteria, and secondary effects, refer to **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**. With respect to the Estuary Management Project, water quality issues, including short-term impacts during outlet channel creation (Impact 4.3.1), impacts to salinity, dissolved oxygen, and temperature during the Lagoon Management Period (Impact 4.3.2), and effects of nutrient and bacteria levels during the lagoon management period (Impact 4.3.3), are disclosed in Draft EIR Section 4.3, Water Quality. The impacts are evaluated in accordance with criteria identified in the CEQA Guidelines Appendix G, which require analysis of violation of water quality standards, alteration of drainage such that increased siltation or sedimentation occurs, or creation of additional pollutant sources. For a discussion regarding the invasive aquatic plant species, *Ludwigia*, refer to **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**, for a discussion of potential secondary biological effects related to water quality impacts.

- G\_CAG-11 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.

# Comment Letter G\_DOW



**Richard Charter**  
*Senior Policy Advisor, Marine Programs*  
6947 Cliff Avenue | Bodega Bay, CA 94923  
main 707.875.2345 | 707.875.3482 | fax 707.875.2947  
rcharter@defenders.org | waterway@monitor.net  
[www.defenders.org](http://www.defenders.org)

February 12, 2011

Ms. Jessica Martini-Lamb  
Sonoma County Water Agency  
404 Aviation Boulevard  
Santa Rosa, CA 95403

Subject: DEIR Comments

Submitted by email: [estuaryproject@cassoc.com](mailto:estuaryproject@cassoc.com)  
and [Jessica.Martini.Lamb@scwa.ca.gov](mailto:Jessica.Martini.Lamb@scwa.ca.gov)

Dear Ms. Martini-Lamb:

Thank you for this opportunity to present comments on behalf of Defenders of Wildlife on the proposed Estuary Project and the accompanying Draft Environmental Impact Report (DEIR). Representing our over 145,000 members and activists in California and over one million nationwide, we request that a science-based process based on the precautionary principle be pursued before elements of the proposed project are implemented in the real world.

The DEIR fails to consider lessons learned from past attempts to “re-engineer” the mouth of the Russian River and the Lower River, involving major construction projects that repeatedly failed. Past failures, as well as previous unsuccessfully-managed flow regime modifications to the River itself, dictate that the utmost care be taken before proceeding with yet another engineering “solution” for this critical ecosystem component.

G\_DOW-1

Defenders would like to raise a range of concerns about the Estuary Project DEIR, having primarily to do with water quality, flows, project description, and shortcomings in the administrative and decision-making procedures for the Project.

G\_DOW-2

The Project Description leaves the long-term viability of the project unclear, but admits that the proposed modifications to the environmental setting and river flow should be considered an experiment, at best. The DEIR fails to address potential harm to upstream habitats, wildlife, and impacts to fish, beyond one species (Steelhead).

G\_DOW-3

G\_DOW-4

The geographic scope of the proposed Project as described is inadequate, extending its analysis upstream only to Duncans Mills.

G\_DOW-5

The referenced “Temporary Urgency Change Petitions & Orders” would apparently have no California Environmental Quality Act (CEQA) review (or mitigations), and there would appear to be no CEQA review for the lower reaches of the River between Forestville and Duncans Mills, in spite of a recommendation from the National Marine Fisheries Service (NMFS) that it be included. The DEIR references unrelated estuary studies for other rivers with different circumstances, rivers which are generally smaller and surrounded by substantially less urban development.

G\_DOW-6

G\_DOW-7

The DEIR fails to adequately address the new marine protected area near the Russian River mouth recently put in place under the State’s Marine Life Protection Act (MLPA).

G\_DOW-8

The DEIR fails to make it clear how minimum flows will be maintained in wet years.

G\_DOW-9

The DEIR fails to adequately address the impact of the Project on recreation and the local economy.

G\_DOW-10

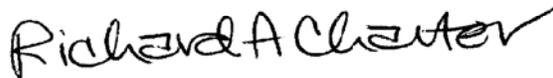
**National Headquarters**

1130 17th Street, N.W.  
Washington, D.C. 20036-4604  
tel 202.682.9400 | fax 202.682.1331

# Comment Letter G\_DOW

- There is inadequate review of Special Status Species undertaken in the DEIR. [ G\_DOW-11
- The DEIR contains inadequate delineation and assessment of the anticipated impacts of altered water levels on Penny Island. [ G\_DOW-12
- There has been inadequate monitoring of bacteria and nutrients in the Estuary and the Lower Russian River, and the existence of undefined “natural” conditions is used by the DEIR as a flawed rationalization to avoid mitigations for the Project. [ G\_DOW-13
- The DEIR fails to evaluate the implications of biomagnification and cumulative impacts for toxic compounds. [ G\_DOW-14
- While the DEIR concludes that there are problems with excess nutrient levels within the Project area, it fails to provide adequate evaluation or mitigation for these excess nutrients. [ G\_DOW-15
- The DEIR fails to adequately consider pathogen impairments and their link to rainfall events. [ G\_DOW-16
- The DEIR fails to properly consider and evaluate long-term impacts on species other than Steelhead, and fails to evaluate biological diversity, including wildlife such as birds and mammals and the 47 other fish species in the Russian River Estuary. [ G\_DOW-17
- The DEIR fails to adequately consider Project impacts on pinnipeds, including Harbor seals, northern elephant seals, and California sea lions, nor does the DEIR adequately address the potential loss of the important Harbor seal haul-out at Jenner, the largest in Sonoma County, and other nearby haulout areas associated with the Estuary, and fails to assess the probability that the cumulative impacts of eighteen possible maintenance activities, each lasting up to two days, could be anticipated to disturb and disrupt seals and their pupping activities. [ G\_DOW-18
- Neither the Project’s Notice of Intent (NOI) nor the DEIR adequately address the probable environmental effects of the Project pursuant to CEQA Guidelines Section 15082(C). [ G\_DOW-19
- Thank you for your attention, and for your commitment to this process. Please acknowledge receipt of these comments via reply email to [waterway@monitor.net](mailto:waterway@monitor.net). [ G\_DOW-20

Sincerely,



Richard A. Charter  
Senior Policy Advisor, Marine Programs  
Defenders of Wildlife

## Defenders of Wildlife, Richard Charter, February 12, 2011

- G\_DOW-1 Please refer to **Master Response 2.3, Project Feasibility**, in **Chapter 2, Master Responses**. The Draft EIR includes the Russian River Biological Opinion by reference; other estuary studies and examples are presented in research as part of the Biological Opinion.
- G\_DOW-2 Draft EIR Section 4.3, Water Quality, includes an analysis, based on evaluation of CEQA criteria, of potential water quality impacts. Refer to **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**. The project description, presented in Draft EIR Chapter 2.0, was prepared in accordance with CEQA Guidelines Section 15124, and includes project objectives, location and map information, and technical and environmental characteristics, and intended use of the EIR. For additional discussion about the content provided in the project description, refer to **Master Response 2.2, Project Description, Impact Areas and Scope of Analysis**, in **Chapter 2, Master Responses**. The comment does not clearly state what administrative and decision-making processes are deficient. In reviewing the preparation of the Draft EIR with CEQA Guidelines Section 21003, Environmental Review Procedures and Administration of Process, the Draft EIR is organized and written in a manner that will be meaningful and useful to decision makers and to the public, and emphasizes feasible mitigation measures and feasible alternatives to projects. With regard to decision-making procedures, Draft EIR Chapter 1.0, Introduction identifies the intended use of the document by the Water Agency Board of Supervisors.
- G\_DOW-3 Please refer to **Master Response 2.3, Project Feasibility**, in **Chapter 2, Master Responses**, for a discussion related to the principles of adaptive management. The Draft EIR includes the Russian River Biological Opinion by reference; other estuary studies and examples are presented in research as part of the Biological Opinion. The Biological Opinion contains clear timeframes for implementation and re-evaluation of the project over the period covered in the Biological Opinion, through 2023.
- G\_DOW-4 The Draft EIR addressed potential impacts to habitats and wildlife in Section 4.4, Biological Resources, and to fish in Section 4.5, Fisheries. Draft EIR Section 4.5 includes analysis of other non-Endangered Species Act-protected aquatic species, including common fish species and macro invertebrates.
- G\_DOW-5 For a discussion of the geographic extent of the project area analyzed under the Estuary Management Project please refer to **Master Response 2.2 Project Description, Impact Areas and Scope of Analysis**, in **Chapter 2, Master Responses**.

G\_DOW-6 The Temporary Urgency Change Petitions (TUCP) are not proposed as part of the Estuary Management Project and are not included in the project’s environmental analysis. The potential for the Estuary Management Project to contribute cumulatively to impacts related to Temporary Urgency Change Petitions are considered in a cumulative analysis (Draft EIR, Chapter 5.0, Cumulative Analysis) and includes information on the CEQA analysis for the TUCP.

The comment is incorrect in the assertion that the NMFS scoping letter, dated June 22, 2010, argues that the Estuary Management Project should consider flow changes in the same EIR. Instead, the NMFS scoping letter states:

“The Russian River BO directs SCWA to pursue Temporary Urgency Changes (TUC) to D-1610 to reduce summer inflow prior to a final change in D-1610 that will be supported by a separate EIR and water rights regulatory process, which we [NMFS] anticipate will be completed sometime between 2014 and 2016.”

The Russian River Biological Opinion and NMFS scoping letter recognize that flow changes would be analyzed in a separate CEQA process. Both changes to flow under Decision 1610 and the TUCs are included in the cumulative analysis in Draft EIR Chapter 5.0. This analysis considers the potential impacts of the Estuary Management Project in conjunction with the anticipated effects of reducing minimum instream flows. The TUCPs result from a separate requirement of the Russian River Biological Opinion and have been found by the SWRCB to be exempt from CEQA.

G\_DOW-7 Please refer to **Master Response 2.3, Project Feasibility**, in **Chapter 2, Master Responses**, for a discussion on management of other river and lagoon systems in California. The Draft EIR includes the Russian River Biological Opinion by reference; the other estuary studies and examples are presented in research as part of the Biological Opinion.

G\_DOW-8 Refer to response to comment S\_CDFG-4 for a discussion regarding the Marine Life Protection Act.

G\_DOW-9 The Estuary Management Project does not include management of flows during wet years. Please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.

G\_DOW-10 The Draft EIR analyzed the potential effects to recreation and recreational resources in accordance with CEQA Guidelines Appendix G criteria in Draft EIR Section 4.7, Recreation. For additional discussion related to the Draft EIR analysis of potential recreational impacts, and CEQA requirements for socioeconomic effects, please refer to **Master Response 2.6, Recreational Impacts, Socioeconomic Impacts and Mitigation Feasibility**, in **Chapter 2, Master Responses**.

G\_DOW-11 All special-status species potentially present in the Estuary Study Area and maximum backwater area are addressed in Draft EIR Section 4.4, Biological Resources. The Draft EIR evaluates the types and conditions of the habitats present on the project site to determine their potential to support candidate, sensitive, or special-status species (herein collectively referred to as sensitive species) and to assess potential impacts resulting from the project to these species. This comment does not identify a specific inadequacy in the Draft EIR.

The potential impacts to special-status plant and animal species from the creation and maintenance of the lagoon outlet channel were addressed in Impact 4.4.1. This discussion included an assessment on the potential impacts to special-status species that may occur within the outlet channel management area and access route or directly adjacent to these sites. Special-status species addressed in this impact included Tidestrom's lupine, Myrtle's silverspot butterfly, nesting birds, and pinnipeds, among others. The potential impacts to special-status plant and animal species from the long-term adaptive management of the Estuary were addressed in Impact 4.4.7. This discussion included an assessment on the potential impacts to special-status species with a moderate to high potential to occur within the Estuary Study Area and those species that are primarily associated with freshwater marsh and riparian habitats, and open water habitat and beaches, gravel bars, and mudflats. Special-status species addressed in this impact included, but were not limited to, bristly sedge, deceiving sedge, California freshwater shrimp, foothill yellow-legged frog, California red-legged frog, western pond turtle, northern harrier, and great blue heron.

G\_DOW-12 The Draft EIR contains a delineation and assessment of the altered water levels on Penny Island. Delineation of elevation contours shown on the Draft EIR Figure 3-4 series are based on bathymetric and topographic survey (EDS, 2009) of the Estuary study area, including Penny Island, and represent the best available information. The water surface elevations, shown at 4.5, 7.0, 9.0, and 14.0 feet, are developed based on water levels recorded at the Jenner gage located across the river from Penny Island. Potential impacts associated with the increased inundation for a longer duration are characterized in Section 4.4, Biological Resources, Impact 4.4.6, which addresses potential impacts associated with the Estuary Management Plan on sensitive natural communities. Draft EIR Figures 4.4-1 through 4.4-5 show the mapped communities with their approximate existing elevations, including Penny Island. The extent of inundation of each community within the marked elevations was determined based on this map series. Although lagoon adaptive management would increase the duration of inundation associated with perched freshwater lagoon conditions, the exact length and extent of inundation cannot be predicted with certainty, as it would depend upon barrier beach formation and outlet channel performance. The Draft EIR assumes that a water surface elevation of up to 9 feet for periods of one to five months represents a frequency, duration and depth that would be

experienced under the proposed project, and that this assumption provides a way to estimate the impacts to vegetation communities.

As described in the Draft EIR, Section 4.4, Biological Resources, Coastal and Valley Freshwater Marsh (CVFM) is the only CDFG sensitive natural community mapped within the Estuary Study Area that could be adversely affected by changes in surface water elevation, duration of inundation, or water quality parameters (e.g., salinity, dissolved oxygen, temperature). Northern Foredune Scrub, a CDFG Sensitive Natural Community, would not be substantially affected by the proposed project. As noted in this discussion, although conversion would be subject to several factors, this potential conversion would likely occur throughout the estuary, and may result in an increased distribution of CVFM. As noted in CDFG comments on the Draft EIR, CDFG agrees with the Draft EIR's findings that changes in vegetation assemblages would likely result in increases in sensitive Coastal and Valley Freshwater Marsh habitat, and that these vegetation distribution changes would be beneficial from a habitat perspective.

- G\_DOW-13 For a discussion of Draft EIR's characterization of existing water quality conditions, including nutrients and bacteria, in the Estuary and impacts analyzed in the Draft EIR, refer to Draft EIR Chapter 3.0, Project Background and Environmental Setting, and **Master Response 2.4, Water Quality, in Chapter 2, Master Responses**. For a discussion of adequacy of the EIR analysis, refer to **Master Response 2.7, CEQA Statutes: Adequacy of EIR Analysis, in Chapter 2, Master Responses**.
- G\_DOW-14 Biomagnification is the result of the process of bioaccumulation and biotransfer by which tissue concentrations of chemicals in organisms at one trophic level exceed tissue concentrations in organisms at the next lower trophic level in a food chain. The Estuary Management Project would not create or contribute to new or more severe sources of pollution; additionally, the Water Agency does not have the authority to control input from other dischargers. Cumulative impacts related to water quality are evaluated in Draft EIR, Chapter 5.0, Cumulative Analysis. The comment does not specify the toxic compounds that are of concern, nor how they may be related to the proposed project.
- G\_DOW-15 Please refer to **Master Response 2.4, Water Quality, in Chapter 2, Master Responses** regarding nutrient levels within the project area. Please refer to **Master Response 2.6, Recreational Impacts, Socioeconomic Impacts and Mitigation Feasibility, in Chapter 2, Master Responses**, for a discussion on mitigation and monitoring requirements for nutrients.
- G\_DOW-16 Draft EIR Section 4.3, Water Quality includes a discussion regarding pathogens. The correlation of pathogens to rainfall events is not specifically addressed by the comment, nor is it specified how such a correlation may be related to the proposed project, and is not required in the context of this project. Refer to

**Master Response 2.4, Water Quality, in Chapter 2, Master Responses** for additional discussion regarding the Draft EIR analysis of nutrients.

G\_DOW-17 In accordance with Appendix G of the CEQA Guidelines, a proposed project would have a significant impact related to wildlife species if it would “[h]ave a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, polices, or regulations, or by CDFG or USFWS.” The Draft EIR includes this guideline in the criteria used to determine the significance of a potential impact in Section 4.4, Biological Resources. The Draft EIR does not specifically analyze diversity, but it does evaluate the types and conditions of the habitats present on the project site to determine their potential to support candidate, sensitive, or special-status species (herein collectively referred to as sensitive species) and to assess potential impacts resulting from the project to these species. Refer to response to comment G\_DOW-11 above, for long-term impacts to special-status plant and animal species.

G\_DOW-18 The Draft EIR Section 4.4, Biological Resources, evaluated the potential impacts on pinnipeds occupying the beach haulout site. For this assessment, refer to Impact 4.4.1, Special-Status Plant and Animal Species, Marine Mammals, on page 4.4-69. Additionally, the Draft EIR evaluated the potential impacts on pinnipeds occupying the beach haulout site, as well as haulouts located within the mainstem of the Russian River Estuary. For this assessment, please refer to Impact 4.4.8, Protected Marine Mammals, on page 4.4-79. Potential impacts to nursery sites, which includes harbor seal pupping, is included in Impact 4.4.10, Wildlife Movement and Nursery Sites, on page 4.4-83. The Draft EIR considered the Marine Mammal Protection Act Incidental Harassment Authorization (IHA), issued by NMFS, the agency with the responsibility of marine mammal species protection, and its provisions were consequently adopted as mitigation.

G\_DOW-19 A Notice of Intent (NOI) was not prepared for the Estuary Management Project because it is not subject to the National Environmental Policy Act (NEPA). A Notice of Preparation (NOP) was prepared pursuant to CEQA Guidelines Section 15082(a) and included the description and location of the project and a list of probable environmental effects. The intent of scoping is to solicit input regarding the scope of EIR analysis. The comment also asserts that the Draft EIR does not address the probable environmental effects of the project in accordance with CEQA Guidelines Section 15082(c), Meetings. This excerpt and the method in which the Water Agency complied are presented in the table below.

CEQA Guidelines Section 15082(c), Meetings	Water Agency Compliance Methodology
In order to expedite the consultation, the lead agency, a responsible agency, a trustee agency, the Office of Planning and Research or a project applicant may request one or more meetings between	During an additional scoping meetings (staff meetings) on June 15, 2010, and September 13, 2010, the Water Agency requested participation from regulatory agencies with jurisdiction over the project area or resources during a

CEQA Guidelines Section 15082(c), Meetings	Water Agency Compliance Methodology
<p>representatives of the agencies involved to assist the lead agency in determining the scope and content of the environmental information that the responsible or trustee agency may require. Such meetings shall be convened by the lead agency as soon as possible, but no later than 30 days after the meetings were requested. On request, the Office of Planning and Research will assist in convening meetings that involve state agencies.</p>	<p>scoping meeting to solicit their comments and input on the scope of the EIR. Invitees included members NMFS, USACE, CDFG, California Department of Parks and Recreation, NCRWQCB, California Coastal Commission, and California State Lands Commission. The meeting was not attended by representatives from the latter two agencies.</p>
<p>For projects of statewide, regional or areawide significance pursuant to Section 15206, the lead agency shall conduct at least one scoping meeting. A scoping meeting held pursuant to the National Environmental Policy Act, 42 USC 4321 et seq. (NEPA) in the city or county within which the project is located satisfies this requirement if the lead agency meets the notice requirements of subsection (c)(2) below.</p>	<p>The Water Agency held two scoping meetings in the city and county of the project area:</p> <p>Wednesday May 19, 2010 Community Meeting, Summary of 2010 Estuary activities:6:30 p.m. – 7:30 p.m. Open House Scoping Meeting: 7:30 p.m. – 9:00 p.m. Jenner Community Center, 10398 Highway 1 Jenner CA 95450</p> <p>Thursday May 20, 2010 6:30 p.m. – 8:30 p.m. Sonoma County Permit and Resource Management Department Meeting Room, 2550 Ventura Avenue Santa Rosa, CA 95403</p>
<p>(2) The lead agency shall provide notice of the scoping meeting to all of the following:</p> <ul style="list-style-type: none"> <li>(A) any county or city that borders on a county or city within which the project is located, unless otherwise designated annually by agreement between the lead agency and the county or city;</li> <li>(B) any responsible agency</li> <li>(C) any public agency that has jurisdiction by law with respect to the project;</li> <li>(D) any organization or individual who has filed a written request for the notice.</li> </ul>	<p>Hard copies of the NOP and postcards summarizing the notice and pertinent meetings dates, times, and locations were circulated on May 7, 2010. The NOP was mailed to the State Clearinghouse, and was posted to the Water Agency website.</p> <p>The NOP was directly mailed to 431 parties, and a postcard notification of the NOP's availability was sent to 1,231 parties. The distribution list was developed based on the SCWA databases of regulatory agencies with jurisdiction, local organizations, business, and interest groups, and property owners based on parcels data. Hard copies of the NOP were mailed directly to federal, state, and local agencies with jurisdiction; members of organizations, business, and interest groups that requested a copy; and property owners with postal zip codes within Jenner, Duncans Mills, Monte Rio, Ville Grande, Rio Nido, Camp Meeker, Forestville, Occidental, Bodega Bay, and some in the Dry Creek area. Postcards were mailed to parties that have previously expressed interest in the RRIFR Program, including other local agencies, other interest groups and organizations, and a subset of Sonoma County residents and property owners (outside of the locations listed above). A full copy of the NOP hard copy distribution list is provided in <b>Appendix 1</b> of the Final EIR.</p>
<p>(3) A lead agency shall call at least one scoping meeting for a proposed project that may affect highways or other facilities under the jurisdiction of the Department of Transportation if the meeting is requested by the Department. The lead agency shall call the scoping meeting as soon as possible but not later than 30 days after receiving the request from the Department of Transportation.</p>	<p>No meeting was requested by the Department of Transportation. The Department received the NOP and Notice of Availability of the Draft EIR.</p>

G\_DOW-20 Comment acknowledged. Receipt acknowledged via email on February 22, 2011.

Megan Steer

**From:** David Keller [dkeller@eelriver.org]  
**Sent:** Monday, February 14, 2011 4:07 PM  
**To:** estuaryproject  
**Cc:** Grant Davis  
**Subject:** Russian River Estuary Management Project DEIR: Comments  
**Attachments:** FOER Comments-NOP D-1610FishHabitatFlowWaterRightsEIR 11\_12\_10.pdf; FOER comments on Estuary Management flood levels, July 2010.doc

FROM:  
David Keller, Bay Area Director  
**Friends of the Eel River**  
1327 I St.  
Petaluma, CA 94952  
(707) 763-9336  
[dkeller@eelriver.org](mailto:dkeller@eelriver.org)  
Feb. 14, 2011

TO:  
Sonoma County Water Agency  
Attention: Jessica Martini-Lamb  
404 Aviation Blvd.  
Santa Rosa, CA, 95403  
By Email: [estuaryproject@esassoc.com](mailto:estuaryproject@esassoc.com)  
CC: Grant Davis, SCWA General Manager

**Comments on the Russian River Estuary Management Project DEIR**

Friends of the Eel River wishes to submit these focused comments on the proposals and alternatives for the Russian River Estuary Management Project DEIR ("Estuary Project").

