

Memorandum

Date: January 7, 2015

To: Matt St. John
Executive Office
North Coast Regional Water Quality Control Board

From: Neil Manji 
Regional Manager
Region 1 – Northern

Subject: **2014 Triennial Basin Plan Review for the North Coast Region**

The North Coast Regional Water Quality Control Board (Regional Water Board) is reviewing its priority list for the "Water Quality Control Plan for the North Coast Region" (Basin Plan). The Clean Water Act (CWA) section 303(d) and the Porter-Cologne Water Quality Control Act section 13240 require basin plan reviews at a minimum of every three years. The Basin Plan establishes: (1) beneficial uses of water along with water quality objectives needed to reasonably protect them, including an antidegradation policy; (2) action plans and policies for implementing protection; and (3) monitoring necessary to ensure water quality standards are attained. Water quality objectives may be either narrative or numeric targets.

In reviewing its Basin Plan, the Regional Water Board must consider: (1) the potential for modifications or new additions; (2) identify appropriately written portions of the Basin Plan; and (3) as appropriate, adopt water quality standards. The Basin Plan ranks tasks from high to low with high priority tasks being included in work plans for the next three years. Medium and low priority tasks may not be included in the three-year work planning window.

CDFW Roles and Responsibilities

Fish and wildlife resources are held in trust for the people of California. Pursuant to Fish and Game Code (FGC) section 711.7, the California Department of Fish and Wildlife (CDFW) is designated as trustee for the State's fish and wildlife resources. FGC section 1802 grants CDFW jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. As trustee agency for the aquatic resources, CDFW has a material interest in assuring that stream flows and water quality are maintained at levels that sustain populations of aquatic species, avoid take of state listed species and help bring about their recovery.

As a responsible agency, CDFW administers the provisions of the FGC, including the California Endangered Species Act (CESA) (FGC §2080 et seq.), Lake or Streambed Alteration Agreement (FGC §1600 et seq.), Water Pollution (FGC §5650), and other FGC sections intended to conserve the State's fish and wildlife public trust resources. This memorandum only includes comments and recommendations from CDFW, Northern Region, and are in addition to previous CDFW Northern Region Basin Plan comments.

The area covered by the Basin Plan has many regionally important fish-bearing streams supporting listed and sensitive species (Table 1). Dramatic declines in the abundance of Chinook and coho salmon and steelhead trout have resulted in these fish being listed pursuant to the federal Endangered Species Act and CESA and have resulted in economic losses formerly generated by commercial and recreational fisheries in the State.

Table 1. Partial list of State and federally listed and other sensitive species in the Northern Region coastal watershed (FT-federally threatened, ST-State threatened, CSSC-California species of special concern).

Common Name	Species	Status
Coho salmon	<i>Oncorhynchus kisutch</i>	FT, ST
Chinook salmon	<i>O. tshawytscha</i>	FT
Steelhead trout	<i>O. mykiss mykiss</i>	FT
Coastal Cutthroat trout	<i>O. clarki clarki</i>	CSSC
Longfin smelt	<i>Spirinchus thaleichthys</i>	ST
Tidewater goby	<i>Eucyclogobius newberryi</i>	FT, CSSC
Southern torrent salamander	<i>Rhyacotriton variegatus</i>	CSSC
Western pond turtle	<i>Emys marmorata</i>	CSSC
Northern red-legged frog	<i>Rana aurora</i>	CSSC
Foothill Yellow-legged frog	<i>R. boylei</i>	CSSC
Bank swallow	<i>Riparia riparia</i>	ST
Western lily	<i>Lilium occidentale</i>	FE & SE

As trustee agency, CDFW produced *The Recovery Strategy for California Coho Salmon* with its goal of returning a viable Tribal, recreational, and commercial fishery in California (DFG 2004). The Recovery Strategy actions include implementing existing laws, regulations, and permits contributing to coho salmon recovery (DFG 2004). The Recovery Strategy lists the Port-Cologne Water Quality Control Act, Water Code section 13000 et seq. and CWA section 303(d) as existing laws that contribute to coho salmon recovery. As such, CDFW believes the Regional Water Board should consider coho salmon recovery as a high priority during prioritizing Basin Plan tasks.

Task 4. Ground/Surface Water Objectives – Implementation Plan

The Ground/Surface Water Objectives are divided into two phases: Phase I is an amendment to the Water Quality Objectives and Phase II is the Groundwater Protection Policy. In Phase I, the Regional Water Board proposes to develop a narrative groundwater toxicity objective, revised chemical constituents objectives, and add other changes as deemed appropriate.

To protect fish and wildlife resources, CDFW recommends development of numeric targets for endocrine disruptors for surface waters be added to the Ground/Surface Water Objectives. Endocrine disruptors have been linked to developmental, reproductive, behavioral, immunological, and physiological changes in various fish and wildlife species (Colborn and Smolen 1997). Endocrine disruptors are found in over 60% of herbicides (Short and Colborn 1999, Colborn 2004), which are often used in close proximity to surface waters in vineyards and other agricultural areas. Additionally, endocrine disruptors occur in pharmaceuticals (Hayes 2004), which can be discharged to surface waters from wastewater treatment facilities. Given the impacts on fish and wildlife from endocrine disruptors, CDFW recommends the Regional Water Board include endocrine disruptors and objectives in Phase I. CDFW believes including endocrine disruptors is consistent with the Ground/Surface Water Objective of protecting water from chemical constituent contamination.

