



April 27, 2016

State Water Resources Control Board
Division of Water Rights
Attn: Sarah Sugar
P.O. Box 2000, Sacramento, CA 95812

RE: Comment Letter – Groundwater Recharge

Issuance of temporary permits for water diversions requires consideration that the “water may be diverted and used without unreasonable effect upon fish, wildlife, or other instream users...” Streams and rivers with a potential for salmonid populations should have a higher level of review before permits are issued. Special care must be taken that emergency temporary permits do not result in “take” of wildlife or fish. Steelhead trout, Coho salmon, and Chinook salmon were listed as “threatened” under the Endangered Species Act (ESA) and the California Endangered Species Act (CESA) in 1996. South Central California Coast (S-CCC) (*Oncorhynchus mykiss*) was listed “endangered” in 2000; Coho salmon were listed “endangered” in 2005.

Under ESA it is unlawful to “take” any species listed as endangered. “Take” includes “harm” which is defined by NMFS:

...an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering. 50 C.F.R. section 222.102

The following criteria should be considered for any waterways suitable for salmonid populations. These criteria are based on Division of Water Rights guide effective September 10, 2010 “Policy for Maintaining Instream Flows in Northern California Coastal Streams”¹ and draft “Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams” June 17, 2002²

The “Policy...” establish the following principles for the protection of fisheries:

- Water diversions shall be seasonally limited to periods in which instream flows are naturally high to prevent adverse effects to fish and fish habitat;
- Water shall be diverted only when streamflows are higher than the minimum instream flows needed for fish spawning, rearing, and passage;
- The maximum rate at which water is diverted in a watershed shall not adversely affect the natural flow variability needed for maintaining adequate channel structure and habitat for fish;
- The cumulative effects of water diversions on instream flows needed for the protection of fish and their habitat shall be considered and minimized.³

¹http://www.swrcb.ca.gov/waterrights/water_issues/programs/instream_flows/docs/ab2121_0210/adopted050410instreamflowpolicy.pdf

²http://www.waterboards.ca.gov/waterrights/water_issues/programs/coastal_streams/docs/nmfs_dgs_fish_guidelines_061702.pdf

³IBID p. 3

Emergency temporary permits must prescribe measures addressing season of diversion, minimum bypass flows, and maximum cumulative diversion.

Season of diversion must be specified and confined to periods of full bank flow from December 15 through March 31 of the following year to minimize impacts to fish resources.

Minimum bypass flows must be guaranteed. According to the “Policy...”⁴

A minimum bypass flow requirement prevents water diversions during periods when streamflows are at or below the flows needed for spawning, rearing, and passage. Adequate magnitude and variability in peak streamflows are needed to meet the habitat needs of anadromous salmonids, including maintaining stream channel geometry, vegetative structure and variability gravel and wood movement, and other channel features. In this policy these peak streamflows are called **channel maintenance flows**. Channel maintenance is a long-term process in which the basic habitat structure of a stream is formed and maintained by multiple, variable high flow events recurring on a periodic basis.

“Channel Forming” flows should be protected utilizing the Policy described in the “Policy...”⁵

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Channel maintenance is a long-term process in which the basic habitat structure of a stream is formed and maintained by multiple, variable high flow events recurring on a periodic basis.

The **bankfull flow** is the flow at which channel maintenance is the most effective. The 1.5-year return peak flow is a hydrologic metric that can be used to estimate bankfull flow and effective channel maintenance flows. The **1.5-year instantaneous peak flow** is the annual maximum instantaneous peak streamflow that is equaled or exceeded, on average over the long term, once every one and a half years. The frequency at which this peak flow is expected to occur is referred to as the **recurrence interval**. Limiting the maximum rate at which water is withdrawn by all water diverters in a watershed so that peak streamflows are reduced by no more than a small fraction of the 1.5-year instantaneous peak flow will result in a relatively small change to channel geometry, and will ensure that natural flow variability and the various biological functions that are dependent on that variability are protected.

To ensure maintenance of natural flow variability and protection of the biological functions dependent on it, the sum of all permit-specified diversion rate limitations upstream of a POI or POD shall not exceed the regionally protective maximum cumulative diversion rate.

The maximum cumulative diversion rate regionally protective criterion is equal to: five percent of the 1.5-year instantaneous peak flow.

For projects located above anadromy, the maximum cumulative diversion rate criterion shall be evaluated at POIs at and/or below anadromy in order to identify the allowable rate of diversion at project PODs. The maximum cumulative diversion rate puts limitations on the cumulative rate of water withdrawal in a watershed, not necessarily the rate of withdrawal at a point of diversion. The rate of diversion limitation for a project is not necessarily equal to the maximum cumulative

⁴IBID p. 5

⁵ IBID p. 6-7

diversion rate limitation in a watershed. This is because the project's rate of diversion limitation is based on an evaluation of whether the project, together with existing diversions, causes an exceedance of the maximum cumulative diversion rate criterion at points of interest at and/or below the upper limit of anadromy. Guidelines for calculating the maximum cumulative diversion rate criterion and for determining whether a limit on the rate of diversion is needed are provided in [Appendix A, Section A.1.8](#) and [Appendix B Section B.5.2.3](#).

The cumulative effects of all diversion within a watershed must be considered. Cumulative effect policy in the Guidelines "...requires the evaluation of whether a proposed water diversion project, in combination with existing diversions in a watershed, may affect instream flows needed for fishery resources protection."⁶

Emergency temporary permits should include clear and enforceable permit terms and conditions, compliance investigations, and complaint investigations. Permits should require the installation of automated flow measuring device. The flow data should be recorded on an hourly (or more frequent) basis in a format that can be readily downloaded into a computer spreadsheet program or database for subsequent reporting. This information should be available for review by the public.

Sincerely,

A handwritten signature in blue ink, appearing to read 'KJ', is positioned above the typed name.

Kyle Jones
Policy Advocate

⁶*IBID* p. 8