**1. Segmentation of Estuary Project from Fish Habitat Flow and Water Rights Project (revisions to D.1610) and other components of the Russian River Biological Opinion.**

Revisions to the State Water Resources Control Board's D.1610, which sets minimum flow requirements for the Russian River, and which must be altered to comply with the Russian River Biological Opinion, were noticed for public comment in an NOP for the SCWA's Fish Habitat Flow and Water Rights Project. Such changes in Estuary management and Russian River flows, including proposed changes to flows released through Dry Creek from Lake Sonoma, as well as potential increased storage or release changes from Lake Mendocino, are integrally related to any changes in flow regime and management options for the Estuary Project.

G\_FOER-1

The Estuary Project DEIR cannot be considered separately from the rest of the requirements and recommendations of the Russian River Biological Opinion, and must be considered as a singular project. It may not be segmented into its component parts as is done in the Estuary Project DEIR and the Fish Habitat Flow and Water Rights Project. The DEIR must be revised and recirculated to account for all

G\_FOER-2

parts of the requirements of the Biological Opinion, which was not reviewed under CEQA or NEPA as an entire project.

↑ G\_FOER-2  
cont.

Please include as relevant comments prior comments submitted for the Fish Habitat Flow and Water Rights Project NOP (D.1610) on behalf of Friends of the Eel River, Nov. 12, 2010, attached.

↑ G\_FOER-3

**2. Dependence on Eel River diversions to the Russian River for flow management not disclosed or discussed.**

The inflows to the Russian River from the Eel River, through PG&E's Potter Valley Project ("PVP"), have been instrumental over the past 100 years in establishing, managing, supplementing and maintaining flows in the main stem of the Russian River. As such, they are also instrumental in establishing flows, water levels, water quality and fisheries habitat in the Russian River, including the Estuary. The diversions and transfer of water at the PVP has significant and adverse impacts on the Eel River and the three listed species of salmonids native to the Eel River (Chinook, Coho and Steelhead). The Estuary Project DEIR fails to disclose the Estuary Project's relationship to and dependence on Eel River inflows to the Eel River, and must be corrected to account for the water and timings and impacts of these inflows on both Rivers.

↑ G\_FOER-4

**3. The Estuary Project EIR must consider impacts of continued diversions of water from the Eel River and possible cessation of the diversions.**

The DEIR must provide an alternative of flows and water quality and flood level management that do not include inflows from the Eel River included in any modeling, and include reasonably foreseeable changes in flows from the Eel River, including changes in the FERC licensing requirements for the PVP. *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th. We have described such an alternative approach and the rationale for it in more detail in the attached letter, FOER comments on NOP, Nov. 12, 2010.

↑ G\_FOER-5

**4. Management of flood levels at the Estuary must include an alternative of removal of the affected low-lying structures, rather than maintaining flood levels to protect the structures.**

The management of flood levels at the Estuary appear to be limited by managing for flood protection of some 6-8 low-lying structures, rather than primarily focused on improving fisheries and wildlife habitat, and water quality and flows at the Estuary.

↑ G\_FOER-6

The "Galloway Report," issued to address changes in federal floodplain management policies following the Great Floods of 1993, Interagency Floodplain Management Review Committee [US Army Corps of Engineers], Sharing the Challenge: Floodplain Management into the 21st Century, 1994, broadly recommended that floodplain management policy reflect three priorities:

- avoid building in floodplains
- provide protection for structures which are water dependent or are critical infrastructure.
- remove other structures from the floodplain to lessen the risks and costs of future, repetitive flood protection schemes, repairs, replacement and loss of life.

↑ G\_FOER-7

Here, the structures being offered protection as part of the Estuary Project alternatives are not water dependent, nor are they critical infrastructure. An alternative must be developed which either removes these structures, elevates them above base flood elevations, or otherwise protects them from flood

↓

impacts without designing the Estuary flood elevations around their protection.

↑ G\_FOER-7  
cont.

I have included e-correspondence with SCWA and NOAA, from July 2010, attached, discussing these issues and problems.

↓ G\_FOER-8

Thank you for the opportunity to provide comments on the Estuary Project DEIR. Please include FOER on the list for notification of any and all future activities related to the Estuary Project.

Sincerely,

David Keller  
Bay Area Director  
Friends of the Eel River

[www.eelriver.org](http://www.eelriver.org)

*"How would you manage the Russian River for sustainable water supply and fisheries restoration without any Eel River inflows?"*

Jessica Martini-Lamb  
November 12, 2010  
Page 2

Project Description and Environmental Setting

Under CEQA, an EIR must describe the project's precise location, boundaries, objectives, and technical, economic, and environmental characteristics. See CEQA Guidelines § 15124(a)-(c). Here, the NOP indicates that the EIR will evaluate the impacts of changes in flow in the Russian River mandated by the 2008 Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance issued by the National Marine Fisheries Service. (NOP at 4.) Although the NOP specifies the new flow levels that will be sought for the protection of Coho salmon and steelhead trout, it is vague in its description of at least two other elements of the Project: (1) unspecified changes in instream flow requirements for chinook salmon and (2) unspecified changes in water rights permits.

The NOP should clarify the proposed changes that SCWA will seek in connection with these elements of the Project. In particular, the water rights permits that will be affected and the changes sought should be included in the Project Description. SCWA should also clarify now whether it intends to seek any right to use water from the Eel River as part of this Project.

This letter is submitted on behalf of the Friends of the Eel River ("FOER") and comments on the Notice of Preparation ("NOP") of an environmental impact report ("EIR") on the Sonoma County Water Agency's Fish Habitat Flow and Water Rights Project ("the Project.")

The purpose of an NOP is to "solicit guidance from [responsible and other] agencies as to the scope and content of the environmental information to be included in the EIR." CEQA Guidelines § 15375; see also CEQA Guidelines § 15082. In order to effectively solicit such guidance, the NOP must provide adequate and reliable information regarding the nature of the project and its probable environmental impacts, in sufficient detail to enable a meaningful response. CEQA Guidelines § 15082(a)(1)(A)-(C). CEQA requires responsible and trustee agencies to respond "with specific detail about the scope and content of the environmental information . . . that must be included in the draft EIR." CEQA Guidelines § 15082(b). In particular, such agencies must identify particular environmental impacts, alternatives, and mitigation measures for analysis in the EIR. CEQA Guidelines § 15082(b)(1)(A).

The ability of responsible and trustee agencies to comply with this requirement, however, depends entirely on the adequacy of the information provided in the NOP. As the following discussion illustrates, the NOP should provide additional information about the proposed project, alternatives, and potential environmental impacts so that the public and trustee agencies can more fully understand and respond to the NOP.

In addition, the EIR should carefully consider the existing environmental setting and regulatory environment affecting the Project. In this context, the EIR should contain a full discussion of existing water rights on the Russian River, diversions, pumping and storage from the River (both legal and illegal). This information will be critical to a full discussion of how reductions in flows will affect actual conditions in the River and will enable the public and decision makers to determine whether reductions in flows will create the incentive for more consumptive use of Russian River water.

Reasonably foreseeable future projects and actions should also be taken into account in the EIR. Although the Project is designed in part to respond to changes in flows from the Eel River as a result of the 2004 license amendment, those flows are likely to change again in the future as the new relicensing process begins. Possible change to flows from the Eel River should be addressed in this EIR. *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859, 870-71. Indeed, in *River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859, 870-71. Indeed, in Russian River rather than the Eel River watershed, the EIR should include a scenario in which no flows from the Eel River are diverted to the Russian River. This information would best reflect the decision to change the hydrologic index and would provide crucial information about alternative ways to achieve the Project's low flow goals.

## Comment Letter G\_FOER Attachment 1

Jessica Martini-Lamb  
November 12, 2010  
Page 3

### Environmental Impacts

The NOP recites in general terms the areas of environmental impact that will be reviewed in the EIR. FOER requests that the EIR provide a detailed analysis of all of the potentially significant environmental impacts of the Project and all feasible mitigation measures. In determining whether particular impacts are significant, the Agency must look to CEQA Guidelines section 15064. In order for the EIR to serve its purpose as an informational document, it is essential that the EIR not understate the severity or extent of the impacts associated with the proposed Project.

To provide an accurate view of the impacts of this proposed project, the EIR should, at a minimum, evaluate:

- Impacts to Lake Mendocino caused by reductions in flows to the Russian River and whether Lake Mendocino can store additional water not released to the Russian River.
- Impacts associated with additional releases to the Russian River in the event Lake Mendocino is not able to store additional water, such as those releases that occurred between October 8 and October 15, 2010.
- Impacts identified in the attached letter from Kamman Hydrology & Engineering.

The SCWA must also use reasonable efforts to discover, disclose, and discuss past, present and future projects including those under review by other agencies. Discussion following CEQA Guidelines § 15130. As one court put it:

[T]he full environmental impacts of a . . . proposed action cannot be gauged in a vacuum . . . [or treated] as an isolated “single shot” venture . . . in the face of persuasive evidence that it is but one of several [environmental threats]. To ignore the prospective cumulative harm under such circumstances could be to risk ecological disaster.

*Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397, 408.

Thus, the draft EIR should evaluate the cumulative impacts resulting from implementation of the Project and other future actions including:

- Reductions or changes in flows in the Russian River mainstem and tributaries during critical spring flow conditions due to frost control

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WEINBERGER LLP

## Comment Letter G\_FOER Attachment 1

Jessica Martini-Lamb  
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pumping regulations now being considered by Sonoma County and the State Water Resources Control Board;

- Changes in flows that may result from AB 2121;
- Impacts associated with the amendments to the Vineyard Erosion & Sediment Control Ordinance, scheduled for adoption by the Board of Supervisors in December 2010;
- Changes in estuary management being considered by NMFS and SCWA;
- Dry Creek reconstruction, which will limit water diversions by SCWA until new fish habitat or a pipeline is successfully constructed;
- Potential increase in storage capacity in Lake Mendocino, including a proposed increase in dam height and/or sediment removal;
- Potential reduction in PVP inflows to E. Branch Russian River due to tunnel collapse or system malfunctions; and
- Additional and continued gravel mining in the Russian River.

### Alternatives

An EIR must analyze a reasonable range of feasible alternatives that would lessen the environmental impacts of the proposed project. See CEQA Guidelines § 15126.6(a). This discussion must include analysis of alternative project designs and locations capable of avoiding significant impacts, even if those alternatives would be more costly or would impede the project's objectives to some degree. CEQA Guidelines § 15126.6(b). Information about alternatives in the EIR should be sufficiently detailed to enable “meaningful evaluation, analysis, and comparison with the proposed project.” CEQA Guidelines § 15126.6(d), and must include discussion of a “no action” alternative. CEQA Guidelines § 15126.6(e).

At a minimum, the EIR should evaluate an alternative that does not rely on any diversions from the Eel River. This alternative would reflect the decision as part of this Project to seek a change in the hydrologic index from the Eel River to the Russian River watershed. Moreover, this alternative would facilitate a consideration of the extent to which the proposed reductions in flows will create an incentive to maintain and/or increase reliance on Eel River water in view of reduced flows in the Russian River.

SHUTE, MIHALY  
WEINBERGER LLP

**Comment Letter G\_FOER  
Attachment 1**

Jessica Martini-Lamb  
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In addition, the EIR should evaluate whether reductions in flows from the Eel River would make it possible to meet the minimum flow requirements of the Project. For example, the EIR could evaluate an alternative in which only the minimum flows to the Russian River specified in PG&E's 2004 license to operate the Potter Valley Project are diverted to the Russian River. Such an alternative could avoid potential impacts to Lake Mendocino (caused by the need for additional storage) as well as potential impacts to the Russian River that result when water is released from Lake Mendocino increase storage capacity, as recently occurred.

**Preparation of a Joint Environmental Impact Report/Environmental Impact Statement:**

If the Project will receive federal funding or involve federal permits or approvals, including changes in storage or releases by USACE at Lake Mendocino or Lake Sonoma, SCWA should prepare a joint EIR/EIS in cooperation with any federal agency that will be providing major support for the action.

**Conclusion**

We appreciate the opportunity to comment on the NOP. We also submit with these comments the comments of Kamman and Associates, and we request that these comments be considered by the Agency. Inasmuch as the NOP contains only general information as to the Agency's approach to evaluating the project's potential environmental impacts, the issues identified in this letter are not intended to be exhaustive. FOER reserves its right to raise other issues during the environmental review process. Please send this firm a copy of the Draft EIR once it becomes available.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Ellison Folk

cc: Friends of Eel River

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SHUTE, MIHALY & WEINBERGER LLP

**Comment Letter G\_FOER  
Attachment 1**

**MEMORANDUM**

**Kamman Hydrology & Engineering, Inc.**  
7 Mt. Lassen Drive, Suite B-201, San Rafael, CA 94903  
Telephone: (415) 491-9900  
Facsimile: (415) 580-1538  
E-mail: Grog@KHE-inc.com

Date: November 8, 2010  
To: David Keller and Nandananda, FOER  
From: Greg Kamman  
Subject: Review of Sonoma County Water Agency NOP (issued 9/29/10)  
Fish Habitat Flow and Water Rights Project

Per the request of FOER, I've completed a review of Sonoma County Water Agency's Notice of Preparation (NOP) of Environmental Impact Report for the "Fish Habitat Flows and Water Rights Project", issued September 29, 2010. Based on this review, I have developed the following questions, comments and critiques regarding the content of the NOP.

1. The proposed project description for the Fish Habitat Flow changes indicate that a stipulated minimum flow will be in effect during "each year" (bullets on page 8 and 9), implying the minimum flow requirements will be in effect during all year types. The table on page 6 concurs with this description for the listed dry and normal water year-types. However, Decision 1610 requirements provide a minimum flow schedule for normal, dry and critically dry year-types. At first, I simply assumed that NOP lumped the proposed flow change dry and critically dry year-types into the single "Dry year-type" category. However, after careful review of the BO and further consideration, it is not clear to me as to what flow schedule will apply during a critically dry year-type under the NMFS BO proposed changes. Neither the BO nor the NOP provide clarification as to what minimum flow requirement change, if any, occurs during a critically dry year-type. Again, the language in the NOP suggests the BO flow changes apply to "each year", while one interpretation of the BO may leave the original D. 1610 critically dry year-type minimum flow requirement in place. Therefore, the project description is misleading and/or inaccurate and needs clarification on this important issue.
2. If the NOP project description is interpreted to mean that the proposed minimum flow schedule is the same during all year-types within each of the river sections, the need for a water-year type classification methodology is moot – the minimum flow schedule will apply to all year-types. The NOP puts considerable emphasis on the need to revise the water-year type classification approach, suggesting that some project operations will be tied to water-year type classes. However, the only project operations indicated in the BO and NOP that are tied to a water year type classification is the required minimum flow release schedule. Perhaps there are other

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water operations (e.g., reservoir storage curves or safety of dam criteria) that are tied to water year type classes. The only function of a year-type classification scheme that I see of at this time is to identify "critically dry" year-types from all other year-types, if this triggers a change in minimum flow requirements. Again, the project description falls short in clarifying this important water operation and river flow condition.

3. The project proposes to change the criteria for determining the Hydrologic Index. The NOP states (bottom of page 7), "It would be more realistic for the water-year type to be based on the Russian River watershed conditions rather than on Eel River watershed conditions."<sup>1</sup> I have a number of concerns regarding this proposed change and feel the EIR will need to justify such a change and discuss why alternative methods aren't more rationale. My concerns include:

- a. If there is no change in minimum flow requirements between year-types, why is the Hydrologic Index needed? (See discussion under item 5. above).
- b. If the revised Hydrologic Index is to reflect Russian River conditions, why isn't the index tied to Lake Sonoma as well as Lake Mendocino? Surely an index reflecting their combined "condition" better reflects the Russian River as a whole than solely Lake Mendocino. Or, perhaps a broader array of river flow and/or precipitation records would better reflect the overall basin hydrologic condition including Lake Sonoma, the West Branch Russian River and all other principal tributaries. For example, the Bureau of Reclamation's Central Valley Project utilizes the Sacramento River Index as the basis for determining water year types<sup>1</sup> that drive water operation decisions.

c. The majority of water deliveries to Lake Mendocino and, in turn, storage in Lake Mendocino are driven primarily by PVP diversions from the Eel River watershed. The amount of downstream releases to the Eel River (RPA flow schedules based on 2002 Eel River FERC BO) and PVP diversions are primarily determined by water year-type determinations based on the amount of annual inflow to and/or storage in Lake Pillsbury. The hydrologic conditions of Lake Mendocino are closely linked and controlled by the hydrologic conditions and water operations in the Eel River watershed. Therefore, determining the Hydrologic Index for the Russian River watershed based on the hydrologic conditions of Lake Mendocino is flawed, as water supply to Lake Mendocino is heavily driven and controlled by the upper Eel River watershed hydrologic index. Therefore, SCWA's Hydrologic

<sup>1</sup> The Sacramento River Index (SRI) refers to the sum of the unimpaired runoff in the water year as published in the DWR Bulletin 120 for the Sacramento River at Bed Bridge, Feather River inflow to Oroville, Yuba River at Smartville, and American River inflow to Folsom reservoir. SRI calculates unimpaired flow in million acre - feet from the representative stations and compares them to historical statistics to index water year types into Wet, Above Normal, Below Normal, Dry, and Critical. Year types trigger specified Delta outflow criteria and Sacramento system requirements. For example, the SRI is used to trigger relaxation criteria related to May - June Net Delta Outflow (NDO) requirements.

Index should consider alternative approaches that are truly representative of hydrologic conditions in the Russian River watershed.

d. It is my experience that Hydrologic Indices and/or water year-type designations are based on unimpaired hydrologic conditions (e.g., Sacramento, San Joaquin and Colorado River Indices as defined in California's 2009 Water Plan Update). Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, and export of water to or import of water from other basins. The responsible management and beneficial use of water relies on best satisfying demands with available supply. Absent large reservoirs with multiple years of carry-over storage, the best gauge of a watershed's annual available supply is based on an estimate or prediction of unimpaired inflow. The hydrologic conditions in Lake Mendocino are representative of altered streamflow diversions, often created, on occasions, under operational decisions unrelated to unimpaired flow conditions or natural water supply. Therefore, Lake Mendocino hydrologic conditions are not a reliable source for determination of water year-type designations for the Russian River watershed. The Fish Flow Project and associated EIR should identify and evaluate other methods and hydrologic conditions that are more representative of unimpaired hydrologic conditions in the Russian River watershed including Lake Sonoma storage and/or flows on all principal tributaries.

e. There is the possibility that future FERC relicensing of the PVP and/or a new upper Eel River Biological Opinions will cease diversions of Eel River water to Lake Mendocino, eliminating the usefulness of this structure as a gauge of either Russian or Eel River hydrologic conditions, at least as would be functional to the Russian River project. Infrastructure damage, maintenance and diversion tunnel collapse could also alter deliveries to Lake Mendocino, creating anomalies in lake levels and hydrologic conditions.

4. The NOP's project description provides no information on how the project will operate under critically dry year-types or during prolonged droughts, periods when there may be insufficient water available to meet the minimum flow requirements. This statement is predicated on the fact that the current (1986) Decision 1610 minimum flow requirements for the mainstem River during critically dry year-types (25 cfs between East Fork and Dry Creek and 35 cfs between Dry Creek and Ocean) are significantly lower than those stipulated in the NOP for "each year" (125 cfs between East Fork and Dry Creek and 70 cfs between Dry Creek and Ocean). The 1986 D 1610 flow schedules were developed through careful hydrologic modeling of water supply operations to balance available supply and demand. Those analyses and resulting minimum flow schedule yielded minimum flows for critically dry year-types that are two- to three-fold lower than the recommended BO flows - a notable inconsistency that leads me to question the feasibility of the proposed BO flow changes during dry and critically dry year-types.

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Attachment 1**

5. The BO and D. 1610 indicate that in order to meet current minimum flow standards through the entire designated river reaches, excess water is typically discharged in order account for summer losses (legal and illegal diversions, evapotranspiration, groundwater infiltration and recharge, etc.). For example, the BO states that during some spring and summer months, SCWA releases 250-300 cfs from CVD to maintain a flow of 185-cfs at Healdsburg (see page 226 of BO). As part of the project description, it would seem prudent to better predict and present the likely flow releases that will be made below CVD and WSD in order to meet the low flow criteria. These actual release rates and associated water quality will provide much more insight into the potential benefits and impacts associated with the project than simply assuming a single minimum flow criteria value is occurring through all River reaches at any given time. Estimating representative release rates will require developing and analyzing a complete water budget for the entire river corridor.

6. The SCWA is attempting (through anticipated water-right petition) to extend the duration of minimum flows beyond the period stipulated in the BO, possibly year-round. Such changes will enable SCWA and/or project operators to substantially control seasonal flow patterns, geomorphic and ecological conditions and variability within the Russian River watershed, especially if Lake Mendocino storage is increased. This raises a number of concerns, including the following:

- a. A meaningful and definitive description of this action and potential impacts to the environment are not included in the NOP.
- b. Extending SCWA's ability to maintain the minimum flow schedule later into the year could allow them to capture and retain fall and early winter runoff in reservoirs in lieu of allowing the natural flow increases associated with early season storm runoff.
- c. This action will provide SCWA the power to manipulate the fall-early winter flow magnitudes and durations during an important time of fish immigration and spawning, potential changes and impacts that are espoused to be avoided in the BO and Decision 1610 by providing natural runoff and hydrologic conditions.

7. Based on the comments and questions presented in items 7. through 10. above, considerable technical assessments will be required as part of the EIR development process in order to evaluate if the proposed project changes will impart significant impacts to the environment. Analyses and impact assessments that will need to be implemented include, but are not limited to:

- a. Studies to determine if there is sufficient supply and carry-over storage to operate the project in a manner beneficial to watershed fisheries (as determined by flow depth, velocity and temperature) during: normal year types; dry year types; critically dry year types; and multi-year drought periods. Specifically, will there be sufficient storage in Lake Mendocino

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Attachment 1**

to accommodate current PVP diversions and proposed summer flow reductions?

b. If proposed minimum flow releases during critically dry years are higher than those expressed in Decision 1610, studies will need to evaluate if there is sufficient supply available to satisfy project operations during a single and back-to-back critically dry water year type.

c. If the project Hydrologic Index based on Lake Mendocino storage and/or inflow via PVP diversions yields a water year type that differs from the true unpaired flow conditions in the Russian River watershed, will the project meet desired goals and objectives? For example, what if the Lake Mendocino Hydrologic Index indicates a normal year type, but the inflow and/or storage to Sonoma Lake is representative of a dry or critically dry year type. How well will project goals and objectives be met? What if this water year type dichotomy between Lake Mendocino and Lake Sonoma occurs during successive years or on a high frequency? Analyses should also look at the hydrologic record and evaluate how the proposed project would have fared over long-term historic periods.

d. There is the real possibility that future FERC relicensing of the PVP and/or a new upper Eel River Biological Opinions will eliminate diversions of Eel River water to Lake Mendocino. Therefore, this is a reasonable and prudent condition that should be considered when evaluating all project alternatives. The implications of losing such a large and important supply of water to the project would have profound impacts on Russian River project water supply that should be acknowledged and evaluated.

