



California Regional Water Quality Control Board North Coast Region

Geoffrey M. Hales, Chairman



Linda S. Adams
Acting Secretary for
Environmental Protection

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

Edmund G. Brown Jr.
Governor

May 9, 2011

To: Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

Re: Comments on the Department of Fish and Game Suction Dredge Permitting Program Draft Subsequent Environmental Impact Report (SEIR) and Draft Proposed Regulations

Dear Mr. Stopher:

Thank you for this opportunity for the staff of the North Coast Regional Water Quality Control Board (Regional Water Board) to submit comments. We appreciate the effort that was put into developing the draft DEIR, and support the scientific approach taken to the development of the proposed regulations.

The Regional Water Board has an interest in ensuring that the suction dredging regulations are protective of water quality. While our mandate may differ from the Department of Fish and Game's (DFG) mandate, we share the common goal of protecting the cold water fishery in the North Coast Region. The Regional Water Boards regulate discharges of waste to waters of the state and other controllable water quality factors in the interest of protecting the beneficial uses of water, of which, the cold water fishery is one. It is with this shared goal in mind, and the desire to coordinate our regulatory approach to suction dredging, that we are submitting the following comments.

The comments relate to five topics:

1. Consistency between DFG proposed regulations and the Klamath Total Maximum Daily Load (TMDL) Thermal Refugia Protection Policy
2. Addressing documented alterations to the stream channel
3. Compliance with the Regional Water Board's Basin Plan turbidity water quality objective
4. Mercury Transport and Concentration
5. Maximum Nozzle Diameters

Klamath TMDL Thermal Refugia Protection Policy

Thermal refugia play an important role in the vitality of a cold water fishery because they moderate the effects of naturally elevated temperatures and also provide a refuge from depressed mainstem dissolved oxygen levels. This is particularly important in the mainstem Klamath River, where even natural temperatures are sometimes and in some

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places stressful to salmonids. To provide enhanced protection of these areas, the Klamath TMDL Action Plan¹, adopted into the Water Quality Control Plan for the North Coast Region (Basin Plan) in March 2010, includes a Thermal Refugia Protection Policy (Refugia Policy). The Refugia Policy establishes buffer widths around known thermal refugia locations where parties conducting suction dredging activities are restricted from discharging. The default buffer widths are 500 feet, consistent with DFG's proposed regulations, but larger buffers are prescribed in certain situations that will be explained below. The restrictions apply from April 15th through September 15th. To implement the restrictions, the Refugia Policy includes a specific policy recommendation to DFG and the State Water Resources Control Board:

“The State Water Resources Control Board and the California Department of Fish and Game should restrict discharges associated with suction dredging activities as specified by this policy. This directive in no way limits the permitting agency from implementing more stringent requirement.”

In order to identify the locations of known thermal refugia in the basin and appropriate widths, Regional Water Board staff solicited information from fisheries biologists working in the Klamath River basin through a formal request in April 2009. Letters and emails were received from the following people in response to the April 2009 request:

- Mark Stopher, California Department of Fish and Game, April 15, 2009.
- Mike Belchick, Yurok Tribal Fisheries Program, April 24, 2009.
- Earl Crosby of the Karuk Tribe, April 30, 2009.
- Will Harling, Mid-Klamath Watershed Council, April 28, 2009.
- Jon Grunbaum, Klamath National Forest, May 1, 2009.

In addition, Regional Water Board staff consulted the following references to compile the list of tributaries:

1. Grunbaum, Jon B. Memo of Recommended Suction Dredging Guidelines for the Happy Camp Ranger District of Klamath National Forest. 2005.
2. Superior Court of California, County of Alameda, Hayward Division. Case No.: RG 05 211597. Declaration of Peter B. Moyle, Ph. D., in Support of Entry of Stipulated Judgment. January 26, 2006.
3. Belchik, Michael. Use of Thermal Refugial Areas on the Klamath River by Juvenile Salmonids; summer 1998. Yurok Tribal Fisheries Program, November, 2003.
4. Belchik, Michael Summer Locations and Salmonid Use of Cool Water Areas in the Klamath River. Yurok Tribal Fisheries Program. August 1997.

While the draft SEIR provides similar protections as those in the Refugia Policy, there are a couple of differences Regional Water Board staff would like to resolve in order to better coordinate our approach. First, there are a some inconsistencies between the lists of thermal refugia locations. Table 1 below, also included in the Refugia Policy,

¹ http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/klamath_river/

lists tributaries known to provide thermal refugia in the Klamath River basin. There are two tributaries to the mainstem Klamath River highlighted in yellow – Little Horse Creek and West Grider Creek - are included on this list, but not in DFG's draft SEIR. There are also three tributaries to the Scott River highlighted in yellow in the table and include Boulder, Canyon, and Kelsey creeks. The Regional Water Board staff recommend that the draft regulations include these tributaries and provide the default instream buffer protection for them.