In Phase II, the Regional Water Board is proposing to add groundwater recharge and beneficial uses to the groundwater objective. Phase II is a high priority in the Basin Plan. CDFW believes adding groundwater recharge to Phase II acknowledges the importance of groundwater supply in providing for adequate surface flows. California has a Mediterranean climate with most of the instream summer flow originating from groundwater. Recharging hydrologically-connected groundwater systems could enhance surface flows during low-flow periods, benefitting listed salmonids. CDFW also supports adding beneficial uses to the groundwater objective and is willing to work on these with Regional Water Board staff.

CDFW supports the specific changes outlined for Phase II to protect the water quality of groundwater. When groundwater is connected to surface waters, pollutants may enter stream networks and impact listed and sensitive species. While Phase II is proposed to be retained as a high priority, Phase I is not. To adequately protect groundwater and surface waters from contamination and low-flows, CDFW supports the Regional Water Board retaining Phase I and Phase II as high priority tasks in the Basin Plan.

Task 5. Develop Instream Flow Objectives for the Navarro River

In the description of this task, the Regional Water Board discusses numeric targets for instream flows as a means to achieve water quality objectives of protecting beneficial uses of water. In development of Instream Flow Objectives for the Navarro River, the Regional Water Board seeks to work with the Division of Water Rights and CDFW staff.

To ensure low-flow numeric objectives within the mainstem Navarro River are sufficiently protective of fish and wildlife resources, CDFW believes numeric low-flow objectives must be developed for flow-impaired tributaries within the watershed. CDFW looks forward to working with the Regional Water Board staff on the Navarro River flow objectives and hopes this task will remain a high priority for the Basin Plan.

Task 9. Instream Flow (Watershed Hydrology) Objective

This Instream Flow Objective discusses maintaining adequate instream flows, maintaining and protecting four-dimensional hydrological functionality, and improving coordination with the Division of Water Rights. However, the Instream Flow Objective does not discuss the impacts of diversions on instream flow and dissolved oxygen. Many California rivers including those on the North Coast no longer support native species or sustain healthy ecosystems (Poff et al. 1997), and are experiencing widespread biodiversity loss, degraded watershed conditions, and altered hydrology (Gartner et al. 2013). Additionally, instream flow and dissolved oxygen are interconnected conditions. If the Basin Plan addresses low-flow conditions, then dissolved oxygen conditions would improve in many watersheds. North Coast streams are relied upon for dust abatement and for domestic, municipal, and agricultural uses, among others. Water diversions during low-flow periods may add to the already degraded water quality conditions. In many watersheds, lower than normal summer base flows diminish water quality and result in low dissolved oxygen levels. Low dissolved oxygen and low stream flows affect listed fish by reducing available rearing habitat. CDFW recommends water quality impairment affected by low-flows be addressed by the Regional Water Board through the Instream Flow Water Quality Objective.

Additionally, four other tasks (Dissolved Oxygen Objectives for Wetlands, Free Flowing Streams and Lakes, Stream and Wetland Protection Policy, and Update Dissolved Oxygen Objectives for Lakes and Estuaries) have dissolved oxygen objectives that could be addressed in the Instream Flow Objective. Because flow and dissolved oxygen are interconnected conditions, the Regional Water Board can address impacts from stream diversions during low-flow periods on several water quality objectives identified elsewhere in the Basin Plan. The Instream Flow Objective is ranked as medium task. Instream flow is the most important habitat parameter for maintaining listed salmonids and other aquatic life. Thus, CDFW recommends the Instream Flow Objective be considered a high-priority task to ensure there are adequate flows and dissolved oxygen levels to support listed salmonids. CDFW also recommends the Regional Water Board develop numeric targets for specific streams affected by low-flow and low-dissolved oxygen.

Conclusions and Recommendations

CDFW supports the Regional Water Board in its efforts to protect water quality, especially as it affects fish and wildlife resources. CDFW has the following recommendations for the Regional Water Board for its Basin Plan update:

1. Add endocrine disruptors and Objectives to Phase I of the Ground/Surface Water Objectives.
2. Add numeric targets for endocrine disruptors for surface waters to the Ground/Surface Water Objectives.
3. Add groundwater recharge to the Ground/Surface Water Objectives.
4. Add beneficial uses to the Ground/Surface Water Objectives.
5. Implement the specific changes outlined for Phase II to protect the water quality of groundwater.
6. Retain both Phase I and Phase II as high priority tasks in the Basin Plan.
7. Retain Instream Flow Objectives for the Navarro River as a high priority for the Basin Plan.
8. Address water quality impairment affected by low-flows through the Instream Flow Water Quality Objective.
9. Consider Instream Flow Objectives as a high priority task because without adequate flows, dissolved oxygen levels may become too low to support listed salmonids.
10. Develop Regional Water Board numeric targets for specific streams affected by low-flow and low-dissolved oxygen.

CDFW looks forward to continued collaboration with the Regional Water Board staff and other stakeholders regarding Basin Plan review and implementation. If you have any questions or comments regarding this matter, please contact Senior Environmental Scientist (Specialist) Jane Arnold at 619 Second Street, Eureka, CA 95501 or telephone (707) 441-5671.

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