8. Although not addressed in the NOP, the evaluation of the project alternatives will require the development and/or use of defensible water operation, hydrologic, hydraulic, geomorphic and water quality impact assessment tools in the form of hydrodynamic, hydrologic and hydraulic numerical models that will undergo rigorous scrutiny and validation. Typically, water operation models can adequately simulate and address the necessary operational questions using coarse and simplified spatial and temporal (monthly) domains (e.g., US Army Corps HEC-ResSim ). However, more detailed and accurate numerical models running on relatively short time-steps (hourly or daily) are necessary to capture the changes in flow rates, flow velocities, water levels, and water quality conditions (esp. temperature) used to evaluate benefits and impacts to aquatic and riparian species and their habitats – the coarser water operation models such as HEC-ResSim typically can not achieve this objective. Independent habitat assessment modeling is also commonly used on these types of investigations. In fact, in 2000, the Corps and NMFS recommended that additional field measurements and habitat simulation modeling be done to assist in development of the BO's RPA. As stated in the BO, "habitat modeling to address instream flow

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needs for fishes is often accomplished using the Instream Flow Incremental Methodology (IFIM)<sup>7</sup>. In 2001, the Corps and NMFS specifically recommended that the IFIM be used to address habitat flow relations in River segments affected by project water releases. However, the SCWA declined to use this highly quantitative method for addressing this issue. Instead, the 2001 Demonstration Flow Assessment study was completed and used to develop revised minimum flow requirements using, in my opinion, a very small set of empirical information representative of a narrow band of flow ranges. Given the importance of the technical approach and methods used to evaluate project impacts, it would be prudent for the NOP to provide information regarding the modeling analysis tools to be used, the suite of alternative water supply and operations being incorporated into the impact assessments, and the simulation year-types and wet and dry (drought) periods incorporated into the analysis. We also recommend, at a minimum, numerical models provide estimates of flow rates and velocities, water depths and water temperature while accounting for changes in reservoir and groundwater storage, diversions, infiltration and evaporative losses. We do not advocate any specific modeling code at this time, but feel the model selection process be described in the EIR along with specific modeling goals and objectives and the rationale for the specific model choice over other candidate model codes.

9. The NOP repeatedly states the project will, "update water rights permits to reflect current conditions" (e.g., twice on page 8 and once on page 9). What does this specifically mean? Why is this not described in sufficient detail so the reader of the NOP can make a judgment as to possible benefits or impacts to the environment?

10. The current condition and BO recommended management changes to the Russian River Estuary/Lagoon are based to a greater degree on analogies to other Central California coast lagoons than site specific water-level, water quality or barrier dynamics. Based on my own experiences and studies on other California Coastal estuary systems (e.g., Santa Clara River Estuary in Ventura, Ventura River Estuary, Pescadero Creek Estuary, Christie Marsh/Lagoon at San Francisco Presidio, Bolinas Lagoon, lower Lagunitas Creek, Gualala River Estuary and Eel River Estuary), I am concerned that reducing the flow rates (i.e., "provide a lower, closer-to-natural inflow to the estuary between late spring and early fall") will not be sufficient to maintain a "seasonal freshwater lagoon" of satisfactory water quality. The EIR will need to have a rigorous analysis regarding lagoon and barrier beach dynamics in response to flow changes and how the project will alter the frequency and duration of inlet opening/closing and seasonal effects on water quality, again, capturing hourly or daily changes in water level, flow velocity, water temperature, salinity and dissolved oxygen. This analysis will also require an assessment of off-shore wave energy, littoral drift, and sediment supply to characterize and predict seasonal barrier beach dynamics.

11. How will the project assess impacts to existing riparian vegetation? Does the SCWA project EIR need to address all eight of the elements (listed on page 241 of BO) consisting the BO RPA, including instream channel work, pipelines, etc.?

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Attachment 1**

12. The NOP project description should include a statement that the water resources within the entire Russian River watershed area (both surface and groundwater) may be impacted by the project and that the EIR will address such flow related changes and impacts, including:

- a. Changes in surface water diversions – assuming the opportunity to divert surface water would decrease in association with lower flows?
- b. Will the project cause decreases in surface water diversions, leading to increased groundwater withdrawals? If so, what will be the impact on local and regional groundwater levels and supply?
- c. Dry season groundwater infiltration and recharge from the River - how will reduced flows alter river infiltration and groundwater recharge and storage?
- d. How will River water quality be impacted considering a reduced volume of water available to dilute potential contaminants, especially water treatment and agricultural drainage returns to the river via surface and ground water?
- e. How will the changes in flow magnitudes alter water temperatures?
- f. How will the flow changes impact the existing riparian corridor and habitat to associated fish and wildlife species?
- g. If significant changes in the magnitude of winter high flows are proposed or possible, especially with SCWA petitioning to extend the period of the minimum flow requirements into October through December, how will these changes impact channel morphology especially with respect to area and usage of salmonid spawning habitat, fish passage, summer rearing of coho and steelhead and other aquatic species.
- h. The EIR should address the cumulative effects on surface and groundwater resources associated with proposed flow changes in terms of surface and groundwater interactions and water quality, including proposed treated effluent reuse projects, groundwater recharge projects, future anticipated urban and agricultural growth, gravel mining projects, and anticipated groundwater management plans.

Comment Letter G\_FOER Attachment 2

E-mail discussion of management issues for Russian River Estuary Project, July 2010

----- Original Message -----
Subject: Re: [Fwd: Re: Estuary outlet channel]
Date: Tue, 13 Jul 2010 06:31:10 -0700
From: John McKeon <John.McKeon@NOAA.GOV>
To: William Hearn <William.Hearn@NOAA.GOV>, dkeller@eelriver.org, Ann.DuBay@scwa.ca.gov, Grant.Davis@scwa.ca.gov, rkeeper@sonic.net, rrvpc@comcast.net, Dick Butler <Dick.Butler@NOAA.GOV>, Chris Delaney <Chris.Delaney@scwa.ca.gov>

Mr. Keller,
Your input is appreciated and your points well taken. Many are discussed in the biological opinion. Your point of no engineering magic is particularly appropriate considering the variety, magnitude and unpredictability of the forces at work seasonally building and sculpting the beach and the river mouth, not to mention the anthropogenic influences on river flow and beach morphology. However unpredictable though, it is clear California river mouth beaches build in spring and through a process of, at times, multiple closures and re-establishment of outflow as the beaches build and widen, create elongated and elevated outlet channels which raise estuary water surface elevations above high tide (~3 ft NGVD), and allow for rapid conversion of the estuaries to highly productive oligohaline conditions. NMFS is actually pleased to see SCWA's changed breaching practices for the last year did allow for such a channel to form and for a conversion of the estuary to occur. The very limited action Thursday, though unsuccessful in maintaining outflow, was intended by SCWA's engineering team to be conservative in not breaching and flushing the highly productive conditions created in the estuary. They were successful on that count... Unfortunately SCWA's permit with State Parks limits actions to Mon-Thurs, and the lagoon was somehow breached straight out on Sunday night, leaving the former naturally formed long and elevated outlet channel high and dry. As you aptly point out, and as evidenced by the failed jetty, and the unpredictable physical or cultural processes of breaching, SCWA's ability to "manage" the beach is quite limited. Thus adaptive management of the naturally formed outlet channel is only the immediate response by SCWA to allow formation and maintenance of highly productive conditions in the estuary while continuing to carry out its responsibility to prevent flooding.

Ms. DuBay can likely give you the best update on the progress of investigations and planning for other elements of the Reasonable and Prudent

Comment Letter G\_FOER Attachment 2

Alternative prescribed in the Biological Opinion, some of which you mention.

Again, thanks for your comments. Please feel free to contact me directly with any advice about beach processes or questions about adaptive management of the seasonally created outlet channel.

Sincerely,
John McKeon

William Hearn wrote:
> Please respond and cc others. Thanks.
> Bill
>
> ----- Original Message -----
> Subject: Re: Estuary outlet channel
> Date: Mon, 12 Jul 2010 13:26:41 -0700
> From: David Keller <dkeller@eelriver.org>
> To: Ann DuBay <Ann.DuBay@scwa.ca.gov>
> CC: 'dick.butler@noaa.gov' <Dick.Butler@noaa.gov>, William Hearn <William.Hearn@NOAA.GOV>, Grant Davis <Grant.Davis@scwa.ca.gov>, RR Keeper <rrkeeper@sonic.net>, 'Brenda Adelman' <rrwpc@comcast.net>
> References:
> <477A999895BC974581E856648DA3939E095207B1E0C@FeMail.scwa.loc>
> <4C37AE28.7050101@eelriver.org>
> <477A999895BC974581E856648DA3939E095207B1E0C@FeMail.scwa.loc>

> Thank you, Ann, for the followup note.
>
> My concern is that this is an expensive case of 'whistling dixie', with the inevitable serious changes delayed for at least another season. There is 'adaptive management', and there is also the inevitable running up against a clear, extremely likely, reality check. I have a great deal of respect for FWA, but I think this current exercise doesn't pass the sniff test.

> Bests,
> David
>
> Ann DuBay wrote:
>>
>> David,
>>
>> Thanks for the note. As always, I appreciate your insight. We're
>> lucky to have a good consulting team, with FWA, plus the advice of
>> John McKeon at NMFS (who has had success with this at Carmel).
>> Still,
>> it's called "adaptive" management for a reason!
>>
>> Ann
>>
>> Ann DuBay

Comment Letter G\_FOER  
Attachment 2

>> Sonoma County Water Agency  
>> 707.524.8378  
>> 707.322.8185  
>> www.sonomacountywater.org  
>> \*From:\* David Keller [mailto:dkeller@eelriver.org]  
>> \*Sent:\* Friday, July 09, 2010 4:22 PM  
>> \*To:\* Ann DuBay  
>> \*Cc:\* Dick Butler; Bill Hearn; Grant Davis; RR Keeper; rrwpc-1  
>> \*Subject:\* Re: Estuary outlet channel  
>> Ann -  
>> I'm sorry to hear about the most recent failure of Russian River  
>> estuary water level management efforts to date.  
>> In my experience with managing the reconstruction of the historic  
>> groin on the Bolinas Beach at the mouth of Bolinas Lagoon and  
>> Channel  
>> (1982-1986, following destruction in the 1982 storms), I'm  
>> completely  
>> unsurprised at this chain of events. Moving unconsolidated sand  
>> around and hoping it stays in place is like building a sand castle  
>> in  
>> the surf. The number of hours it stands is barely predictable, and  
>> it  
>> is inevitable that it will be washed away. The SCWA efforts at the  
>> beach are merely using bigger toys to build bigger sand castles.  
>> Attempting to balance the energy of the Russian River outflows from  
>> the estuary to the ocean (which energy will diminish over time as  
>> the  
>> estuary level drops) against the vast energy of the swells coming in  
>> on wave trains generated in the South Pacific's winter storms is at  
>> best a very delicate balance. In addition, the impacts of aeolian  
>> drift on sand movement and accumulation must be accounted for as  
>> well.  
>> More likely, however, is that this channel-building work is  
>> engineering magical thinking. It is expensive to SCWA and  
>> frustrating  
>> to residents, visitors and river users, and very likely disruptive  
>> to  
>> the seals and fish who inhabit this place.  
>> I think that the attempts to corral the Russian River's estuary into  
>> controlled and limited depths to prevent flooding of a very few  
>> properties is tilting at windmills. It's really time to cut to the  
>> chase, and move on to letting the estuary close naturally, and with  
>> it, moving, raising, floodproofing or abandoning those few  
>> structures  
>> that are currently being used to set maximum flood elevation levels.  
>>

Comment Letter G\_FOER  
Attachment 2

>> With best wishes for restoration of a functioning and healthy  
>> estuary  
>> and fishery,  
>> Sincerely,  
>> David Keller  
>> /Bay Area Director  
>> Friends of the Bel River  
>> 1327 I St.  
>> Petaluma, CA 94952  
>> dkeller@eelriver.org <mailto:dkeller@eelriver.org>  
>> (707) 763-9336/  
>> ----  
>> Ann DuBay wrote:  
>> All,  
>> On Thursday morning, the Sonoma County Water Agency successfully  
>> created an outlet channel, which functioned as designed for most of  
>> the day. But the river outflow at the channel could not overcome the  
>> combined ocean forces of a high tide on Thursday evening and a 3-  
>> foot  
>> south ocean swell. The channel closed at approximately 7 p.m.  
>> Water Agency staff will be out to maintain the outlet channel on  
>> Monday morning, July 12<sup>th</sup>. With the anticipated higher stages in  
>> the estuary and the extreme low tides (-1.4 ft at 6:05 am) predicted  
>> for Monday morning, the Water Agency is hopeful that the head  
>> difference between the estuary and the ocean will result in channel  
>> outflows great enough to counteract ocean forces and that the  
>> channel  
>> will remain open. Seal monitoring will be conducted prior, during  
>> and  
>> after the activities.  
>> Thank you!  
>> Ann DuBay  
>> Sonoma County Water Agency  
>> 707.524.8378  
>> 707.322.8185  
>> www.sonomacountywater.org <http://www.sonomacountywater.org>  
>>

## Friends of the Eel River, David Keller, February 14, 2011

- G\_FOER-1 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, please refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.
- G\_FOER-2 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project and the CEQA requirements that would trigger recirculation, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, and **Master Response 2.9, Recirculation**, in **Chapter 2, Master Responses**.
- G\_FOER-3 Scoping comments submitted by Friends of the Eel River for the Notice of Preparation for the Fish Habitat Flows and Water Rights Project on November 12, 2010, that were attached to the comment letter on the Estuary Management Project Draft EIR, are included in the record, but are not addressed in this Final EIR because these comments are directed at a different project (the Fish Habitat Flows and Water Rights Project), rather than the proposed project analyzed in the Draft EIR. For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.
- G\_FOER-4 As described in Draft EIR Chapter 5.0, Cumulative Analysis, water released from storage in Lake Mendocino includes water imported from the Eel River via Pacific Gas and Electric's (PG&E) Pottery Valley Project (PVP). The PVP was constructed in 1908 and includes a diversion tunnel to transfer water from the Eel River into the Russian River watershed (see Figure 2-1 in Draft EIR). Water is stored in Lake Pillsbury on the Eel River, then released and re-diverted 12 miles downstream at Cape Horn Dam through a diversion tunnel to the Potter Valley powerhouse in the Russian River watershed. The water is discharged from the powerhouse into a canal from which the Potter Valley Irrigation District diverts water. It then flows into the East Fork of the Russian River to Lake Mendocino. PVP diversions are regulated by a license issued to PG&E by the Federal Energy Regulatory Commission (FERC) and serve multiple purposes, including power generation, Potter Valley agricultural irrigation, and minimum instream flow requirements in the East Fork of the Russian River. For a discussion of the relationship of the Estuary Management Project to Russian River flows, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. The Estuary Management Project does not propose changes to Eel River diversions, which are controlled by FERC and PG&E. The Estuary Management Project will govern the Water Agency's management of the Estuary with or without the instream flow levels

proposed by the Fish Flow Project, and regardless of what amount of water is, or is not, diverted by PG&E from the Eel River to the Russian River.

- G\_FOER-5 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. Refer also to response to comment G\_FOER-4 above.
- G\_FOER-6 The Estuary Management Project is designed to achieve primary dual objectives, of enhancing rearing habitat and managing Estuary water levels to minimize flood hazard (Draft EIR Chapter 1.0, Introduction, Section 1.2). As noted in Draft EIR page 1-1, there is a history of managing the Estuary water levels for flood protection and the Russian River Biological Opinion recognizes flood management as a key consideration in Estuary Management. For a discussion of project alternatives, please refer to Draft EIR Chapter 6.0, Alternatives, which includes analysis of Alternative Flood Control Measures, including establishment of a flood plain management area.
- G\_FOER-7 Draft EIR Chapter 6.0, Alternatives Analysis, (Section 6.4.6) includes review of Alternative Flood Control Measures, including establishment of a flood plain management area. Additionally, Draft EIR Mitigation Measure 4.2.2 requires the Water Agency to coordinate with NMFS and work with the property owners to identify measures that would, if necessary, substantially minimize or avoid any damages to existing structures that would occur as a result of implementing the project (i.e., increased flooding durations at the 7 and 9 foot elevation). As appropriate, the Water Agency shall survey properties within the 9 foot elevation in greater detail to more accurately and precisely determine the elevation of the structures potentially at risk; this information shall be kept on record at the Water Agency and a copy shall be provided to each of the property owners.
- G\_FOER-8 Email correspondence provided does not comment on the Draft EIR; however has been included in the record.

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February 12, 2011

To: [estuaryproject@esassoc.com](mailto:estuaryproject@esassoc.com)  
From: Friends of Villa Grande  
Subject: Estuary Management Plan draft EIR

The Friends of Villa Grande (FOVG) is a non-profit 501c3 corporation that owns and maintains a public access point to the Russian River in the town of Villa Grande. The FOVG acquired title to the beach access about one and a half years ago through an acquisition process that was partially funded by the Sonoma County Agricultural Preservation and Open Space District (the District). Part of the acquisition process included the grant of a public access easement to the Russian River to the District in perpetuity.

Our property, which is named Patterson Point Preserve (the preserve) consists of about 2 acres of land that we are currently restoring to native conditions. This includes removal of invasive plant species and replacement with native vegetation. We are also preserving and enhancing habitat for native animals. The preserve contains a trail access to two recreational beaches on the Russian River.

The beaches at the preserve and the property itself have been used for recreation by the local community and the general public for over 100 years, dating back to when Villa Grande was subdivided in the early 1900's. Historically, the beach areas have been available for most of the summer months but will become inundated when the mouth of the river is blocked by the sand bar. Typically, these incidences have been fairly brief and have not been frequent through the summer. When the mouth of the river is blocked, the recreational benefit of the preserve is severely diminished.

In the EIR for the subject project, there is no mention of our public access point. There is no analysis of the impacts to our recreational use through inundation. There is no significant analysis of changes to water quality that will result from the project and how these changes may affect our recreational uses for swimming, fishing and other water contact sports. There is no mention of how the proposed project may affect our restoration efforts. The EIR lists potential significant impacts that cannot be avoided to other recreational areas on the river.

G\_FOVG-1

The issues are broader than those addressed by the estuary EIR. It is limited to the estuary portion of the river and doesn't address the impacts to our reach of the river just upstream of the estuary. Nor does it address river flow rate which we understand will be addressed separately in a different EIR at a later date. The FOVG recommends that the river be addressed as a whole with one EIR. We in the lower river understand the connections between the various components of the river and want to see a complete river EIR.

G\_FOVG-2  
G\_FOVG-3

We feel that the EIR is seriously deficient and inadequate in not considering the potential impacts to the preserve. We feel these impacts should be addressed and quantified before any further action is taken on this project and before the EIR is certified as adequate. We request that specific mitigation measures be included in the project to protect our recreational uses and to insure that the restoration of the preserve by FOVG is not interfered with.

G\_FOVG-4

Sincerely,

Richard L. Holmer,  
President, Friends of Villa Grande

## Friends of Villa Grande, Richard Holmer, February 12, 2011

L\_FOVG-1 Draft EIR Section 4.7, Recreation, includes a discussion of impacts to river front beaches associated with the Estuary Management Project. Although the Draft EIR does not specifically mention Patterson Point Preserve, it is located in the maximum backwater area, shown on Draft EIR Figure 2-3A, and therefore is included in the discussion and quantification of impacts to public and private river beach areas. The Draft EIR text on pages 4.7-3 and 4.7-9 has been modified to specifically include the Patterson Point Preserve, as follows:

“In the maximum backwater area, there is formal public access at Monte Rio Community Beach, Patterson Point Preserve, and Vacation Beach. Monte Rio Community Beach is located on a large bend in the river and offers picnic amenities and boat rental facilities. This location is frequently used for community gatherings. Patterson Point Preserve is located in Villa Grande and maintained by Friends of Villa Grande for public river recreation and restoration as a redwood and riparian area. Vacation Beach is located at Vacation Beach Road in Guerneville and has a seasonal dam during the summer recreation season that is removed over four days in late September” (page 4.7-3).

“Public beach access within the maximum backwater area is limited to Monte Rio Community Beach, Patterson Point Preserve, and Vacation Beach. Many of the beach areas occurring within the Estuary Study Area and maximum backwater area do not have formal public access. Inundation associated with higher water levels would reduce the amount of beach acreage available within the Estuary, and these conditions would occur for a longer duration, depending upon performance of the outlet channel” (page 4.7-9).

Comment states that beach, preserve, and property at Patterson Point Preserve will be inundated for a longer duration than historically experienced during the lagoon management period and this precludes restoration efforts and recreational use. Comment does include specifics about restoration efforts at the Patterson Point Preserve. As disclosed in the Draft EIR, increased duration of elevated water levels may preclude use of these riverfront beach areas; clarification of the specific Patterson Point Preserve Area does not change the conclusions presented in the Draft EIR.

Refer also to and **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**, for a discussion regarding water quality and public health.

L\_FOVG-2 For a discussion of the geographic extent of the project area analyzed under the Estuary Management Project please refer to **Master Response 2.2, Project**

**Description, Impact Areas, and Scope of Analysis, in Chapter 2, Master Responses.**

- L\_FOVG-3 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.**
- L\_FOVG-4 Refer to responses to comments G\_FOVG-1 and-2 above for a discussion related to the inclusion of potential impacts to the Patterson Point Preserve. For a discussion of mitigation to avoid impacts to recreational and restoration uses, refer to **Master Response 2.6, Recreational Impacts, Socioeconomic Impacts and Mitigation Feasibility, in Chapter 2, Master Responses.**



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February 14, 2011

Via e-mail

Sonoma County Water Agency  
Attn: Jessica Martini-Lamb  
404 Aviation Boulevard  
Santa Rosa, CA 95403  
estuaryproject@esassoc.com

Re: Comments on the Russian River Estuary Management Project Draft Environmental Impact Report

Dear Ms. Martini-Lamb,

Thank you for this opportunity to submit comments on the draft environmental impact report (“DEIR”) issued by the Sonoma County Water Agency (“SCWA”) for the proposed Russian River Estuary Management Project (“Estuary Project”). The following comments are submitted on behalf of the Russian River Watershed Protection Committee (“RRWPC”). Formed in 1980, RRWPC is a non-profit environmental advocacy organization dedicated to the protection of the Russian River and its recreational uses. RRWPC’s approximately 1200 supporters include residents, recreationists, business owners and others who reside or recreate in the lower Russian River, including the Estuary.

RRWPC is concerned about the scope and adequacy of the DEIR for the following reasons:

- The DEIR fails to address the whole of the action being taken by the SCWA because the Estuary Project and SCWA’s Fish Habitat Flows and Water Rights Project (“Fish Flow Project”) are a single project; [ G\_LozDru-1
- The DEIR’s analysis of the existing water quality conditions in the Estuary and characterization of those conditions as “natural” is not supported by substantial evidence; [ G\_LozDru-2
- The DEIR’s analysis of water quality impacts is inadequate, and; [ G\_LozDru-3
- The DEIR fails to identify and propose adoption of all feasible mitigation measures available to address the expected water quality impacts of the Estuary Project. [ G\_LozDru-4

RRWPC requests that SCWA revise the DEIR to expand its scope to include the Fish Flow Project and to revise and recirculate the water quality analysis in order to assure that all impacts on water quality will be fully disclosed and mitigated. [ G\_LozDru-5

Sonoma County Water Agency  
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**A. The DEIR Improperly Piecemeals SCWA’s Adaptive Russian River Management Project.**

RRWPC is very concerned that the DEIR underestimates the impacts to water quality resulting from the Estuary Project because SCWA has opted to bifurcate this Estuary management proposal from SCWA’s Fish Flow Project. Applying CEQA’s definition of “project,” RRWPC believes these two pending proposed actions are one project that must be reviewed together under CEQA.