Table 1. Tributaries to the Klamath River known to provide thermal refugia in and around their confluence

Tributaries		
Aikens Creek	Halverson Creek	Pine Creek
Aubrey Creek	Hopkins Creek	Portuguese Creek
Barkhouse Creek	Horse Creek	Red Cap Creek
Beaver Creek	Humbug Creek	Reynolds Creek
Blue Creek	Hunter Creek	Roach Creek
Bluff Creek	Ikes Creek	Rock Creek
Bogus Creek	Independence Creek	Rogers Creek
Boise Creek	Indian Creek	Rosaleno Creek
Boulder Creek¹	Irving Creek	Sandy Bar Creek
Cade Creek	Kelsey Creek¹	Salt Creek
Camp Creek	King Creek	Seiad Creek
Canyon Creek¹	Kohl Creek	Slate Creek
Cappell Creek	Kuntz Creek	Stanshaw Creek
Cheenitch Creek	Ladds Creek	Swillup Creek
China Creek	Little Horse Creek	Ten Eyck Creek
Clear Creek	Little Humbug Creek	Thompson Creek
Coon Creek	Little Grider Creek	Thomas Creek
Crawford Creek (Humboldt Co.)	Lumgrey Creek	Ti Creek
Crawford Creek (Siskiyou Co.)	McGarvey Creek	Titus Creek
Dillon Creek	Mill Creek	Tom Martin Creek
Doggett Creek	Miners Creek	Trinity River
Dona Creek	McKinney Creek	Tully Creek
Donahue Flat Creek	Nantucket Creek	Ukonom Creek
Elk Creek	Negro Creek	Ullathorne Creek
Elliot Creek	Oak Flat Creek	Walker Creek
Empire Creek	O'Neil Creek	West Grider Creek
Fort Goff Creek	Pecwan Creek	Whitmore Creek
Grider Creek	Pearch Creek	Wilson Creek

¹ Scott River tributary

The second difference between the Refugia Policy and the proposed regulations is in the prescribed buffer widths where suction dredging is prohibited in the draft regulations. The Regional Board's policy includes the added protection of a 1,500-3,000 foot buffer in the downstream direction for select tributaries as opposed to the default 500 feet. The additional buffer lengths were developed based on a thermal infrared study of the Klamath River basin conducted in August 2003, as well as information submitted in response to the Regional Water Board's April 2009 request for information. The thermal infrared study depicted the spatial dimensions and water temperatures of cold-water refugia in the mainstem Klamath River. The images clearly showed that for some tributaries, the influence of the cold water extended greater than 500 feet below the tributary confluence. Based on this study, the Refugia Policy recommends that DFG include a 1,500 foot buffer in the downstream direction for the following tributaries: Aubrey, Beaver, Clear, Dillon, Elk Creek, Grider, Horse, Indian, Rock, Swillup, Thompson, and Ukonom creeks.

The Refugia Policy also recommends additional buffers where juvenile fish have been found holding in the cold water in the tributary upstream of the confluence. As with the buffer extent in the downstream direction in the Klamath River, the fisheries biologists that responded to the April 2009 solicitation identified a number of tributaries known to provide refugia for fish. To protect these tributaries from the impacts of suction dredging, the policy recommends that the buffer be extended to 3,000 feet within the tributary, upstream of its confluence with the mainstem river. The following tributaries should be afforded this added protection or should be added to the list of tributaries where no dredging is allowed: Aubrey, Dillon, Empire, Fort Goff, King, Little Horse, Little Humbug, Mill, Nantucket, O'Neil, Portuguese, Reynolds, Rock, Sandy Bar, Stanshaw, Swillup, Ti, and Titus creeks.

Compliance with the Water Quality Objective for Turbidity

The Regional Board's Basin Plan contains the following water quality objective for 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."

As turbidity values in the North Coast Region are, on average, relatively low during the dry season when suction dredging is permitted, it is likely that the Regional Water Board's turbidity objective will be violated downstream of suction dredge operations. The draft regulations include the requirement that "reasonable care shall be used to avoid dredging silt and clay materials that would result in a significant increase in turbidity." This requirement needs more definition to be enforceable. Regional Water Board staff recommend that DFG's suction dredging regulations include be modified so that the turbidity objective is achieved.

Risk of Alterations to the Stream Channel

Significant alterations to the stream channel are well documented in the literature that covers the geomorphic impacts of suction dredging. Whether the impact of these alterations will persist through the winter is dependent on the average winter flows in the given stream. In streams, or stream reaches, that have significant flushing flows in the winter, any alterations due to suction dredging will mostly be redistributed during the winter season. For example, pits in the gravel created by suction dredging will be filled in by the winter flows. However, smaller stream channels do not produce the same magnitudes of winter flows compared to the mainstems of rivers, such as the Klamath or Trinity Rivers, and therefore have the potential to undergo significant alterations to their channel structure. These alterations may persist through the winter resulting in more permanent damage to stream habitat. Regional Board staff recommend that DFG consider adding some level of additional protection to smaller streams in the proposed regulations, to address the heightened risk of longer term impacts to fish habitat.

Mercury Transport and Concentration

The Central Valley Regional Water Board has noted several potential impacts of suction dredging on the mobilization of mercury and the potential increase in mercury concentrations. The State Anti-Degradation Policy directs the Regional Board to prevent the degradation of high quality or unimpaired waters. Staff therefore support the recommendations of the Central Valley Regional Water Board staff regarding the mitigation of the effects of suction dredging on mercury transport and concentration.

Maximum Nozzle Diameters

Regional Board staff support a limit of 4 inches on the nozzle diameter of suction dredges to minimize turbidity and impacts to the stream channel, especially in smaller streams. The proposed regulations state that an 8 inch diameter nozzle may be permitted on the condition that there is an onsite inspection. We recommend that the regulations be more specific regarding the conditions under which an 8 inch nozzle will be permitted. We recommend that 8 inch nozzles not be permitted in small streams or in locations where significant turbidity is likely to result.

In closing, Regional Water Board staff, again, appreciate this opportunity to provide comments on the draft SEIR and proposed regulations. It is my hope that DFG and the Regional Water Board continue to coordinate their approach to protecting the beneficial uses of waterbodies in the North Coast Region. Please feel free to contact Ben Zabinsky of my staff at the following phone number if you have questions about these comments or want to coordinate further on subsequent drafts: (707) 576-6750.

Sincerely,

Cat Kuhlman
Executive Officer

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