G\_LozDru-6

CEQA's conception of a project is broad and the term is broadly construed and applied in order to maximize protection of the environment. (*Nelson v. County of Kern* (2010) 190 Cal.App.4th 252, 271 (2010) (citations omitted).) “The broad scope of the term ‘project’ prevents ‘the fallacy of division,’ which is the ‘overlooking [of a project’s] cumulative impact by separately focusing on isolated parts of the whole.’” (*Id.*, citing *McQueen v. Board of Directors* (1988) 202 Cal.App.3d 1136, 1144.) A public agency may not divide a single project into smaller individual subprojects to avoid responsibility for considering the environmental impact of the project as a whole. (*Orinda Assn. v. Board of Supervisors* (1986) 182 Cal.App.3d 1145, 1171; *see also Association for a Cleaner Environment v. Yosemite Community College Dist. (“ACE”)* (2004) 116 Cal.App.4th 629, 638. Rather, “the whole of an action” or the entire activity for which the approvals are being sought must be considered by the agency. (*Nelson*, 190 Cal.App.4th at 271; CEQA Guidelines, § 15378(a) & (c).)

“One way to evaluate which acts are part of a project is to examine how closely related the acts are to the overall objective of the project.” (*Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1226.) Where two acts are steps taken towards the achievement of a common objective, such acts are part of a coordinated endeavor and a single project under CEQA. (*See id.* at 1228; *ACE*, 116 Cal.App.4th at 639.) “The relationship between the particular act and the remainder of the project is sufficiently close when the proposed physical act is among the ‘various steps which taken together obtain an objective.’” (*Id.*, citing *Robie et al.*, Cal. Civil Practice—Environmental Litigation (2005) § 8.7.) In determining the whole of an action, courts also look to the timing, physical location and the entity undertaking the action:

G\_LozDru-7

When two acts are closely connected in time and location, the potential for related physical changes to the environment in that location is greater than otherwise. Thus, the need for a single review of the environmental impact of the two acts is greater. Also, when the same entity undertakes both matters, it increases the likelihood that the matters are related—that is, are part of a larger whole.

(*Tuolumne County Citizens*, 155 Cal.App.4th at 1227.) Separate governmental approvals do not create separate projects. (*Id.* at 1228; CEQA Guidelines, § 15378(c).)

Applying these principles to the Estuary project and the Fish Flow Project demonstrates that the two proposed actions constitute a single project under CEQA. Both actions share a common objective – to improve habitat conditions in the Russian River for salmon and steelhead. The Estuary Project states its main objective as follows:

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In order to comply with the requirements of the Russian River Biological Opinion, the Water Agency will implement adaptive management of the Estuary with the primary dual objectives of enhancing rearing habitat for juvenile salmonids, particularly steelhead, and managing Estuary water levels to minimize flood hazard. Rearing habitat may be enhanced by reducing tidal influence on the Russian River Estuary from May 15 to October 15 (“lagoon management period”) to increase freshwater habitat available for salmon and steelhead.

DEIR, p. 2-11. The Fish Flow Project’s objective is “to manage Russian River Project releases to provide instream flows that improve habitat for threatened and endangered fish, while updating the Water Agency’s existing water rights to reflect current conditions.” Notice of Preparation for Fish Habitat Flows and Water Rights Project, p. 8 (Sept. 29, 2010) (attached as Exhibit A). Like the Estuary Project, the Fish Flow Project’s main purpose is to implement the National Marine Fisheries Service’s Biological Opinion of September 24, 2008 for “Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed (“Biological Opinion”) (excerpt attached as Exhibit B). (DEIR, p. 2-23) (“The Estuary Management Project is one action to be undertaken by the Water Agency to meet the requirements of the Russian River Biological Opinion.”) The Project as identified by NMFS in the Biological Opinion includes both the actions now deemed by SCWA as the Fish Flow Project and the beach breaching action at the mouth of the river labeled the Estuary Project. Biological Opinion, p. vii. Both actions are thus directly related to improving habitat for listed salmonids and implementing NMFS’ Biological Opinion. The actions are, thus, a coordinated endeavor and one project under CEQA. (*Tuolumne County Citizens*, 155 Cal.App.4th at 1226; *ACE*, 116 Cal.App.4th at 639. See DEIS, p. 2-23 (“The Russian River Biological Opinion and the corresponding RRIFR Program include a series of actions to be taken by the Water Agency, in coordination with NMFS and CDFG, to provide benefit to listed salmonids”).)

G\_LozDru-7  
cont.

The other criteria considered by the courts also show the two actions comprise a single project under CEQA. The two actions overlap in time. Indeed, although the Fish Flow Project’s EIR process has only recently begun, the flow proposals included in that action already are occurring pursuant to the SCWA’s Temporary Urgency Change Order petitions to the State Water Resources Control Board each year. The location of the two actions also overlap, both including the lower reaches of the Russian River. Lastly, SCWA is the agency implementing both actions. For all of these reasons, the two actions comprise a single project that must be evaluated in a single EIR.

**B. The DEIR’s Water Quality Analysis is Inadequate.**

As a result, in part, of the DEIR’s cramped project scope, the DEIR’s discussion of water quality impacts also comes up short. The analysis first downplays the existing degraded water quality conditions found in the Estuary Project affected area. The DEIR then fails to fully analyze the likely water impacts of obstructing the mouth of the river and reduced river flows. Lastly, the DEIR fails to identify feasible mitigation measures to address the Estuary Project’s impacts on the water quality of the Russian River’s lower reaches.

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**1. The DEIR’s analysis of the existing water quality conditions in the Estuary and characterization of those conditions as “natural” is not supported by substantial evidence.**

Although acknowledging data that shows pollutant levels in excess of the North Coast Regional Board’s water quality objectives, the DEIR misleads the lay reader to think those exceedances are of no importance because levels merely represent “natural conditions” and the Regional Board has not yet included the lower Russian River on its impaired waters list under Section 303(d) of the federal Clean Water Act. These efforts to downplay the serious pollution degradation that already exists in the lower reaches of the river render the DEIR’s water quality discussion inadequate.

Just because a waterbody is not listed on the Section 303(d) list does not mean it is not impaired. Based on the data described in the DEIR, the waterbody exceeds Basin Plan water quality objectives for dissolved oxygen and fecal coliforms. The fact that the Regional Board has not yet included the Russian River’s lower reaches on the list for certain constituents does not mean that river reach is not already in violation of water quality objectives. Indeed, the Regional Board has now identified serious concerns about the water quality impacts of the Estuary Project, especially as combined with the Fish Flow Project. Letter from Regional Board to SCWA Commenting on NOP (Nov. 15, 2010) (attached as Exhibit C). The DEIR treats the lack of a listing on the impaired waters list as evidence that the high levels of pollutants measured in the project area are merely “indicators of the current conditions of the Estuary that support the beneficial uses identified in the RWQCB Basin Plan for the Lower Russian River, including aquatic habitat and recreation.” DEIR, p. 4.3-5. To the general reader who would not be aware of the significance of violations of Basin Plan water quality objectives, this statement suggests that measured exceedances are inconsequential. The DEIR should more clearly describe the measured exceedances of objectives and refrain from suggesting that exceedances are somehow consistent with protecting the beneficial uses the objectives are designed to protect.

Similarly, the DEIR improperly downplays the violations of the dissolved oxygen standard measured in the Estuary, claiming they are naturally occurring. DEIR, p. 4.3-19. Given the excessive nutrients known to be in the river, the DEIR’s simplistic assertion that depressed DO levels are natural is not supported by any reasonable analysis or substantial evidence. And again, that assertion lulls the general public reviewing the DEIR into a false sense that all is well in the Estuary.

**2. The water quality analysis fails to address water quality in the Estuary prior to the creation of the proposed channel.**

The DEIR does not describe the length of time it will take water levels in the Estuary to reach the 7 to 9 foot level once the mouth of the river closes. During that undisclosed period of time, no “flow-through” will be occurring. We do know that SCWA will be requesting reduced river flows even before implementation of the Estuary project. We are told that “project implementation would increase the duration of freshwater lagoon conditions from the typical five to 14 day duration currently experienced, to an estimated one- to five- month duration.” DEIR, p. 2-12. It appears that the higher water levels allowed before breaching coupled with lower flows in the river will result in an extended period where no “flow-through,” “steady-

G\_LozDru-9

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state” system is in place. Thus, although the DEIR asserts that “implementation is not anticipated to adversely affect nutrient or bacteria levels within the Estuary, as closed Estuary conditions would still include flow through processes,” it does not address the times where no such flow through process is occurring. The absence of any discussion of water quality conditions during this critical period is a serious omission in the DEIR’s analysis.

G\_LozDru-10  
cont.

In addition, no mention is made in the DEIR’s water quality analysis of other pollutants that may be at levels of concern in the river and which levels could be exacerbated by the proposed project. Of particular interest to RRWPC and its members are mercury and copper pollution in the river, both of which are particularly toxic to aquatic life.

G\_LozDru-11

**C. The DEIR Fails to Identify and Propose Adoption of All Feasible Mitigation Measures Available to Address The Expected Water Quality Impacts of the Estuary Project.**

The DEIR concludes that impacts resulting from potential increases in bacteria, nutrient and salinity levels in the Estuary are significant and unavoidable but does not identify any mitigation measures for these impacts, not even monitoring. CEQA requires public agencies to avoid or reduce environmental damage when “feasible” by requiring “environmentally superior” alternatives and mitigation measures. (CEQA Guidelines § 15002(a)(2) and (3); *See also, Berkeley Keep Jets Over The Bay v. Bd. Of Port Commissioners*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.) The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.” (Guidelines §15002(a)(2).) If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.” (Pub.Res.Code § 21081; 14 Cal.Code Regs. § 15092(b)(2)(A) & (B).)

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CEQA requires the lead agency to adopt feasible mitigation measures that will substantially lessen or avoid the Project’s potentially significant environmental impacts (Pub. Res. Code §§ 21002, 21081(a)), and describe those mitigation measures in the CEQA document. (Pub. Res. Code § 21100(b)(3); CEQA Guidelines § 15126.4.) A public agency may not rely on mitigation measures of uncertain efficacy or feasibility. (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727 (finding groundwater purchase agreement inadequate mitigation measure because no record evidence existed that replacement water was available).) “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines § 15364.) Mitigation measures must be fully enforceable through permit conditions, agreements or other legally binding instruments. (Id. at § 15126.4(a)(2).)

A lead agency may not conclude that an impact is significant and unavoidable without requiring the implementation of all feasible mitigation measures to reduce the impacts of a project to less than significant levels. (CEQA Guidelines §§ 15126.4, 15091.)

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Although the DEIR purports to rely upon an Adaptive Management Plan, it does not disclose the details comprising that plan. *See* DEIR, pp. 2-12, 4.3-24, 4.3-26. Likewise, the DEIR references some additional monitoring and updating of the Adaptive Management Plan. Perhaps there is an adaptive management plan in a file someplace, but the DEIR does not inform the public or decisionmakers what the plan is, what would trigger its implementation, and what water quality monitoring would occur in the first place. Without describing in the DEIR all the feasible mitigation measures, including the terms of the adaptive management plan, the detailed monitoring requirements and other feasible mitigation measures, including for example possible increases in the flow rate, SCWA cannot make a significant and unavoidable finding for the water quality impacts.

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RRWPC requests that SCWA revise the DEIR consistent with the above comments and and recirculate the revised DEIR for public review and comment. Thank you again for this opportunity to comment.

G\_LozDru-14

Sincerely,



Michael R. Lozeau  
Lozeau Drury LLP  
Attorneys for Russian River Watershed Protection Committee

cc: Brenda Adelman

# EXHIBIT A



## Notice of Preparation of Environmental Impact Report

September 29, 2010

TO: State Clearinghouse  
Responsible and Trustee Agencies  
Interested Agencies and Parties

FROM: Sonoma County Water Agency  
404 Aviation Blvd.  
Santa Rosa, CA 95403

### FISH HABITAT FLOWS AND WATER RIGHTS PROJECT

The Sonoma County Water Agency (Water Agency) is preparing an Environmental Impact Report (EIR) for the proposed *Fish Habitat Flows and Water Rights Project* (Fish Flow Project). The EIR will be prepared by the Water Agency in accordance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the Water Agency's "Procedures for the Implementation of CEQA." The Water Agency will be the lead agency and will consider all comments from responsible and trustee agencies, property owners, and interested persons and parties regarding the scope and content of the information to be included in the EIR. The Fish Flow Project is required by the 2008 National Marine Fisheries Service's Russian River Biological Opinion.

#### SONOMA COUNTY WATER AGENCY

The Water Agency is a special district created by the California Legislature and operates under the direction of a Board of Directors, composed of the members of the Sonoma County Board of Supervisors. The law that created the Water Agency and defines its powers and duties authorizes it to produce and furnish surface water and groundwater for beneficial uses, to control flood waters, to generate electricity, to provide recreational facilities in connection with Water Agency water supply facilities, and to treat and dispose of wastewater.

#### BACKGROUND INFORMATION

The Russian River originates in central Mendocino County approximately 15 miles north of Ukiah. The Russian River watershed is shown on Figure 1.



## Comment Letter G\_LozDru Attachment

Mendocino (which includes water imported from the Eel River via PG&E's PVP) and Lake Sonoma.

The Russian River and Dry Creek minimum instream flow requirements of Decision 1610 may no longer be appropriate. Decision 1610 was adopted before the listings of three salmonid species under the federal Endangered Species Act, and did not specifically address the importance of fall storage in Lake Mendocino to the Chinook salmon migration. Although Decision 1610 assumed that higher instream flows were better for fishery resources, information developed in the last decade indicates this may not be so for salmonid species in Dry Creek, the Russian River, and the Russian River estuary. Decision 1610 expressly recognized that later fishery studies might identify a need to change the minimum flow requirements. Decision 1610 also expressly contemplated that such changes might be needed if PG&E's PVP imports changed, as they did in 2006.

The National Marine Fisheries Service (NMFS) issued its Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed (Russian River Biological Opinion) on September 24, 2008.<sup>4</sup> The Russian River Biological Opinion is a culmination of more than a decade of consultation between the Water Agency, the USACE, and NMFS regarding the impact of Water Agency and USACE water supply and flood control activities on three fish species listed under the federal Endangered Species Act: Central California coast steelhead, Central California coast coho salmon, and California coast Chinook salmon. Coho salmon are also listed under the California Endangered Species Act (CESA). The California Department of Fish and Game (CDFG) issued a consistency determination on November 9, 2009, finding that the NMFS' Russian River Biological Opinion was consistent with the requirements of the CESA and adopting the measures identified in the Russian River Biological Opinion.

NMFS concluded in the Russian River Biological Opinion that the continued operations of Coyote Valley Dam and Warm Springs Dam by the USACE and the Water Agency in a manner similar to recent historic practices, together with the Water Agency's stream channel maintenance activities and estuary management, are likely to jeopardize and adversely modify critical habitat for endangered Central California coast coho salmon and threatened Central California coast steelhead. Specifically, NMFS concluded that the artificially elevated summertime minimum flows in the Russian River and Dry Creek that are currently required by Decision 1610 result in high water velocities that reduce the quality and quantity of rearing habitat for coho salmon and steelhead. Additionally, NMFS concluded that maintaining these flows disrupts lagoon formation in the Russian River estuary and that allowing a lagoon to develop would likely enhance juvenile steelhead and salmon habitat.

<sup>4</sup> NMFS' Russian River Biological Opinion may be accessed online at [www.sonomacountywater.org](http://www.sonomacountywater.org) and may be reviewed at the Water Agency's office at 404 Aviation Boulevard, Santa Rosa, Ca.

## Comment Letter G\_LozDru Attachment

NMFS' Russian River Biological Opinion concludes that reducing Decision 1610 minimum instream flow requirements will enable alternative flow management scenarios that will increase available rearing habitat in Dry Creek and the upper Russian River, and provide a lower, closer-to-natural inflow to the estuary between late spring and early fall, thereby enhancing the potential for maintaining a seasonal freshwater lagoon that would likely support increased production of juvenile steelhead and salmon.<sup>5</sup>

As required by NMFS' Russian River Biological Opinion, in September 2009 the Water Agency filed a petition with the SWRCB to permanently change the Decision 1610 minimum instream flow requirements, in order to improve habitat for endangered Central California Coast coho salmon and threatened Central California Coast steelhead. This petition presently is pending before the SWRCB. The SWRCB will act on this petition after the EIR that is the subject of this notice is prepared.

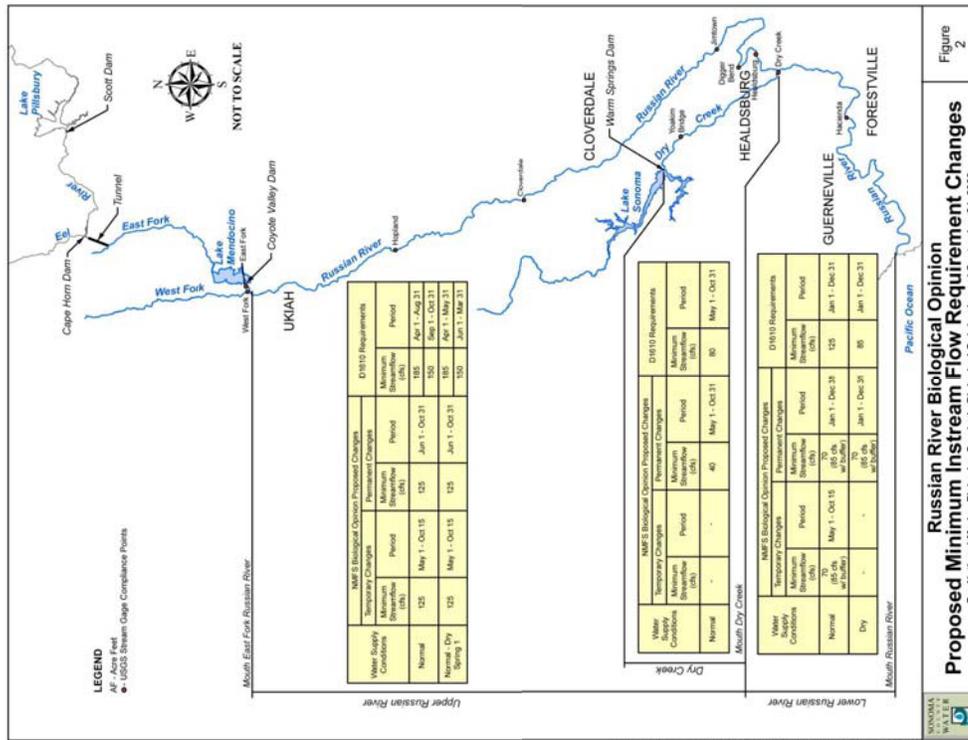
Until the SWRCB issues an order on this petition, the minimum instream flow requirements specified in Decision 1610 (with the resulting adverse impacts to listed salmonids) will remain in effect, unless temporary changes to these requirements are made by the SWRCB. NMFS' Russian River Biological Opinion requires that the Water Agency petition the SWRCB for temporary changes to the Decision 1610 minimum instream flow requirements each year until the SWRCB issues an order on the Water Agency's petition for the permanent changes to these requirements. NMFS' Russian River Biological Opinion only requires petitions for temporary changes to minimum streamflow requirements for the mainstem Russian River, and not to the requirements for Dry Creek. The Water Agency petitioned the SWRCB for the Biological Opinion-specified temporary changes for the first time in 2010, and the SWRCB made a temporary urgency change in its Order WR 2010-0018-DWR. If approved by the SWRCB, the temporary changes required by NMFS will reduce the minimum instream flow requirement to 70 cubic feet per second (cfs) for the lower Russian River between May 1 and October 15. Additionally, to enhance steelhead rearing habitat in the Russian River between the East Branch and Hopland, the temporary changes, if approved, will reduce the minimum instream flow requirement to 125 cfs for the upper Russian River between May 1 and October 15.<sup>6</sup>

The permanent and temporary changes to Decision 1610 minimum instream flow requirements specified by NMFS in the Russian River Biological Opinion are summarized in Figure 2.

<sup>5</sup> National Marine Fisheries Service. *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed*. p. 243, September 2008.

<sup>6</sup> National Marine Fisheries Service. *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed*. p. 247, September 2008.

**Comment Letter G\_LozDru  
Attachment**



**Comment Letter G\_LozDru  
Attachment**

NMFS' Russian River Biological Opinion concluded that, in addition to providing fishery benefits, the lower instream flow requirements "should promote water conservation and limit effects on in-stream river recreation."<sup>7</sup> NMFS stated that the following changes may achieve these goals:

**During Normal Years:**

1. Reduce the minimum flow requirement for the Russian River from the East Fork to Dry Creek from 185 cfs to 125 cfs between June 1 and August 31; and from 150 cfs to 125 cfs between September 1 and October 31.
2. Reduce the minimum flow requirement for the Russian River between the mouth of Dry Creek and the mouth of the Russian River from 125 cfs to 70 cfs.
3. Reduce the minimum flow requirement for Dry Creek from Warm Springs Dam to the Russian River from 80 cfs to 40 cfs from May 1 to October 31.

**During Dry Years:**

1. Reduce the minimum flow requirement for the Russian River between the mouth of Dry Creek and the mouth of the Russian River from 85 cfs to 70 cfs.

During the periods that the temporary changes are in effect, the Water Agency will monitor water quality and fish, and collect and report monitoring information as required by NMFS' Russian River Biological Opinion.

In 2002, 2004, 2007, and 2009, water storage levels in Lake Mendocino declined to dangerously low levels. In 2002, the terms of Decision 1610 authorized the necessary reductions in instream flows, but that was not the case in 2004, 2007 and 2009. In those years, the SWRCB made temporary urgency changes to Water Agency water-right permits, and adopted temporary lower instream flow requirements to preserve water in Lake Mendocino. The situation during these years was due to lack of rainfall and, in 2007 and 2009, also was due to lower inflows from PG&E's PVP. Because of the recent reductions in PG&E's PVP diversions from the Eel River into the Russian River, it is no longer reasonable to use cumulative Lake Pillsbury inflows to determine the water-year type (normal, dry, or critical) that governs the level of Russian River and Dry Creek minimum streamflow requirements. It would be more realistic for the water-year type to be based on Russian River watershed conditions rather than on Eel River watershed conditions.

<sup>7</sup> National Marine Fisheries Service. *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed*. p. 244. September 2008.

## FISH HABITAT FLOWS AND WATER RIGHTS PROJECT

### Objective

The objective of the Fish Flow Project is to manage Russian River Project releases to provide instream flows that improve habitat for threatened and endangered fish, while updating the Water Agency's existing water rights to reflect current conditions.

### Location

The Fish Flow Project would generally be located in the Russian River watershed in Mendocino County and Sonoma County, California, shown on Figure 1. Environmental impacts of the Fish Flow Project would potentially occur at Lake Mendocino, Lake Sonoma, in and along the Russian River downstream of Lake Mendocino/Coyote Valley Dam to Jenner, and in and along Dry Creek downstream of Lake Sonoma/Warm Springs Dam.

### Description

The Water Agency would manage water supply releases from Lake Mendocino and Lake Sonoma to provide instream flows in the Russian River and Dry Creek that would improve habitat for listed salmonids. The proposed Fish Flow Project requires approval by the SWRCB of Water Agency petitions to modify the Water Agency's existing water-right permits. In addition to the water-right modifications related to changing the minimum instream flow requirements to improve habitat for fish, the Water Agency also will file petitions with the SWRCB to update the Water Agency's water-right permits to reflect current conditions. The Water Agency will implement the proposed Fish Flow Project if the water-right modifications are made by the SWRCB.

#### *Minimum Instream Flows for Coho Salmon and Steelhead*

To comply with the requirements of NMFS' Russian River Biological Opinion, the Water Agency has filed a petition with the SWRCB that asks the SWRCB to make the following changes in the instream flow requirements that are specified in Decision 1610 and the Water Agency's water-right permits:

- between June 1 and August 31 of each year the existing minimum instream flow requirement of 185 cfs is proposed to change to 125 cfs for the upper Russian River (upstream of the confluence with Dry Creek and downstream of the confluence of the East and West Forks)
- between September 1 and October 31 of each year the existing minimum instream flow requirement of 150 cfs is proposed to change to 125 cfs for the upper Russian River (upstream of the confluence with Dry Creek and downstream of the confluence of the East and West Forks)

- between January 1 and December 31 of each year the existing minimum instream flow requirement of 125 cfs is proposed to change to 70 cfs for the lower Russian River (downstream of its confluence with Dry Creek)
- between May 1 and October 31 of each year the existing minimum instream flow requirement of 80 cfs is proposed to change to 40 cfs for Dry Creek from Warm Springs Dam to the Russian River.

#### *Minimum Instream Flows for Chinook Salmon*

Operating water supply releases from Lake Mendocino to preserve or increase the pool of cold water available in Lake Mendocino to support the fall Chinook salmon migration runs is also desirable, and may aid in the conservation and recovery of these threatened species. Although the proposed lower minimum instream flow requirements in NMFS' Russian River Biological Opinion will help to achieve this goal, the Water Agency will file another petition with the SWRCB, requesting that the modifications to minimum instream flow requirements be extended beyond the months required by NMFS' Russian River Biological Opinion for the upper Russian River (upstream of the confluence of Dry Creek and downstream of the confluence of the East and West Forks). These additional months could include those earlier or later in the year, or could be extended to be in effect year-round.

#### *Hydrologic Index*

The Water Agency will file another petition with the SWRCB, seeking to change the methodology used to establish the water-year type classifications that determine minimum instream flow requirements for the Russian River, to reflect actual conditions within the Russian River watershed rather than conditions in the Eel River watershed. The proposed hydrologic index will be developed based on appropriate measurements and dates of storage in, or inflows into, Lake Mendocino.

#### *Water-Right Permit Updates*

The Water Agency also will file petitions as needed to update its water-right permits to reflect current conditions and to resolve the time extension petitions that are pending before the SWRCB. These actions are not required to implement the proposed new minimum instream flow requirements or to change the hydrologic index, but will ask the SWRCB to consolidate the process to modify and update the Water Agency's water-right permits so that the SWRCB may make all necessary changes to the Water Agency's water-right permits in one order. These actions will include the pending petitions to extend time to complete use of water to December 1, 2020, and also may include new petitions to amend the place-of-use maps for the Water Agency's water-right permits, so that they are based on actual current and expected uses, and to make other updates or clarifications.

The proposed changes to the minimum instream flow requirements and the criteria used to determine the hydrologic index, and the proposed requests for water-right permit updates may change as the Fish Flow Project description and alternatives are further developed.

**Comment Letter G\_LozDru Attachment**

**ISSUES TO BE ADDRESSED IN THE EIR**

In accordance with CEQA, the Fish Flow Project EIR will address the potential environmental impacts associated with the Fish Flow Project. Specific areas of analysis may include: Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, and Utilities and Service Systems. The EIR will also analyze potential cumulative impacts related to the Fish Flow Project, including potential impacts of other required elements of NMFS' Russian River Biological Opinion. Areas of analysis may be changed based on input received during the Notice of Preparation (NOP) review period. Mitigation measures will be proposed to avoid or reduce such impacts, where reasonably feasible.

The Fish Flow Project EIR will discuss alternatives to the proposed project, and alternatives may be added based on input from the public and regulatory agencies during the NOP review period.

Information to be included in the Fish Flow Project EIR will also be based on input and comments received during the review period for this NOP. Decision-makers, responsible and trustee agencies under CEQA, property owners, and interested persons and parties will also have an opportunity to comment on the Draft EIR after it is published and circulated for public review.

**PUBLIC COMMENT PERIOD FOR THIS NOTICE OF PREPARATION**

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 45 days after receipt of this notice. The public comment period will close at 5:00 p.m. on November 15, 2010. Please include a name, address, and telephone number of a contact person in your agency for all future correspondence on this subject. Please send your comments to:

Sonoma County Water Agency  
 Attn: Jessica Martini-Lamb, Principal Environmental Specialist  
 404 Aviation Boulevard  
 Santa Rosa, CA 95403

You may also submit comments electronically at the Water Agency's website:

[www.sonomacountwater.org/trif](http://www.sonomacountwater.org/trif)

**Comment Letter G\_LozDru Attachment**

**SCOPING MEETINGS**

In order for the public and regulatory agencies to have an opportunity to ask questions and submit comments on the scope of the Fish Flow Project EIR, three Scoping Meetings will be held during the NOP review period. Comment forms will be supplied for those who wish to submit written comments at the scoping meetings; written comments may also be submitted anytime during the NOP review period. The dates, times, and locations of the Scoping Meetings are listed below:

<p><b>Thursday, November 4<sup>th</sup></b>                  5:00 p.m. - 9:00 p.m.                  (Note changed starting time)                  Monte Rio Community Center                  20488 Highway 116                  Monte Rio</p>	<p><b>Monday, November 8<sup>th</sup></b>                  6:00 p.m. - 9:00 p.m.                  Windsor Town Hall                  9291 Old Redwood Hwy                  Windsor</p>	<p><b>Wednesday, November 10<sup>th</sup></b>                  6:00 p.m. - 9:00 p.m.                  The Alex Rorabaugh Center                  1640 South State Street                  Ukiah</p>
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Documents or files related to the Fish Flow Project are available for review at the Water Agency's Administrative Office located at 404 Aviation Boulevard, Santa Rosa, CA, 95403. If you have any questions, or if you wish to update your information on our mailing list, please contact Jessica Martini-Lamb, Principal Environmental Specialist, at (707) 547-1903 or Erica Phelps, Environmental Resources Coordinator, at (707) 547-1934.



# Notice of Preparation of Environmental Impact Report

## FISH HABITAT FLOWS AND WATER RIGHTS PROJECT

### Upcoming Scoping Meetings:

<b>Thursday, November 4<sup>th</sup></b> <b>5:00 p.m. - 9:00 p.m.</b> <i>(Note changed starting time)</i> Monte Rio Community Center 20488 Highway 116 Monte Rio	<b>Monday, November 8<sup>th</sup></b> <b>6:00 p.m. - 9:00 p.m.</b> Windsor Town Hall 9291 Old Redwood Hwy Windsor	<b>Wednesday, November 10<sup>th</sup></b> <b>6:00 p.m. - 9:00 p.m.</b> The Alex Rorabaugh Center 1640 South State Street Ukiah
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Sonoma County Water Agency  
404 Aviation Blvd.  
Santa Rosa, CA 95403

# EXHIBIT B

Endangered Species Act  
Section 7 Consultation

## BIOLOGICAL OPINION

for

Water Supply, Flood Control Operations, and Channel Maintenance  
conducted by the U.S. Army Corps of Engineers, the Sonoma County  
Water Agency, and the Mendocino County Russian River Flood Control  
and Water Conservation Improvement District in the Russian River  
watershed

PCTS Tracking Number: E/SWR/2006/07316  
Action Agency: U.S. Army Corps of Engineers, San Francisco District  
Consultation Conducted By: National Marine Fisheries Service, Southwest Region  
Date Issued: September 24, 2008

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Table of Acronyms

Ac-ft	acre-feet
BA	Biological Assessment
CDPG	California Dept. Fish & Game
CESA	California Endangered Species Act
CHART	Critical Habitat Analytical Review Team
CIE	Center for Independent Experts
Corps	U.S. Army Corps of Engineers
CVD	Coyote Valley Dam
CVFF	Coyote Valley Fish Facility
D1610	SWRCB Water Right Decision 1610
DCFH	Don Clausen Fish Hatchery
DPS	Distinct Population Segment
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
EWSL	Emergency water supply line
FMEP	Fishery Management & Evaluation Plan
HGMPP	Hatchery and Genetic Management Plan
LMHPP	Lake Mendocino Hydroelectric Power Plant
LWD	Large woody debris
MCRRFCD	Mendocino County Russian River Flood Control and Water Conservation Improvement District
MOU	Memorandum Of Understanding
NCPA	North California Power Agency- (member: <i>City of Ukiah</i> )
NCRWQCB	North Coast Regional Water Quality Control Board
NMFS	National Marine Fisheries Service
PCE	Primary Constituent Element ( <i>of critical habitat</i> )
ppm	parts per million
ppt	parts per thousand
RCD	Resource Conservation District
RPA	Reasonable and Prudent Alternative
RRCSCBP	Russian River Coho Salmon Captive Broodstock Program
SCWA	Sonoma County Water Agency
SWRCB	State Water Resources Control Board
TRT	Technical Recovery Team ( <i>for listed species Recovery Plans</i> )
VSP	Viable Salmon Population
WSD	Warm Springs Dam
WWTP	Wastewater Treatment Plants
YOY	Young-of-Year ( <i>i.e.</i> , age 0+ fish)

EXECUTIVE SUMMARY

Pursuant to Section 7(a)(2) of the Federal Endangered Species Act (ESA), NOAA's National Marine Fisheries Service (NMFS) consulted with the U.S. Army Corps of Engineers (Corps) regarding its operations of Warm Springs Dam (WSD) and Coyote Valley Dam (CVD) and a suite of activities that are authorized by the Corps and undertaken by the Sonoma County Water Agency (SCWA) and the Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCD). The Corps, the SCWA, and the MCRRFCD have proposed to implement, for an additional 15 years, ongoing practices and operations at WSD and CVD and activities related to flood control, water diversion and storage, regulation of flows in the Russian River and Dry Creek, estuary management, hydroelectric power generation, channel maintenance, and fish hatchery production.

These actions likely affect Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*), CCC coho salmon (*O. kisutch*), and California Coastal (CC) Chinook salmon (*O. tshawytscha*), each of which is protected as threatened or endangered under the ESA. The proposed actions also likely affect designated critical habitat for these species. The purpose of this consultation is to provide a determination regarding whether the Corps has insured that the proposed project is not likely to jeopardize one or more of these species or destroy or adversely modify their designated critical habitat. If a project is found to jeopardize a species or adversely modify its critical habitat, NMFS must develop a Reasonable and Prudent Alternative (RPA) to the proposed project in coordination with the federal action agency and any applicant. If the project is also expected to result in the incidental take of listed species, NMFS must also provide reasonable and prudent measures (RPM's) to minimize and monitor the impact of the incidental take of listed species.

In this document, we present our analysis and conclusions in the conventional format for biological opinions as described in the Endangered Species Consultation Handbook (U.S. Fish and Wildlife Service and NMFS 1998). This biological opinion includes reviews of the *Consultation History*, a *Description of the Proposed Action*, the *Status of the Species and Critical Habitat*, and the *Environmental Baseline*. Following these reviews we provide an analysis of the *Effects of the Proposed Action*, *Cumulative Effects*, and an *Integration and Synthesis* section in which we analyze the effects of the project in the context of the species status and environmental baseline. This biological opinion concludes with NMFS' determination regarding the impacts of this proposed project on the species' likelihood of survival and recovery, and on the value of the species' critical habitat. Because we have determined that this proposed project is likely to jeopardize the continued existence of some of the salmonid species affected by the proposed project, and adversely modify their critical habitats, we have provided a *Reasonable and Prudent Alternative* (RPA) to the proposed action that 1) avoids jeopardy to the species and adverse modification of critical habitat, 2) can be implemented in a manner consistent with the intended purpose of the action, 3) is economically and technically feasible, and 4) is within the legal authorities of the Corps, SCWA, and MCRRFCD.

**The Proposed Action**

NMFS analyzed the effects of continued operation of the Russian River Water Supply and Flood Control Project for a 15 year period on ESA-listed threatened and endangered salmonid species within the Russian River watershed. The Project includes operation of two dams and appurtenant facilities in the Russian River watershed. Together, these facilities are operated to control flooding within the watershed, to supply water to users within and outside the watershed, and to generate hydroelectric power. The altered flow regimes caused by the Project change the natural hydrology of the Russian River estuary, and artificial breaching of a barrier beach at the mouth of the river is often required to prevent flooding adjacent to the estuary. In addition, the Project includes channel maintenance activities that keep the water delivery system functional and reduce the impacts of flooding in the mainstem and some tributaries of the Russian River. The Project also includes operation of two fish hatchery facilities, the Don Clausen Fish Hatchery (DCFH) located at WSD and the Coyote Valley Fish Facility (CVFF) at CVD. SCWA's scope of maintenance responsibilities covered under this Biological Opinion includes maintenance of stream channels and small reservoirs throughout most of an area that SCWA terms Zone 1A, which consists of the Laguna de Santa Rosa watershed, as well as maintenance activities on the Russian River main stem and the segment of Dry Creek downstream from WSD. The Corps' maintenance activities include safety inspections at the two dams. In addition, MCRRFCD conducts channel maintenance activities related to the CVD in the Mendocino County portion of the Russian River. Channel maintenance by both counties is related to Federal sites and inspection of levees under Public Law 84-99 (non Federal sites), but this consultation does not include implementation of the current Corps Operations and Maintenance manual for channel maintenance in the Russian River watershed. Instead, NMFS is consulting on channel maintenance practices as described in Section III.B and referenced to the Corps and SCWA's Biological Assessment where appropriate.

In the initial draft of this Biological Opinion, dated July 11, 2007, NMFS analyzed the implementation of ongoing project operations for ten years, because SCWA and the Corps were contemplating potential complex, future changes in project flow release schedules associated with new water rights and other avenues for increasing reservoir water supplies. Such changes were likely to take at least ten years to accomplish. We were unable to fully analyze both short-term ongoing and future water supply scenarios because of the uncertainties and limited available information about those future scenarios. Originally, the Corps, SCWA, and NMFS agreed that it was prudent to evaluate project effects for the next ten year period because future changes in water supply operations contemplated by SCWA would likely take ten years to fully analyze and develop the permits and water rights agreements/decisions that may yield additional water rights and water supply that would affect flows and habitat in the Russian River and Dry Creek.

During work on the RPA, the Corps, SCWA, and NMFS determined that a major component of the RPA would take up to fifteen years to complete. The remediation of project impacts to designated critical habitat in Dry Creek would take 12 to 15 years to accomplish. NMFS transmitted a working draft biological opinion to the Corps and SCWA on August 1, 2008, and indicated that the timeframe for analysis of the original proposed project would need to be changed from ten years to fifteen years (NMFS 2008b). NMFS also indicated in transmitting the

working draft that the RPA did not ensure that resulting project operations would not likely jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Because the project's impact on critical habitat could not be fully addressed in a ten year period, NMFS, the Corps, and SCWA agreed to amend the period of the proposed project from ten to fifteen years (Russian River Project Executive Committee Meeting August 4, 2008). The RPA's approaches to addressing impacts to critical habitat were also discussed between SCWA and NMFS and modified subsequent to the August 1, 2008 working draft.

The water supply and flood control elements of the Project involve the regulation of flood flows to control flooding in properties adjacent to the Russian River, and the storage of water in two reservoirs to be released for water supply in Sonoma, Mendocino, and Marin counties during the spring, summer, and fall. The water supply is released from the reservoirs and flows down the main stem Russian River and Dry Creek to diversion points downstream of the dams. Part of the water stays in the river channel and flows to the Pacific Ocean at the river's mouth near Jenner. The diverted water is delivered to end-users for municipal, industrial, agricultural, and domestic uses.

The keystone elements of the project are CVD, on the East Branch headwaters of the Russian River, and WSD on Dry Creek, a main tributary of the Russian River. Russian River water is released from Lake Mendocino (the reservoir formed by CVD) for flood control, and, under the requirements of the State Water Resources Control Board's (SWRCB) Decision 1610 (D1610) for water supply. The Coyote Valley Fish Facility (CVFF) was constructed in 1992 at the base of CVD to mitigate for the loss of salmonid habitat and natural salmonid production upstream of CVD. Water released from Lake Sonoma (the reservoir formed by the WSD) is also released for flood control and water supply. The Don Clausen Fish Hatchery (DCFH) was built at the base of WSD to mitigate for the loss of fish habitat and anadromous salmonid production in the upper Dry Creek watershed. The operation and programmatic purpose of the hatchery has changed to a more adaptive program since its inception. There have been operational changes towards salmonid conservation and recovery to further mitigation goals and to fulfill the Corps' obligation under Section 7 (a)(1) of the ESA. D1610 establishes minimum flow requirements for both Dry Creek and the Russian River. Minimum stream flows under D1610 are specified for four different reaches in the Russian River watershed, assuring high enough summer flows to meet the diversion requirements as well as river-based recreational uses.

In addition to the two major dams in the Russian River watershed, there are several small storage reservoirs, levees, temporary dams, and other elements of the system that contribute to accomplishing the water supply and flood control goals of the Project and are discussed in subsequent sections of this consultation.

**Status of the Species and Critical Habitat**

In this opinion, NMFS assessed the condition of each of the three listed salmonid species relative to their extinction risk; we also describe the function and role of their respective critical habitats for species conservation. The CCC coho salmon includes coastal populations in rivers entering the ocean along the coasts of Mendocino, Sonoma, Marin, San Mateo and Santa Cruz counties.

The CCC steelhead includes populations ranging from those in the Russian River south to streams in Santa Cruz County, plus populations in streams entering San Francisco Bay (e.g., Sonoma Creek, Napa River, Alameda Creek). CC Chinook salmon include populations of this species in coastal streams ranging from the Russian River north to Humboldt County's Redwood Creek. Our assessment of the status of these species examined the viability (per the framework described by McElhany *et al.* 2000) of populations in four to five distinct geographic areas (termed diversity strata) that constitute each species. For this, we used the diversity strata identified by Spence *et al.* (2008).

Our assessment of extinction risk focuses on the viability of individual populations in each diversity strata in order to appropriately apply the ESU viability criteria provided by Spence *et al.* (2008), which is the current definitive source for ESU viability evaluation. Spence *et al.* (2008) report that for an ESU or DPS to be viable, "representative", "redundancy", and "connectivity" criteria must be met.

CCC coho salmon, which is listed as Endangered, faces the highest risk of extinction of the three salmonid species considered in this opinion. This is evidenced by their precipitous decline in abundance during the last several decades and poor status of population viability metrics (abundance, population growth rates, spatial structure, and genetic diversity). Wild populations of this species were extirpated in the nearby Salmon and Walker Creek watersheds; their distribution has been very highly reduced in the Gualala watershed. The cause of this decline is likely the widespread degradation of habitat, particularly those habitat attributes that support freshwater rearing life stages. The loss of this habitat and the concurrent extirpation of local populations have resulted in a high degree of isolation for the remaining populations.

CCC steelhead is listed as a Threatened Species. Its habitat is degraded throughout the Distinct Population Segment, especially in the two diversity strata with streams bordering San Francisco Bay. However, the diverse life-history strategies of steelhead have helped reduce this species' extinction risk overall. For example, the highly variable time of instream residence (one year to several years) and spawning age allow for effective temporal dispersal within a population. Also individuals within this species are able to spawn in multiple years, unlike coho and Chinook salmon which die shortly after spawning. CCC steelhead appears to be doing best in the more coastal environments and seems more challenged, but persistent in the more inland and urbanized areas. The overall extinction risk of this species is moderate.

The extinction risk for CC Chinook salmon, which is listed as a Threatened Species, is likely intermediate between that of CCC coho salmon and CCC steelhead. Their habitat condition is somewhat better than for the other species mainly because their range lies well north of San Francisco Bay and they do not occupy rearing habitats throughout the summer when stream flows can be very low or negligible. However, habitat degradation is still widespread and is particularly an issue in the upper Eel River. Excluding the reduced returns in 2007, the resurgence in abundance in the Russian River and in other southerly watersheds of this ESU suggests favorable conditions not entirely explained by freshwater habitat analysis. In any case, the more restricted life-history strategy compared to steelhead, relative spatial isolation of the Russian River population, and habitat condition in the Eel River make the extinction risk for CCC Chinook salmon higher than for CCC steelhead.

**Environmental Baseline**

The environmental baseline section provides the reference point for the listed species and their habitats within the action area to which NMFS adds the effects of the proposed action. The action area includes the Russian River and its tributaries downstream of WSD and CVD. This large action area is necessary because of the need to address the impacts of straying hatchery fish in the watershed. However apart from that issue, our effects analysis was primarily focused on:

- 1) the East Branch Russian River below CVD and the main stem Russian River from the confluence of the East Branch to the river's mouth at Jenner, 2) Dry Creek downstream of WSD, and 3) areas of the Mark West Creek watershed that do not contain coho salmon, including Santa Rosa Creek and its tributaries, and the Laguna de Santa Rosa. Because channel maintenance activities in Zone 1A and other project actions were not proposed for portions of the Mark West Creek watershed upstream of its largest tributary the Laguna de Santa Rosa, it was unnecessary to focus on that portion of Zone 1A.

The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal Projects that have already undergone consultation under Section 7 of the ESA, and the impact of State or private actions which are contemporaneous with the consultation process. By establishing the historical and current condition of the species and their habitat in the action area, we describe those conditions to which the effects of the project under consultation are added in our analysis of the project. Our ability to understand factors contributing to the baseline condition is also important for predicting future baseline conditions and likely responses of salmonids to the effects of the proposed action.

Urban, residential, and agricultural developments, timber harvest, road construction, water supply and flood control management activities have had a collective adverse effect on the quality and quantity of spawning, rearing, and migratory habitats for steelhead, coho salmon, and Chinook salmon in the Russian River watershed. Prior to the construction in 1908 of the Potter Valley Hydroelectric Project, which conveys water from the upper Eel River to the upper Russian River, late summer flows in the Russian River were in the vicinity of 20 to 30 cfs. Now with that project, the construction of Scott Dam on the Eel River, CVD, and WSD, the Russian River sustains flows over 185 cfs throughout much of the mainstem and at least 125 cfs flows to the ocean in most summers. Prior to these projects, the river's estuary likely closed during summer months with a barrier beach that formed a large freshwater lagoon providing high quality rearing habitat for steelhead and coho salmon.

Prior to European settlement, the mainstem Russian River was a dynamic meandering river which migrated across its floodplain creating ox-bows and side sloughs. Most of the 110 miles of mainstem and many hundreds of more miles in the tributaries were likely historically available to salmonids for spawning and juvenile rearing (SEC 1996). Both the mainstem and tributaries very likely had an abundance of large woody debris in the form of root wads and fallen logs that created scour pools and provided cover and foraging sites for rearing salmonids (SEC 1996). Summer flows were much lower in the mainstem; however, numerous deep pools likely stratified and contained lower cooler layers. Stream channelization, road construction along stream

margins, bank stabilization, and water diversions in tributaries have significantly degraded stream habitats throughout the watershed by simplifying stream channels, isolating them from their flood plains, greatly increasing sedimentation, blocking fish migrations, and reducing or eliminating flow and cover.

#### Effects of the Proposed Action

Listed salmonids are adversely affected by operations for flood control at the two project dams, by project flow releases for water supply, by the management of estuary water levels, by the project related hatchery operations, and by channel maintenance activities in both the mainstem and Russian River tributaries. We did not find significant impacts specific to the operations of the small hydroelectric facilities at CVD and WSD.

Flood control releases at CVD have increased the duration of high flows that scour stream substrates and salmonid spawning habitats in the segment of the mainstem Russian River immediately downstream of the East Branch. In addition, the project's proposed rates of flow ramp down of 250 cfs/hr (when flows are 250-1000 cfs) and 1000 cfs/hr (when flows exceed 1000 cfs) likely cause both CC Chinook salmon and CCC steelhead fry and juveniles to be stranded in isolated pools or beached in dewatered areas. The stranded fry and juveniles are likely to experience higher rates of predation. Some fry and juveniles are likely to be stranded in disconnected pool areas that may not become reconnected depending on flow regime, resulting in the death of these fish. Pre-flood and five-year periodic inspections at CVD, which are conducted during late summer, adversely affect juvenile steelhead because the Corps shuts off stream flow at CVD for about two hours with resulting loss of salmonid rearing habitat in the East Branch and stranding of juvenile steelhead in the remaining isolated pools. CVD is also known to release highly turbid water for extended periods well after turbidity levels have diminished upstream of the mainstem's confluence with the East Branch and elsewhere in the river's unregulated tributaries.

Flood operations at WSD likely cause minor scouring of spawning habitat in Dry Creek in the three mile segment immediately below the dam. We estimate that 5 to 10% of the salmonid redds constructed in this segment are likely to be scoured (*i.e.*, lost) when WSD releases are 5000 cfs or greater. The proposed rates of ramp down for WSD flood control operations, which are the same as above for CVD, are expected to cause stranding of fry and juvenile salmon and steelhead in the three mile segment immediately below the dam. However, the steep banks and lack of side channels in this segment are generally not conducive to high stranding rates. The continuous 25 cfs minimum bypass flow at WSD will likely avoid stranding and beaching of juvenile steelhead or coho salmon during annual pre-flood and five-year periodic inspections.

Flood control operations at the dams will affect stream flows in Dry Creek and the main stem during and shortly after heavy precipitation and runoff in winter or early spring. These operations limit peak flows by storing water in the reservoirs, after which the Corps releases those waters downstream during an extended period when flood risk has abated.

# EXHIBIT C



Linda S. Adams  
Secretary for  
Environmental Protection

**Comment Letter G\_ LozDru  
Attachment**

**California Regional Water Quality Control Board  
North Coast Region**

Geoffrey M. Hales, Chairman

www.waterboards.ca.gov/northcoast  
5550 Skyline Boulevard, Suite A, Santa Rosa, California 95403  
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135



Arnold  
Schwarzenegger  
Governor

November 15, 2010

Ms. Jessica Martini-Lamb  
Sonoma County Water Agency  
404 Aviation Boulevard  
Santa Rosa, CA 95403

Dear Ms. Martini-Lamb:

**Subject:** Comments on the Notice of Preparation of an Environmental Impact Report for the Fish Habitat Flows and Water Rights Project, SCH No. 2010092087

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of an Environmental Impact Report for the Fish Habitat Flows and Water Rights Project (Fish Flow Project EIR). We appreciate the opportunity to participate early in the environmental review process. The North Coast Regional Water Quality Control Board (Regional Water Board) is a responsible agency for this project, with jurisdiction over the quality of ground and surface waters (including wetlands) and the protection of the beneficial uses of such waters.

The proposed project consists of the management of water supply releases from Lake Mendocino and Lake Sonoma to provide instream flows in the Russian River and Dry Creek. The project proposes to modify the Sonoma County Water Agency's (Water Agency) existing water-right permit to charge the minimum instream flow requirements, consistent with the National Marine Fisheries Service's Russian River Biological Opinion dated September 24, 2008.

We have reviewed the NOP for the Fish Flow Project EIR and offer the following recommendations and comments.

General Comments

The mission of the State Water Resources Control Board and Regional Water Boards is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The quality of surface and ground waters in the North Coast Region of California is governed by the *Water Quality Control Plan for the North Coast Region* (Basin Plan) and state-wide Policies. The Basin Plan identifies the existing and potential beneficial uses of water within the North Coast Region and the water quality

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objectives necessary to protect those uses. The relevant existing beneficial uses that apply to the Project area include: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Groundwater Recharge (GWR), Water Contact Recreation (RECT), Non-Contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Estuarine Habitat (EST), Rare, Threatened, or Endangered Species (RARE), Migration of Aquatic Organisms (MIGR), and Spawning, Reproduction, and/or Early Development (SPWN). The water quality objectives of specific concern to Regional Water Board staff are outlined in the following sections. Together water quality objectives, beneficial uses, the anti-degradation policy, and implementation policies are known as water quality standards. The NOP identifies hydrology and water quality as specific areas of analysis for the EIR, including an analysis of potential cumulative impacts related to the Project. The Fish Flow Project EIR must ensure that the Project complies with the water quality standards within the Project area.

Russian River Water Quality Impairments

Section 303(d) of the federal Clean Water Act and 40 CFR §130.7 require states to identify water bodies that do not meet water quality standards and are not supporting their beneficial uses. These waters are placed on the Section 303(d) List of Water Quality Limited Segments (also known as the list of Impaired Waterbodies). The List identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. On August 4, 2010, the State Water Board adopted the California 2010 303(d) List and the United States Environmental Protection Agency will likely approve or disapprove the 2010 List in November 2010. This 2010 List includes the following three impairments for the Russian River within the Project area: sedimentation/siltation, temperature, and indicator bacteria.

State Water Board staff have begun assessing available data in order to update the 303(d) List. State Water Board staff's assessment includes nutrient and algal biomass data collected within the Project area and submitted by interested parties. At a later date, Regional Water Board staff will consider whether the available data demonstrates that the Russian River within the Project area is impaired for nutrients/bio-stimulatory substances.

Regional Water Board staff is currently developing a pathogen total maximum daily load (TMDL) for the Russian River to address the indicator bacteria impairments and a temperature implementation policy to address the temperature impairment. The sediment impairment in the Russian River watershed is addressed, in part, by the *Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region* (Resolution No. R1-2004-0087).

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### Water Quality Objectives of Concern

The following are the water quality objectives that we believe could be violated under the Fish Flows Project, and a brief explanation of why violations of these objectives are a concern.

**Bacteria:** *The bacteriological quality of waters of the North Coast Region shall not be degraded beyond natural background levels. In no case shall coliform concentrations in waters of the North Coast Region exceed the following: In waters designated for contact recreation (REC-1), the median fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed 50/100 ml, nor shall more than ten percent of total samples during any 30-day period exceed 400/100 ml (State Department of Health Services).*

Per the *Draft Guidance for Fresh Water Beaches* (DHS 2006), freshwater beach posting is recommended when single sample levels exceed the following thresholds: 1) Total coliforms - 10,000 MPN/100mL; 2) E. coli - 235 MPN/100mL; and 3) Enterococcus - 61 MPN/100 mL.

Our working hypothesis, supported in part by preliminary empirical analysis of available data (Attachment 1), is that under a given loading of bacteria from existing sources, reduced flows provides less dilution and may lead to higher bacteria concentrations, potentially causing violation of the bacteria objectives and beach posting thresholds and not supporting REC1 and REC2.

**Biostimulatory Substances:** *Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.*

Biostimulatory substances include nitrogen and phosphorus. It is generally recognized that flow, along with channel morphology and riparian conditions, is a "risk cofactor" that can affect the biostimulatory response of nutrients in a waterbody (Tetra Tech 2006). Assuming all other factors are constant, a given concentration of nitrogen and phosphorus in a waterbody can lead to greater biostimulation under reduced flows. Biostimulation can result in more aquatic plant productivity under lower flow conditions.

**Dissolved Oxygen:** *The instantaneous minimum concentration of dissolved oxygen (DO) required is 7.0 mg/L. Half of the monthly mean DO values for the year must be 10.0 mg/L or greater.*

Reduced DO conditions can occur, particularly during pre-dawn and early morning hours, due to respiration of aquatic plants and decomposition of organic

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matter, which can occur under biostimulatory conditions in a water body. As summarized above, biostimulatory conditions may result from reduced flows in the Project area.

**Toxicity:** *All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board.*

The toxic parameters of concern are blue-green algae toxins. Algal productivity is a biostimulatory response. Algal biomass can include blue-green algae species. Some blue-green algae species produce algal toxins that can be harmful to humans, pets, and wildlife.

**Temperature:** *The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.*

*At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature.  
At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperatures.*

"Natural receiving water temperature" is that temperature regime that would occur in the absence of human alteration of those factors, including flow, which can affect stream temperature. The Fish Flows Project EIR must demonstrate to the satisfaction of the Regional Water Board that the Project does not contribute to violation of the temperature objective. We recommend the use of a water quality model to evaluate temperatures representing baseline, with-project, and natural conditions. The natural condition representation should evaluate temperatures that would be expected to occur without flow augmentation from reservoirs. The model should be capable of predicting hourly temperatures so that the 5°F restriction can be properly evaluated.

**Sediment:** The Basin Plan contains the following four sediment-related water quality objectives:

*Sediment: The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.*

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*Turbidity: Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.*

*Suspended Material: Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.*

*Settleable Material: Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.*

Flow is a factor that could affect in-stream sediment loads. One potential mechanism for increases in sediment discharges from the Project is a drop in the water table which might lead to loss of riparian vegetation and subsequent bank erosion.

Water Quality Monitoring and Assessment

As stated above, the Fish Flow Project EIR must ensure that the Project complies with the water quality standards within the Project area. This assessment should be based on not only available water quality data, but also new water quality data, the collection of which should be designed specifically to evaluate potential impacts to water quality standards from reduced flows.

The stated objectives of the Russian River Water Quality Monitoring Plan for the Sonoma County Water Agency 2010 Temporary Urgency Change (2010 Monitoring Plan) were, "to provide information to evaluate potential changes to water quality and availability of aquatic habitat for salmonids resulting from the proposed permanent changes to Decision 1610... and provide information to support the development of a CEQA document required for permanent changes to Decision 1610." We support these objectives, and expect the Water Agency to meet them through additional monitoring and assessment efforts in 2011 and beyond. We believe that the assessment of changes in water quality should involve statistical analysis. Statistical analysis of water quality data for trends often requires an adequate time period to detect a statistical change in constituent concentration. The amount of time required to detect a trend is dependent on the sample variability. Constituents like bacterial indicators have a high ambient variability and therefore require longer monitoring time periods before a trend can be detected.

As mentioned previously, Regional Water Board staff are conducting water quality monitoring and assessment in development of an indicator bacteria TMDL for the Russian River within the Project area. In addition, in 2011 Regional Water Board's Surface Water Ambient Monitoring Program will conduct monitoring and assessment of nutrient/biostimulatory conditions within the Project area. Regional Water Board staff will make our data from these projects available to Water Agency staff for your use in

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preparing the Fish Flow Project EIR. In addition, Regional Water Board staff are available to work with Water Agency staff to design additional monitoring to support the preparation of the EIR. Finally, Regional Water Board staff are available to consult Water Agency staff on appropriate statistical analyses to conduct on relevant water quality data in order to meet the stated monitoring and assessment objectives of the 2010 Monitoring Plan.

Impacts to Estuary

The Project has the potential to cause elevated water levels within the Russian River estuary. The Fish Flow Project EIR should evaluate the potential for elevated water levels to inundate residential septic systems located near the estuary shore and cause system failures, which could lead to discharges in violation of the Basin Plan.

Though Regional Water Board staff recognize that this Project NOP does not address breaching of the barrier beach between the ocean and the Russian River estuary, we provide the following comments for your consideration. Past activities to artificially breach the barrier beach between the ocean and Russian River Estuary have been covered by a Clean Water Act Section 401 Certification (certification). The current certification (WDID No. 1B04001WNSO) and its amendment expire on December 31, 2010. On September 24, 2008, the National Marine Fisheries Service issued the Biological Opinion entitled "Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation Improvement District in the Russian River Watershed," (File No. 1514222SWR2000SR150).

A new certification will need to be applied for and issued for new methods of creating the outlet channel and breaching the estuary that will be more protective of salmonids and the estuarine habitat by providing deeper, cooler, and less saline water for improved rearing habitat for salmonids within the estuary. Flow will be a critical factor to evaluate and include within the certification application. Information on our certification program may be found on our website at:

[http://www.swrcb.ca.gov/northcoast/water\\_issues/programs/water\\_quality\\_certification.shtml](http://www.swrcb.ca.gov/northcoast/water_issues/programs/water_quality_certification.shtml).

Concluding Comments

Regional Water Board staff recognize the potential conflicts between compliance with the National Marine Fisheries Service Biological Opinion and the Basin Plan water quality standards that the Fish Flow Project poses. As summarized above, we are concerned that the Project may contribute to violations of some water quality standards that apply to the Project area. Further, Regional Water Board staff expect the Fish Flow Project EIR to include qualitative and quantitative (i.e. statistical) assessment of whether the Project will cause violations of water quality standards and to include appropriate measures, as necessary, to mitigate identified impacts to these water quality standards.

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Regional Water Board staff are available to consult with Water Agency staff in identifying appropriate measures to mitigate potential water quality violations caused by the Project.

Again, we thank you for the opportunity to comment. We look forward to continuing to work with Water Agency staff on this Project in our efforts to protect water quality. If you have any questions regarding these comments, you may contact me or Matt St. John at (707) 570-3762 or MSTJohn@waterboards.ca.gov.

Sincerely,

Original signed by

Catherine Kuhlman  
Executive Officer

101115\_MSJ\_FishFlowProject\_EIRCommentLetter

cc: Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812  
Re: SCH No. 2010092087

Barbara Evoy, Division of Water Rights, State Water Resources Control Board,  
P.O. Box 2000, Sacramento, CA 95812

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**Attachment 1  
Assessment of Fecal Indicator Bacteria in the Lower Russian River**

Regional Water Board staff assessed fecal indicator bacteria (FIB) samples collected from the Russian River for possible effects from variation in stream flow. FIB data for total coliform, E. coli, and enterococcus were compiled from several sources for the assessment.

SCWA conducted water quality monitoring at fifteen (15) sampling locations along the mainstem of the Russian River from May 28, 2009 through October 1, 2009. Samples were also collected by Regional Water Board staff at these same locations during 2009 for the routine beach assessment program. Regional Water Board staff also assessed historical FIB data (1995-2008) collected at six (6) sample locations within the Project area. Nearly 2,000 FIB data samples were available for this assessment (Table 1).

Table 1. Number of Fecal Indicator Bacteria data samples assessed

Location	Total Coliform		E. coli		Enterococcus	
	1995-2008	2009	1995-2008	2009	1995-2008	2009
Camp Rose	177	27	95	27	41	27
Healdsburg Memorial Beach	211	27	103	27	66	27
Steelhead Beach	83	27	81	27	30	27
Forestville Beach	10	27	10	27	10	27
Johnson's Beach	166	27	87	27	30	27
Monte Rio Beach	166	14	88	14	30	14

**Data Assessment**

The purpose of the Water Agency 2009 sampling was to assess whether the ambient FIB concentrations changed due to the reduction in flow resulting from the minimum flow requirement variance. Regional Water Board staff's assessment includes: (1) visual comparison of 2009 FIB concentration data to historical data, (2) linear regression between stream flow and FIB concentration, (3) FIB load durations curves, and (4) trend analysis.

While there is considerable variability in observed FIB concentrations, both spatially and temporally, within the Project area, Regional Water Board staff's assessment detailed below indicates that some of this variability is correlated with flow conditions. Lower flows appear to result in higher FIB concentrations, and violations of bacteria objectives and beach posting thresholds, in some instances.

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**Visual Comparisons**  
Box plots of the FIB data collected in 2009 are visually compared to box plots of all years of historical data collected at each site (Figures 1 – 6). Box plots show data set medians, quartiles, and outliers. The visual comparison suggests that with a few exceptions there is no large apparent difference between FIB concentrations collected in 2009 as compared to past samples collected at each location.

Figure 1. Comparison of the Distribution of FIB Concentrations Measured at Camp Rose.

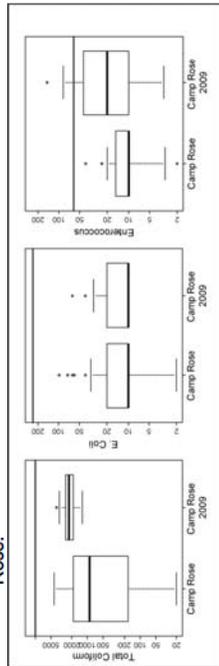


Figure 2. Comparison of the Distribution of FIB Concentrations Measured at Healdsburg Memorial Beach.

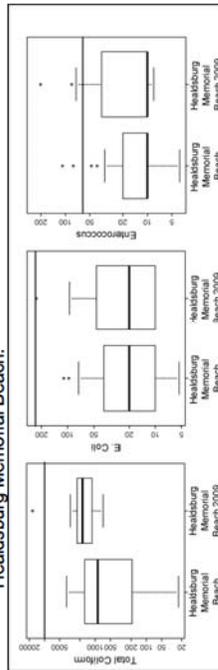


Figure 3. Comparison of the Distribution of FIB Concentrations Measured at Steelhead Beach.

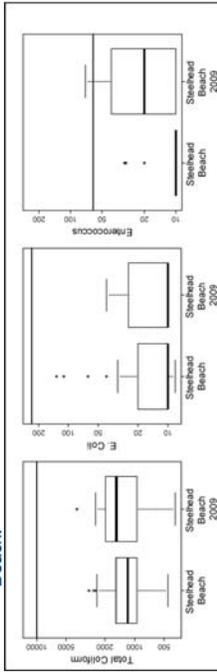


Figure 4. Comparison of the Distribution of FIB Concentrations Measured at Forestville Access Beach.

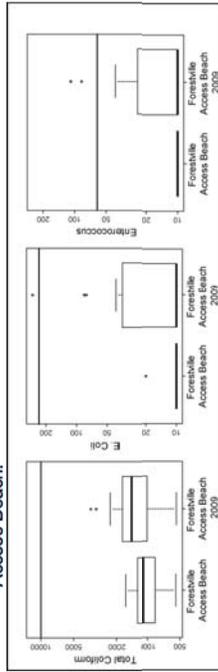


Figure 5. Comparison of the Distribution of FIB Concentrations Measured at Johnson's Beach.

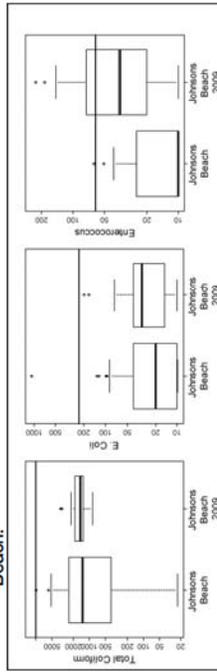
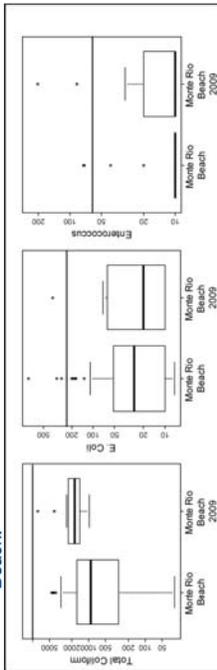


Figure 6. Comparison of the Distribution of FIB Concentrations Measured at Monte Rio Beach.



**Linear Regression**

The relationship between stream flow and FIB concentrations was assessed using linear regression. Daily stream flow data from the nearby U.S. Geological Survey (USGS) gauging station were matched with each FIB sample. FIB data from Camp Rose and Healdsburg Memorial Beach were compared to daily flows recorded at the USGS gauge near Healdsburg (#11464000). FIB data collected at the other four locations were compared to daily flow recorded at USGS gauge near Guerneville (#11467000).

Data were log-transformed to address the normality distribution requirement of regression analysis. Visual inspection of the frequency distribution histograms show that log-transformation of the FIB data resulted in a distributions more normally distributed (Figures 7-10).

Figure 7. Frequency Distribution of Russian River Stream Flow Measurements at USGS Gauges near Healdsburg and Guerneville.

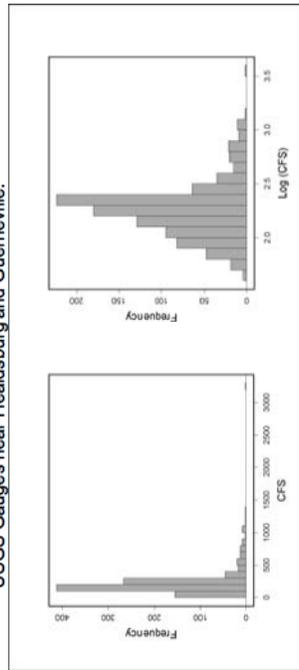


Figure 8. Frequency Distribution of Total Coliform Concentrations at all 6 Sites

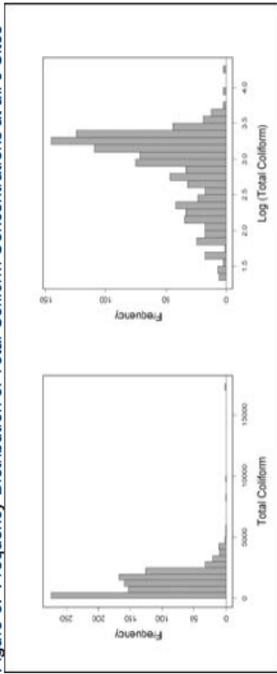


Figure 9. Frequency Distribution of E. coli Concentrations at all 6 Sites

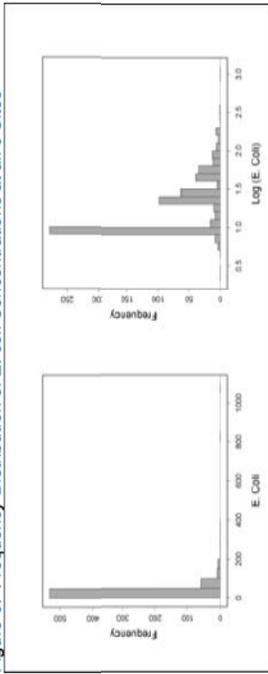
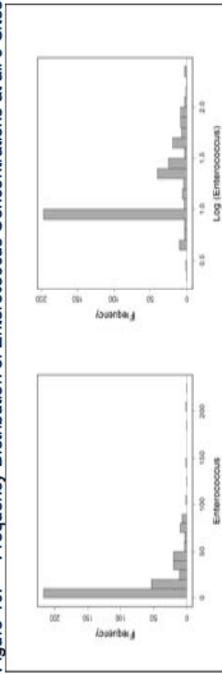


Figure 10. Frequency Distribution of Enterococcus Concentrations at all 6 Sites



Linear regression models were fitted using the Pearson least squares approach with the log-transformed FIB and flow data. Several of the regression analyses show a statistically significant relationship between flow and FIB concentration (Table 2). Most of these significant relationships explain less than 10% of the variance between the variables. However, several locations show a larger influence of flow on FIB concentrations. For example, analysis of enterococcus concentrations collected at Camp Rose show that flow explains nearly half of the variation. The negative slope of the regression line indicates that lower flows result in higher ambient concentrations.

Table 2. Relationship between Stream Flow and Fecal Indicator Bacteria Concentration. **Bold font** indicates a statistically significant regression.

<b>FIB</b>	<b>Site</b>	<b>Explained Variance (%)</b>	<b>Probability</b>	<b>Slope</b>
Total Coliform	Camp Rose	<b>3%</b>	<b>0.02</b>	-0.37
	Forestville Access Beach	<b>27%</b>	<b>0.00</b>	0.52
	Healdsburg Memorial Beach	0%	0.67	0.00
	Johnson's Beach	<b>4%</b>	<b>0.00</b>	-0.42
	Monte Rio Beach	1%	0.17	-0.21
	Steelhead Beach	<b>4%</b>	<b>0.04</b>	0.14
E. coli	Camp Rose	<b>4%</b>	<b>0.02</b>	0.19
	Forestville Access Beach	0%	0.71	0.11
	Healdsburg Memorial Beach	1%	0.21	0.13
	Johnson's Beach	0%	0.86	-0.02
	Monte Rio Beach	2%	0.16	0.24
	Steelhead Beach	0%	0.60	0.04
Enterococcus	Camp Rose	<b>46%</b>	<b>0.00</b>	-1.06
	Forestville Access Beach	1%	0.57	-0.14
	Healdsburg Memorial Beach	<b>6%</b>	<b>0.02</b>	-0.36
	Johnson's Beach	4%	0.13	-0.33
	Monte Rio Beach	0%	0.90	0.03
	Steelhead Beach	<b>15%</b>	<b>0.00</b>	-0.41

Load Duration Curves

Load duration curves are a useful tool identifying pollutant problems over the entire flow regime of a river (USEPA, 2007). A load duration curve provides a visual display of the relationship between flow and pollutants, like FIB. The load duration curve presents the frequency and magnitude of FIB measurements along with the allowable loads derived from water quality standards and stream flow data.

First, flow duration curves were generated for USGS Russian river flow gauging stations, near Healdsburg (#11464000) and near Guerneville (#11467000). The flow durations curves for the two USGS gauges were developed using daily flow measurements recorded from 1939 to present (Figures 11 & 12).

Figure 11. Flow Duration Curve for Russian River near Healdsburg (#11464000)

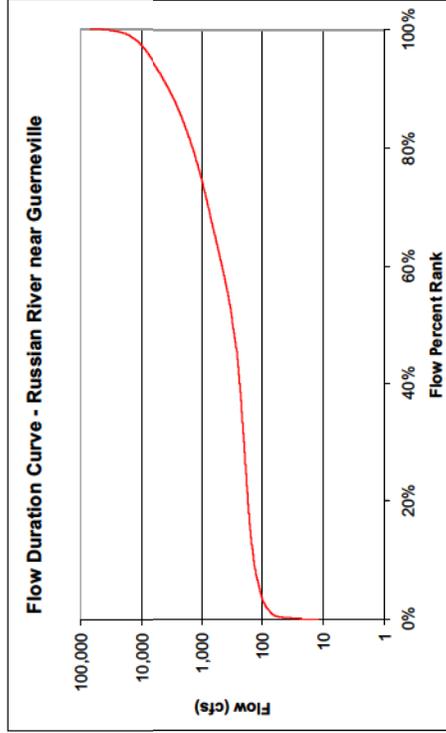
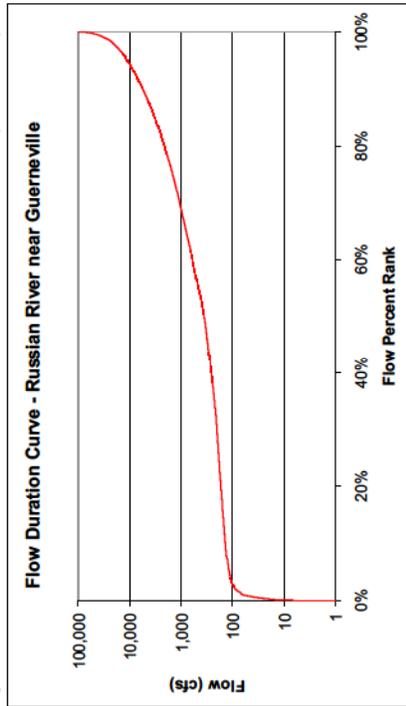


Figure 12. Flow Duration Curve for Russian River near Guerneville (#11467000)



Second, load duration curves were prepared for each sampling locations from the measured FIB data and the daily stream flow (Figures 13 - 18). FIB data from Camp Rose and Healdsburg Memorial Beach were compared to daily flows recorded at the USGS gauge near Healdsburg (#11464000). FIB data collected at the other four locations were compared to daily flow recorded at USGS gauge near Guerneville (#11467000). The allowable loads are shown as the solid curve lines; the allowable loads were derived from the water quality thresholds used for beach posting by Sonoma County Health Services (DHS, 2006): (1) Total coliforms not to exceed 10,000 MPN/100mL, (2) E. coli not to exceed 235 MPN/100mL, and (3) Enterococcus not to exceed 61 MPN/100 mL. The results show that exceedance of allowable loads within the Project area tend to occur during periods of lower flow.

Figure 13. Total Coliform Load Duration Curve for Russian River near Healdsburg

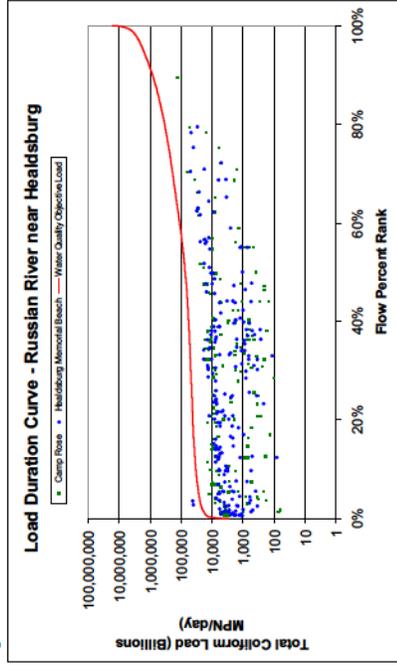


Figure 14. Total Coliform Load Duration Curve for Russian River near Guerneville

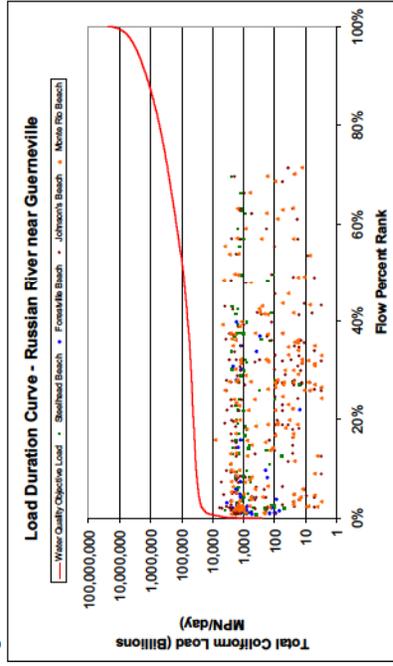


Figure 15. E. coli Load Duration Curve for Russian River near Healdsburg

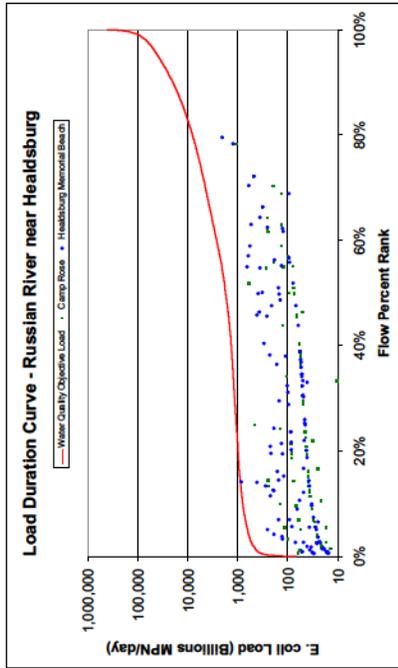


Figure 16. E. coli Load Duration Curve for Russian River near Guerneville

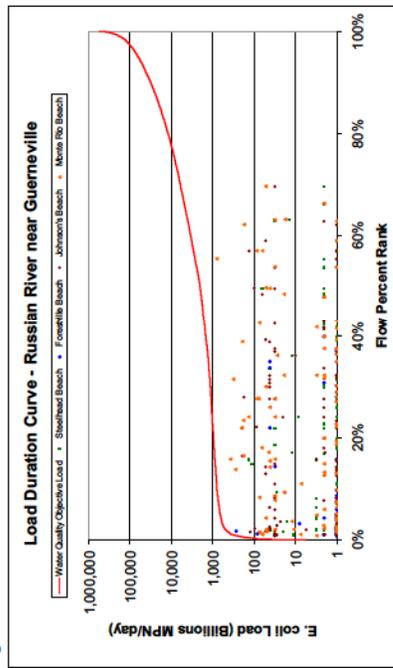


Figure 17. Enterococcus Load Duration Curve for Russian River near Healdsburg

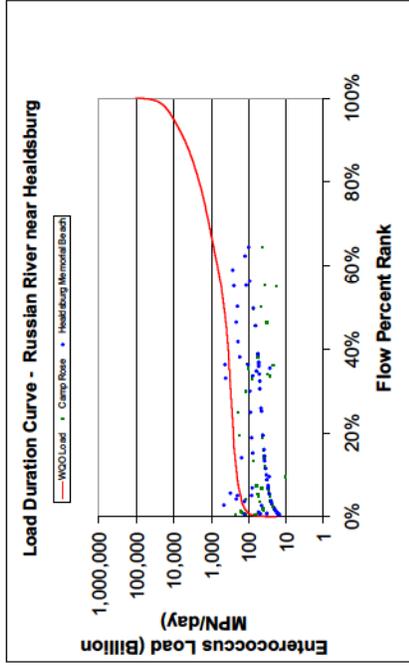
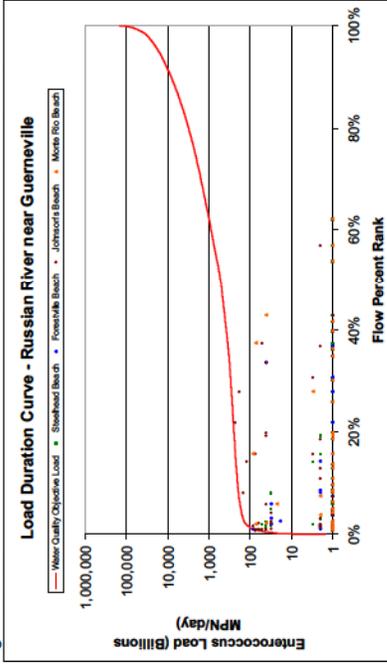


Figure 18. Enterococcus Load Duration Curve for Russian River near Guerneville



Trend Analysis

Trend analysis was conducted for FIB concentrations at each of the six monitoring stations within the Project area using current and historical data. Water quality data possess distributional characteristics that generally require specialized approaches to trend testing. Water quality data sets can contain censored (less than) values, outliers, multiple detection limits, missing values, and serial correlation. These characteristics commonly present problems in the use of conventional parametric statistics based on normally distributed data sets. The presence of censored data, non-negative values, and outliers generally lead to a non-normal data distribution which is common for many data sets. These skewed data sets require use of specific non-parametric statistical procedures for their analysis. Nonparametric statistical tests are more powerful when applied to non-normally distributed data, and almost as powerful as parametric tests when applied to normally distributed data (Heisel and Hirsch, 2002).

The nonparametric Mann-Kendall test for linear trend (Heisel et al. 2006) was used to evaluate whether FIB concentrations have increased or decreased significantly since the base year. The test is non-parametric, rank order based, and insensitive to missing values. Sen's slope estimator (Sen, 1968) was used to estimate the magnitude of change over time when a significant trend was observed. Sen's slope estimator is a non-parametric method that is insensitive to outliers and can be used to infer the magnitude of a trend in the data. Sen's slope estimator is not greatly affected by gross data error or outliers, and it can be computed when data are missing. Sen's slope estimator is closely related to the Mann-Kendall statistic in that all possible slopes are calculated between all possible data pairs and the resulting median slope is the Sen slope. The Sen's slope estimator was used to estimate the slope for the Mann-Kendall test.

The dataset contains FIB concentration measurements with levels below the detection limit of the analytical method. These values were assigned the value of the detection limit. Data sets having large numbers of values below detection limit (BDLs) may create statistical problems for trend analyses. The Mann-Kendall test for trend adjusts variance estimates upward for ties in magnitude. Since BDL values in the raw data set produce such ties, trend analyses of data sets with high percentages of BDLs will be based upon greater variances than those without BDLs. Thus, the power of the trend analyses for the data sets with BDLs are reduced compared to those without detection limits censoring. If the percentage of BDL observations is greater than 50, it is reported there are too many observations below the detection limit to determine the presence or absence of trend.

Trends in FIB concentrations were evaluated for the effect of flow (Table 3). Several of the sites show increasing trend in FIB concentrations. These trends may be due to natural trends in flow due to climate. For example, a trend may be observed if the last

few years in a set of data were collected during drought conditions with lower flows. The effect of the lower flows on the apparent trend can be addressed using the relationship observed between flow and FIB concentration. The regression equation resulting in statistically significant relationship between flow and FIB was applied to the data. The residuals resulting from the difference of the predicted values from the observed value were tested for trend. The results indicate a trend without the influence of flow.

Trends of FIB concentrations were also evaluated by removing the effect of flow from those sampling locations with a statistically significant relationship to flow. The residuals from the significant regression equations derived above were used to assess trend without the influence of flows. Only those locations with a relationship between a FIB and flow could be assessed for flow influence on FIB trend. Accounting for this flow effect did not change the detection of trend in the FIB data for most locations indicating that the flow did not influence observed trends. However, removing the flow effect did result in removing the observed trends for each FIB at Camp Rose.

Table 3. Trends Statistics for Fecal Indicator Bacteria Concentrations

FIB	Site	Probability	Trend Slope	Trend Inclination
Total Coliform	Camp Rose – with flow influence	<0.01	163.3	Increasing
	Camp Rose – without flow influence	<0.01	-0.001	Decreasing
	Forestville Access Beach – with flow influence	0.51	-61.7	None
	Forestville Access Beach – without flow influence	0.70	-38.4	None
	Healdsburg Memorial Beach	<0.01	105.2	Increasing
	Johnsons Beach – with flow influence	<0.01	158.4	Increasing
	Johnsons Beach – without flow influence	<0.01	62.0	Increasing
	Monte Rio Beach	<0.01	128.9	Increasing
	Steelhead Beach – with flow influence	0.56	14.5	None
	Steelhead Beach – without flow influence	0.29	25.4	None
	Camp Rose – with flow influence	0.34	0.0	None
	Camp Rose – without flow influence	<0.01	-0.001	Decreasing
E. coli	Forestville Access Beach	0.49	0.0	None
	Healdsburg Memorial Beach	0.06	0.0	None
	Johnsons Beach	0.59	0.0	None

**Comment Letter G\_LozDru  
Attachment**

Ms. Martini-Lamb

-21-

November 15, 2010

FIB	Site	Probability	Trend Slope	Trend Inclination
	Monte Rio Beach	0.04	-0.7	Decreasing
	Steelhead Beach	0.53	0.0	None
Enterococcus	Camp Rose – with flow influence	<0.01	0.6	Increasing
	Camp Rose – without flow influence	0.19	0.00	None
	Forestville Access Beach	0.08	0.0	None
	Healdsburg Memorial Beach – with flow influence	0.18	0.0	None
	Healdsburg Memorial Beach – without flow influence	0.01	0.0	None
	Johnsons Beach	0.01	3.3	Increasing
	Monte Rio Beach	0.95	0.0	None
	Steelhead Beach – with flow influence	<0.01	0.0	None
	Steelhead Beach - without flow influence	0.133	0.0	None

**CITATIONS:**

California Department of Health Services. 2006. Draft Guidance for Freshwater Beaches. Last Updated May 8, 2006.

Helsel, D.R. and R. M. Hirsch. 2002. *Statistical Methods in Water Resources* Techniques of Water Resources Investigations, Book 4, Chapter A3. U.S. Geological Survey, 522 pages.

Helsel, D.R., Mueller, D.K. and J.R. Slack. 2006. Computer Program for the Kendall Family of Trend Tests. Scientific Investigations Report 2005-5275. U.S. Geological Survey, Reston Virginia.

Sen, P. K. 1968. Estimates of the regression coefficient based on Kendall's tau. Journal of the American Statistical Association 63:1379-1389.

Tetra Tech 2006. Technical Approach to Develop Nutrient Numeric Endpoints for California. Prepared for U.S. EPA and California State Water Resources Control Board – Planning and Standards Implementation Unit. Lafayette, CA. 120 pp.

U.S. Environmental Protection Agency. 2007. An Approach for Using Load Duration Curves in the Development of TMDLs. EPA 841-B-07-006. Washington, DC

**California Environmental Protection Agency**

*Recycled Paper*

## Lozeau Drury LLP, Russian River Watershed Protection, February 14, 2011

- G\_LozDru-1 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.
- G\_LozDru-2 For a discussion of Draft EIR's characterization of existing water quality conditions in the Estuary and impacts analyzed in the Draft EIR, refer to Draft EIR Chapter 3.0, Project Background and Environmental Setting, and **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**. For a discussion of adequacy of the EIR analysis, refer to **Master Response 2.7, CEQA Statutes: Adequacy of EIR Analysis**, in **Chapter 2, Master Responses**.
- G\_LozDru-3 For a discussion of the range of water quality impacts analyzed in accordance with CEQA Guidelines in the Draft EIR, refer to **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**. This comment is general and does not identify a specific inadequacy in the water quality analysis in the Draft EIR.
- G\_LozDru-4 Refer to **Master Response 2.4, Water Quality**, and **Master Response 2.6, Recreational Impacts, Socioeconomic Impacts, and Mitigation Feasibility**, in **Chapter 2, Master Responses**, for a discussion of potential water quality impacts and feasible mitigation.
- G\_LozDru-5 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flow and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, and **Master Response 2.4, Water Quality**, in **Chapter 2, Master Responses**. Please also refer to **Master Response 2.9, Recirculation of Draft EIR**, for a discussion of the CEQA requirements that would trigger recirculation.
- G\_LozDru-6 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**.
- G\_LozDru-7 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project, and the respective project objectives and timing, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements**, in **Chapter 2, Master Responses**. The TUCPs are not proposed as part of the Estuary Management Project and are not included in the project's environmental analysis. The potential for the Estuary Management Project to contribute cumulatively to impacts related to TUCPs are

considered in a cumulative analysis (Draft EIR, Chapter 5.0, Cumulative Analysis) and includes information on the CEQA analysis for the TUCP. The TUCPs result from a separate requirement of the Biological Opinion and have been found by the State Water Resources Control Board to be exempt from CEQA.

G\_LozDru-8 The Estuary Management Project would not obstruct the Russian River mouth. As discussed in Draft EIR Chapter 2.0, Project Description, the outlet channel would be created following natural closure events. Water quality conditions existing in the Estuary, including existing impairments for temperature and sediment, are characterized in Chapter 3.0, Project Background and Environmental Setting, and analyzed in Section 4.3, Water Quality. For additional discussion of Draft EIR's characterization of existing water quality conditions in the Estuary and impacts analyzed in the Draft EIR, and monitoring required under the Russian River Biological Opinion refer to **Master Response 2.4, Water Quality, in Chapter 2, Master Responses**. For a discussion of the relationship, and cumulative effects to water quality, of the Estuary Management Project to the proposal to lower minimum instream flows as required by the Russian River Biological Opinion, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses**.

G\_LozDru-9 Under CEQA, baseline conditions are considered the physical conditions at the time of the Notice of Preparation. Water quality conditions existing in the Estuary, including occurrences of dissolved oxygen and relationship of the Estuary Management Project to Basin Plan Water Quality Objectives, are characterized in Chapter 3.0, Project Background and Environmental Setting, and analyzed in Section 4.3, Water Quality. Draft EIR Section 4.3, Water Quality describes the impairments listed on the 303(d) list and applicability to the Estuary Management Project. Impacts 4.3.2, beginning on page 4.3-17, evaluates potential changes in dissolved oxygen levels; Impact 4.3.3 addressed nutrients and bacteria. Conclusions of the analyses are based on review of best available data relative to these parameters. For additional discussion refer to **Master Response 2.4, Water Quality, in Chapter 2, Master Responses**.

G\_LozDru-10 Draft EIR Section 4.3, Water Quality, beginning on page 4.3-22, provides a discussion of residence time within the estuary. In 2009, the Water Agency contracted with Bodega Marine Laboratory (U.C. Davis) to provide a view of circulation, stratification, residence and salinity in the Russian River Estuary over summer and fall months of 2009. Residence time is a function of river flows into the Estuary, discharge at the river mouth, seepage through the barrier beach, and other losses, such as evaporation and groundwater infiltration. Under current conditions, the estimated residence time in the Estuary ranges from approximately one day, during open tidal conditions, to approximately 27 days, under full closure conditions. With artificial breaching under existing conditions,

the actual residence time within the Estuary during closure events is the time period between barrier beach formation and the implementation of artificial breaching by the Water Agency. This time period is typically between five and 14 days. The fill rate of the estuary is approximately 0.5 feet per day at a flow of 185 cfs. This closed condition is the time between closure and Water Agency artificial breaching. Implementation of the Estuary Management Project would not alter the rate of inflow into the Estuary, or the fill rate of the Estuary. Under the Estuary Management Plan, creation of the outlet channel to support water elevations of 7 to 9 feet would not alter the duration of fully-closed estuary conditions. Rather, it would establish an outlet channel that would result in “steady-state” conditions within the same approximately timeframe. The definition of “steady-state” in the Draft EIR (defined as the continuous outflow condition after the outlet channel is established) conflicts with the commenter’s use of the terms (defined as the period of closure before the outlet channel is created).

As presented in the Draft EIR Section 4.3, Water Quality (page 4.3-23), based upon the lowest observed flows of 70-85 cfs, and stratified conditions observed during the 2009 closure, residence time for the proposed project is estimated to range between 14 days and 22 days, depending upon the depth of the freshwater layer that is established. This represents an increase in estimated residence time of approximately one week, compared to the typical residence time of between five and 14 days associated with artificial breaching under existing conditions. It should be noted that during the extended closure in October 2009, residence time was extended to the duration of the 29-day closure. During that time period, no nuisance conditions were observed.

That is to say, inflow to the estuary would be matched primarily by outflow conveyed by the channel and seepage through the barrier beach. Other natural losses, such as evaporation, would provide additional, but minor losses. Therefore, establishment of the outlet channel would include flow through the Estuary towards the outlet channel, as opposed to full closure conditions, when output is limited to seepage through the barrier beach (Draft EIR Section 4.3, Water Quality, pages 4.3-22 and -23). For additional information regarding fish and wildlife, refer to Draft EIR Section 4.5, Fisheries.

- G\_LozDru-11 Please refer to **Master Response 2.4, Water Quality**. The Estuary Management Project would not create or control sources of discharges of pollution or pollutant loads into the Russian River system.
- G\_LozDru-12 Refer to the analysis provided in Draft EIR Section 4.3, Water Quality, and the discussion in **Master Response 2.4, Water Quality**, and **Master Response 2.6, Recreational Impacts, Socioeconomic Impacts, and Mitigation Feasibility**, in **Chapter 2, Master Responses**, for discussion related to Draft EIR analysis and

level of significance of impacts on parameters, including but not limited to bacteria, nutrients, and salinity, monitoring required under the Russian River Biological Opinion.

G\_LozDru-13 Refer to **Master Responses 2.3, Project Feasibility**, for a discussion related to the adaptive management process, and **Master Response 2.7, CEQA Statutes: Adequacy of EIR Analysis**, in **Chapter 2, Master Responses**.

G\_LozDru-14 Refer to **Master Response 2.9, Draft EIR Recirculation**, in **Chapter 2, Master Responses**.



February 14, 2011

Jessica Martini-Lamb  
Sonoma County Water Agency  
Administrative Office - 404 Aviation Blvd  
Santa Rosa CA 95403

Re: Estuary Management Project Draft EIR

To start with, the Estuary Management Project DEIR is deficient due to project segmentation-- a lack of analysis or insufficient analysis of how controlling the flow regime indicated by the Biological Opinion would affect flows from the Dry Creek confluence downstream through the lower river sections into the estuary. As part of the BO, flows will be controlled, at least partially, by dam releases and SCWA pump uptakes. The proposed lower flows may cause significant adverse environmental impacts to that section of the river. Since the DEIR is only dealing with a part of assessment of impacts and alternatives to the overall river health project, it is considered improper segmentation in violation of CEQA.

G\_NCRW-1

The DEIR does not do an analysis or a sufficient analysis of water quality in the lower reaches of the Russian River as indicated in the letter from the California Regional Water Quality Control Board North Coast Region Geoffrey M. Hales to Ms. Jessica Martini-Lamb, Sonoma County Water Agency, on November 15, 2010. As stated in the conclusion of their letter, "...we are concerned that the Project may contribute to violations of some water quality standards that apply to the Project area. Further, Regional Water Board staff expect the Fish Flow Project EIR to include qualitative and quantitative (i.e. statistical) assessment of whether the Project will cause violations of water quality standards and to include appropriate measures, as necessary, to mitigate identified impacts to these water quality standards." Without this analysis, the DEIR is deficient in this regard.

G\_NCRW-2

In the alternatives analysis in the DEIR, costs of projects were asserted using a subjective descriptor such as "substantial". This descriptor is used in connection with the Jetty Modification and Alternative Flood Management alternatives. For Flood Management the cost is a one-time expense creating a more naturalized regime to the river mouth verses the continued artificial breaching and channeling into the distant future. Without even a crude cost analysis wherever cost is an issue and only described by words as "substantial", the Alternative Analysis section is deficient in the DEIR.

G\_NCRW-3

The Alternative Analysis that weighs impacts and feasibility is inadequate. The decision for the project chosen is not supported by substantial evidence in the record. The method identified in the DEIR was to pick one alternative or variable out of a list of possible alternatives as the solution to the problem. If a superior solution included two or more of them, this was not considered. The analysis of this section actually referred to utilizing alternatives in combination but only in the negative. I don't think CEQA precludes analyzing two or more alternatives that together would

G\_NCRW-4

## Comment Letter G\_NCRW

meet the project outcomes. As an example, by selecting the Alternative Flood Management and Habitat Restoration, the first would naturalize the estuary regime and stop artificial breaching and channeling and the second would provide the necessary nurseries for salmonid development. In addition, there appears to be a statement of outcome when the actual outcome is much less predictable. This comes from Table 6.2 under Proposed Project where this statement occurs: "Yes. Would use outlet channel creation to maintain perched freshwater lagoon conditions during May 15 to October 15. Would provide 4,565 af of storage volume at 9 feet." The confidence of this outcome is purportedly based on an outlet channel constructed on a different river in another watershed without having some of the specific attributes impacting the Russian River mouth and estuary.

G\_NCRW-4  
cont.

Designs of the outlet channel were varied depending on various scenarios. The final determination was not a project with a specific set of criteria but instead a process—adaptive management. How can this be a positive yes for meeting project objectives while the jetty alternative, for example, is unknown? Moreover, the attempts at creating a successful outlet channel have failed thus far. One could conclude that the response in the box under Proposed Project should be unknown, at best.

G\_NCRW-5

From the DEIR it appears that other factors are really in the "unknown" category when it comes to creating stratification layers and how beneficial this will be on all the salmonid species, how rates of predation will manifest itself in a managed closed estuary, what the impacts on pinnipeds would be from managed openings, channeling, and other construction activities. It is one thing to have a naturalized system where openings and closings happen due to the various ocean manifestations and stream flow but when purposeful human activity causes those adverse impacts, whether intended or unintended consequences, this is creates a legal liability and should be refrained.

G\_NCRW-6

The analysis of the disruption and potential harm from constructive activity itself in the estuary appears to be insufficient in the DEIR. In my opinion, this is the one factor that should be completely eliminated due to its obvious disruption to all wildlife including the ones of particular concern of the BO and the potential harm and take due to unintended consequences. All other alternatives could be evaluated based on their benefits with consideration of the briefest construction or deconstruction to obtain intended outcomes.

G\_NCRW-7

I reserve the right to add to my comments when the data that I requested from the lead agency in November 2010 is received and reviewed by me.

G\_NCRW-8

Sincerely,

Larry Hanson, Manager

NCRW

## Comment Letter G\_NCRW Attachment 1

Regional Water Board staff are available to consult with Water Agency staff in identifying appropriate measures to mitigate potential water quality violations caused by the Project.

Again, we thank you for the opportunity to comment. We look forward to continuing to work with Water Agency staff on this Project in our efforts to protect water quality. If you have any questions regarding these comments, you may contact me or Matt St. John at (707) 570-3762 or MStJohn@waterboards.ca.gov.

Sincerely,

Catherine Kuhlman Executive Officer  
101115\_MSJ\_FishFlowProject\_EIRCommentLetter

cc:

Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812 Re: SCH No. 2010092087

Barbara Evoy, Division of Water Rights, State Water Resources Control Board, P.O. Box 2000, Sacramento, CA 95812

**Comment Letter G\_NCRW  
Attachment**

**California Regional Water Quality Control Board North  
Coast Region** Geoffrey M. Hales, Chairman

November 15, 2010

Ms. Jessica Martini-Lamb  
Sonoma County Water Agency  
404 Aviation Boulevard  
Santa Rosa, CA 95403

Dear Ms. Martini-Lamb:

**Subject:** Comments on the Notice of Preparation of an Environmental Impact Report for the Fish Habitat Flows and Water Rights Project, SCH No. 2010092087

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of an Environmental Impact Report for the Fish Habitat Flows and Water Rights Project (Fish Flow Project EIR). We appreciate the opportunity to participate early in the environmental review process. The North Coast Regional Water Quality Control Board (Regional Water Board) is a responsible agency for this project, with jurisdiction over the quality of ground and surface waters (including wetlands) and the protection of the beneficial uses of such waters.

The proposed project consists of the management of water supply releases from Lake Mendocino and Lake Sonoma to provide instream flows in the Russian River and Dry Creek. The project proposes to modify the Sonoma County Water Agency's (Water Agency) existing water-right permit to change the minimum instream flow requirements, consistent with the National Marine Fisheries Service's Russian River Biological Opinion dated September 24, 2008.

We have reviewed the NOP for the Fish Flow Project EIR and offer the following recommendations and comments.

**General Comments**

The mission of the State Water Resources Control Board and Regional Water Boards is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The quality of surface and ground waters in the North Coast Region of California is governed by the *Water Quality Control Plan for the North Coast Region* (Basin Plan) and state-wide Policies. The Basin Plan identifies the existing and potential beneficial uses of water within the North Coast Region and the water quality

**Comment Letter G\_NCRW  
Attachment**

objectives necessary to protect those uses. The relevant existing beneficial uses that apply to the Project area include: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Groundwater Recharge (GWR), Water Contact Recreation (REC1), Non-Contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Estuarine Habitat (EST), Rare, Threatened, or Endangered Species (RARE), Migration of Aquatic Organisms (MIGR), and Spawning, Reproduction, and/or Early Development (SPWN). The water quality objectives of specific concern to Regional Water Board staff are outlined in the following sections. Together water quality objectives, beneficial uses, the anti-degradation policy, and implementation policies are known as water quality standards. The NOP identifies hydrology and water quality as specific areas of analysis for the EIR, including an analysis of potential cumulative impacts related to the Project. The Fish Flow Project EIR must ensure that the Project complies with the water quality standards within the Project area.

**Russian River Water Quality Impairments**

Section 303(d) of the federal Clean Water Act and 40 CFR §130.7 require states to identify water bodies that do not meet water quality standards and are not supporting their beneficial uses. These waters are placed on the Section 303(d) List of Water Quality Limited Segments (also known as the list of Impaired Waterbodies). The List identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. On August 4, 2010, the State Water Board adopted the California 2010 303(d) List and the United States Environmental Protection Agency will likely approve or disapprove the 2010 List in November 2010. This 2010 List includes the following three impairments for the Russian River within the Project area: sedimentation/siltation, temperature, and indicator bacteria.

State Water Board staff have begun assessing available data in order to update the 303(d) List. State Water Board staff's assessment includes nutrient and algal biomass data collected within the Project area and submitted by interested parties. At a later date, Regional Water Board staff will consider whether the available data demonstrates that the Russian River within the Project area is impaired for nutrients/bio-stimulatory substances.

Regional Water Board staff is currently developing a pathogen total maximum daily load (TMDL) for the Russian River to address the indicator bacteria impairments and a temperature implementation policy to address the temperature impairment. The sediment impairment in the Russian River watershed is addressed, in part, by the *Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region* (Resolution No. R1-2004-0087).

Comment Letter G\_NCRW  
Attachment

Water Quality Objectives of Concern

The following are the water quality objectives that we believe could be violated under the Fish Flows Project, and a brief explanation of why violations of these objectives are a concern.

**Bacteria:** *The bacteriological quality of waters of the North Coast Region shall not be degraded beyond natural background levels. In no case shall coliform concentrations in waters of the North Coast Region exceed the following: In waters designated for contact recreation (REC-1), the median fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed 50/100 ml, nor shall more than ten percent of total samples during any 30-day period exceed 400/100 ml (State Department of Health Services).*

Per the *Draft Guidance for Fresh Water Beaches* (DHS 2006), freshwater beach posting is recommended when single sample levels exceed the following thresholds: 1) Total coliforms - 10,000 MPN/100mL; 2) E. coli - 235 MPN/100mL; and 3) Enterococcus - 61 MPN/100 mL.

Our working hypothesis, supported in part by preliminary empirical analysis of available data (Attachment 1), is that under a given loading of bacteria from existing sources, reduced flows provides less dilution and may lead to higher bacteria concentrations, potentially causing violation of the bacteria objectives and beach posting thresholds and not supporting REC1 and REC2.

**Biostimulatory Substances:** *Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.*

Biostimulatory substances include nitrogen and phosphorus. It is generally recognized that flow, along with channel morphology and riparian conditions, is a "risk cofactor" that can affect the biostimulatory response of nutrients in a waterbody (Tetra Tech 2006). Assuming all other factors are constant, a given concentration of nitrogen and phosphorus in a waterbody can lead to greater biostimulation under reduced flows. Biostimulation can result in more aquatic plant productivity under lower flow conditions.

**Dissolved Oxygen:** *The instantaneous minimum concentration of dissolved oxygen (DO) required is 7.0 mg/L. Half of the monthly mean DO values for the year must be 10.0 mg/L or greater.*

Reduced DO conditions can occur, particularly during pre-dawn and early morning hours, due to respiration of aquatic plants and decomposition of organic matter, which can occur under biostimulatory conditions in a water body. As

Comment Letter G\_NCRW  
Attachment

summarized above, biostimulatory conditions may result from reduced flows in the Project area.

**Toxicity:** *All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board.*

The toxic parameters of concern are blue-green algae toxins. Algal productivity is a biostimulatory response. Algal biomass can include blue-green algae species. Some blue-green algae species produce algal toxins that can be harmful to humans, pets, and wildlife.

**Temperature:** *The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.*

*At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperatures.*

"Natural receiving water temperature" is that temperature regime that would occur in the absence of human alteration of those factors, including flow, which can affect stream temperature. The Fish Flows Project EIR must demonstrate to the satisfaction of the Regional Water Board that the Project does not contribute to violation of the temperature objective. We recommend the use of a water quality model to evaluate temperatures representing baseline, with-project, and natural conditions. The natural condition representation should evaluate temperatures that would be expected to occur without flow augmentation from reservoirs. The model should be capable of predicting hourly temperatures so that the 5°F restriction can be properly evaluated.

**Sediment:** The Basin Plan contains the following four sediment-related water quality objectives:

**Sediment:** *The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.*

**Turbidity:** *Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the*

Comment Letter G\_NCRW Attachment

*issuance of discharge permits or waiver thereof.*

*Suspended Material: Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses*  
*Settleable Material: Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.*

Flow is a factor that could affect in-stream sediment loads. One potential mechanism for increases in sediment discharges from the Project is a drop in the water table which might lead to loss of riparian vegetation and subsequent bank erosion.

Water Quality Monitoring and Assessment

As stated above, the Fish Flow Project EIR must ensure that the Project complies with the water quality standards within the Project area. This assessment should be based on not only available water quality data, but also new water quality data, the collection of which should be designed specifically to evaluate potential impacts to water quality standards from reduced flows. The stated objectives of the Russian River Water Quality Monitoring Plan for the Sonoma County Water Agency 2010 Temporary Urgency Change (2010 Monitoring Plan) were, "to provide information to evaluate potential changes to water quality and availability of aquatic habitat for salmonids resulting from the proposed permanent changes to Decision 1610... and provide information to support the development of a CEQA document required for permanent changes to Decision 1610." We support these objectives, and expect the Water Agency to meet them through additional monitoring and assessment efforts in 2011 and beyond. We believe that the assessment of changes in water quality should involve statistical analysis. Statistical analysis of water quality data for trends often requires an adequate time period to detect a statistical change in constituent concentration. The amount of time required to detect a trend is dependent on the sample variability. Constituents like bacterial indicators have a high ambient variability and therefore require longer monitoring time periods before a trend can be detected.

As mentioned previously, Regional Water Board staff are conducting water quality monitoring and assessment in development of an indicator bacteria TMDL for the Russian River within the Project area. In addition, in 2011 Regional Water Board's Surface Water Ambient Monitoring Program will conduct monitoring and assessment of nutrient/bio-stimulatory conditions within the Project area. Regional Water Board staff will make our data from these projects available to Water Agency staff for your use in preparing the Fish Flow Project EIR. In addition, Regional Water Board staff are available to work with Water Agency staff to design additional monitoring to support the preparation of the EIR. Finally, Regional Water Board staff are available to consult Water Agency staff on appropriate statistical analyses to conduct on relevant water quality data in order

Comment Letter G\_NCRW Attachment

to meet the stated monitoring and assessment objectives of the 2010 Monitoring Plan.

Impacts to Estuary

The Project has the potential to cause elevated water levels within the Russian River estuary. The Fish Flow Project EIR should evaluate the potential for elevated water levels to inundate residential septic systems located near the estuary shore and cause system failures, which could lead to discharges in violation of the Basin Plan.

Though Regional Water Board staff recognize that this Project NOP does not address breaching of the barrier beach between the ocean and the Russian River estuary, we provide the following comments for your consideration. Past activities to artificially breach the barrier beach between the ocean and Russian River Estuary have been covered by a Clean Water Act Section 401 Certification (certification). The current certification (WDID No. 1B04001WNSO) and its amendment expire on December 31, 2010. On September 24, 2008, the National Marine Fisheries Service issued the Biological Opinion entitled "Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation Improvement District in the Russian River Watershed," (File No. 1514223WR2000SR150).

A new certification will need to be applied for and issued for new methods of creating the outlet channel and breaching the estuary that will be more protective of salmonids and the estuarine habitat by providing deeper, cooler, and less saline water for improved rearing habitat for salmonids within the estuary. Flow will be a critical factor to evaluate and include within the certification application. Information on our certification program may be found on our website at: [http://www.swrcb.ca.gov/northcoast/water\\_issues/programs/water\\_quality\\_certification.s.html](http://www.swrcb.ca.gov/northcoast/water_issues/programs/water_quality_certification.s.html).

Concluding Comments

'Regional Water Board staff recognize the potential conflicts between compliance with the National Marine Fisheries Service Biological Opinion and the Basin Plan water quality standards that the Fish Flow Project poses. As summarized above, we are concerned that the Project may contribute to violations of some water quality standards that apply to the Project area. Further, Regional Water Board staff expect the Fish Flow Project EIR to include qualitative and quantitative (i.e. statistical) assessment of whether the Project will cause violations of water quality standards and to include appropriate measures, as necessary, to mitigate identified impacts to these water quality standards.

**Comment Letter G\_NCRW  
Attachment**

Regional Water Board staff are available to consult with Water Agency staff in identifying appropriate measures to mitigate potential water quality violations caused by the Project.

Again, we thank you for the opportunity to comment. We look forward to continuing to work with Water Agency staff on this Project in our efforts to protect water quality. If you have any questions regarding these comments, you may contact me or Matt St. John at (707) 570-3762 or [MStJohn@waterboards.ca.gov](mailto:MStJohn@waterboards.ca.gov).

Sincerely,

Catherine Kuhlman Executive Officer  
101115\_MSJ\_FishFlowProject\_EIRCommentLetter

cc:

Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812 Re:  
SCH No. 2010092087  
Barbara Evoy, Division of Water Rights, State Water Resources Control Board,  
P.O. Box 2000, Sacramento, CA 95812

## North Coast River Watch, Larry Hanson, February 14, 2011

G\_NCRW-1 For a discussion of the relationship of the Estuary Management Project to the Fish Habitat Flows and Water Rights Project and other Water Agency operations, refer to **Master Response 2.1, Relationship to Other Biological Opinion Elements, in Chapter 2, Master Responses.**

G\_NCRW-2 The letter from the Regional Water Quality Control Board, dated November 15, 2011, as referenced in the comment is directed toward the Fish Habitat Flows and Water Rights Project, not the Draft EIR for the Estuary Management Project. The Draft EIR does not include an analysis of potential violation of water quality objectives associated with the Fish Habitat Flows and Water Rights Project because this is a separate project. The Draft EIR, Chapter 5.0, Cumulative Analysis, analyzes the potential environmental impacts of the Estuary Management Project in combination with the Fish Habitat Flows and Water Rights Project. For additional discussion, refer to **Master Response 2.4, Water Quality, in Chapter 2, Master Responses.**

G\_NCRW-3 For a discussion regarding alternatives and costs, refer to **Master Response 2.5, Alternatives Analysis, in Chapter 2, Master Responses.** CEQA does not require a full cost feasibility analysis.

G\_NCRW-4 For a discussion of the selection, range, and evaluation of alternatives, refer to **Master Response 2.5, Alternatives Analysis, in Chapter 2 Master Responses.** Final project approval will be made by the Water Agency Board of Supervisors based on full review of environmental considerations.

This comment is also concerned with the assertion that the Estuary Management Project will, with certainty, provide an additional 4,565 are-feet of storage (potential fish rearing habitat). This quantity was derived as part of the Draft EIR analysis based on a calculation of change in volume of water in the Estuary if water levels are maintained at 9 feet. This is not based on another estuary example, rather is calculated based on actual Russian River Estuary characteristics.

G\_NCRW-5 Refer to **Master Response 2.3, Project Feasibility, in Chapter 2, Master Responses.** The Estuary Management Project does not include a specific component for jetty removal. As described in Draft EIR Chapter 6.0, Alternatives Analysis, the Water Agency does not own, maintain, operate, or have jurisdiction over the jetty structure, and is therefore not authorized to make policy decisions for action to remove the jetty. However, the Water Agency is required by the Russian River Biological Opinion to develop a study plan to analyze the effects of the Russian River Estuary jetty on Estuary water levels and on beach morphology, as well as evaluate alternatives that modify the jetty to achieve

target estuarine water levels. This is included as a potential alternative to the Estuary Management Project in Draft EIR Chapter 6.0, Alternatives Analysis.

G\_NCRW-6 As described in general in Draft EIR Section 4.5, Fisheries and in detail under Impact 4.5.1 (page 4.5-19 et seq.), the ecological benefits of lagoon habitat for salmonids (and especially rearing steelhead) have been documented extensively. Please refer to Impact 4.4.1, Special-Status Plant and Animal Species, Marine Mammals, on page 4.4-69. Additionally, the Draft EIR evaluated the potential impacts on pinnipeds occupying the beach haulout site, as well as haulouts located within the mainstem of the Russian River Estuary. For this assessment, refer to Impact 4.4.8, Protected Marine Mammals, on page 4.4-79. With respect to predation, there is no substantial evidence to indicate that intrusive predation would be significantly altered as a result of the project. This predator/prey relationship already occurs, although for a shorter duration and predation is an ongoing survival cycle. This relationship is not addressed by CEQA criteria.

G\_NCRW-7 “Construction” activities, namely operation of heavy machinery to create the lagoon outlet channel, is described in Draft EIR Chapter 2.0, Project Description, and is assumed to consist of one to two pieces of equipment on the beach for initial channel creation and up to eighteen maintenance events over a five month period. The resource analyses in Chapter 4.0, Environmental Setting, Impacts, and Mitigation Measures, include a discussion of impacts associated with channel creation.

A reasonable range of alternatives was evaluated based on the ability to achieve project objectives and minimize or avoid environmental impacts. As presented in Draft EIR Chapter 6.0, Alternatives Analysis, several of the other alternatives, including the Temporary Outlet Standpipe and Jetty Modification, are anticipated to incur equivalent or greater construction related impacts for implementation, and are therefore not environmental superior.

G\_NCRW-8 The requested data related to estuary monitoring was provided to the commenter. No further comments have been submitted.

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