



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
777 Sonoma Avenue, Room 325  
Santa Rosa, California 95404

April 30, 2008

Ms. Karen Niiya, Senior Engineer  
State Water Resources Control Board  
Division of Water Rights  
1001 I Street, 2<sup>nd</sup> Floor  
Sacramento, California 95814

Subject: Comment letter — AB2121 Policy

Dear Ms. Niiya:

NOAA's National Marine Fisheries Service (NMFS) thanks the State Water Resources Control Board (SWRCB) for the opportunity to comment on your Draft Policy for Maintaining Instream Flows in Northern California Streams (new policy). This draft policy was developed under the authority of Assembly Bill (AB) 2121 and §1259.4 of the Water Code.

#### **NMFS Basis for Interest**

Several fish species known to be present in the policy area have been listed under the Federal Endangered Species Act (ESA). The Central California Coast Evolutionarily Significant Unit (ESU) of coho salmon (*Oncorhynchus kisutch*) was listed as endangered on 28 June 2005 (70FR37160). The Northern California Distinct Population Segment (DPS) of steelhead trout (*O. mykiss*) was listed as threatened on 5 January 2006 (71FR834), and the California Coastal ESU of Chinook salmon (*O. tshawytscha*) was listed as threatened on 28 June 2005 (70FR37160). NMFS administers the ESA as it relates to these species.

Stream dewatering and loss of habitat due to water diversions is a contributing factor in the decline of several populations of steelhead and coho salmon in central and southern California coastal streams (Busby *et al.* 1996<sup>1</sup>; Titus *et al.* 1999<sup>2</sup>; DFG 2002<sup>3</sup>). The

<sup>1</sup> Busby, P.J. T. Wainwright, G. Bryant, L.Lierheimer, R.Waples, F.Waknitz, and I.Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California. NMFS, NOAA Tech. Mem. NMFS-NWFSC-27, 261 pp.

<sup>2</sup> Titus, R.G., D.Erman, and W.Snider. 1999. History and status of steelhead in California coastal drainages south of San Francisco Bay. CDFGame, Fish Bulletin. Draft manuscript, 261 pp + apps.

<sup>3</sup> DFG. 2002. Status review of California coho salmon north of San Francisco. Report to the California Fish and Game Commission. CDFGame, Candidate Species Status Review Report 2002-3, Sacramento, CA 231 pp + apps.



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manner in which a state approves appropriative water rights has the potential to promote the “take” of listed salmonid species; however, it also has the potential to reduce and greatly limit the take of those species.

“Take” as defined in the ESA, includes, in part, to harm or harass the species. Protective regulations describe certain activities that may adversely affect coho salmon, Chinook salmon, or steelhead and result in legal liability. These activities include, in part:

*Unauthorized destruction/alteration of the species’ habitat, such as removal of large woody debris or riparian shade canopy, dredging, discharge of fill material, draining, ditching, diverting, blocking, or altering stream channels or surface or ground water flow.*

The adult returns of Chinook salmon and coho salmon during the winter of 2007/2008 throughout the state were at or near historical lows. As a result, the Pacific Fisheries Management Council closed all salmon fishing off the California and Oregon coasts. Populations are at such low levels that every reasonable effort to remove environmental stressors and improve habitats must be made.

#### **NMFS Comments on the Proposed Measures to Protect Instream Flow**

We are highly supportive of the SWRCB’s efforts to provide new regulations that protect surface flows in streams that provide habitat for Federally listed threatened and endangered salmonid species. On page 2 of the new draft policy, SWRCB identifies five guiding principles that are, with one exception, similar to the underlying principles of California Department of Fish & Game (DFG) and NMFS’s Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams (DFG and NMFS 2002)<sup>4</sup>. Your stated principles are:

1. Water diversions shall be seasonally limited to periods in which instream flows are naturally high to prevent adverse effects to fish and fish habitat;
2. Water shall be diverted only when stream flows are higher than the minimum instream flows needed for fish spawning and passage;
3. 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;
4. Construction or permitting of new onstream dams shall be restricted. When allowed, onstream dams shall be constructed and permitted in a manner that does not adversely affect fish and their habitat; and
5. The cumulative effects of water diversions on instream flows needed for the protection of fish and their habitat shall be considered and minimized.

<sup>4</sup> DFG and NMFS. 2002. Draft Guidelines for maintaining instream flows to protect fisheries resources downstream of water diversions in mid-California coastal streams. June 17, 2002 (errata note, dated 8-19-02). DFG, Sacramento, CA and NMFS, Santa Rosa, CA. 19 pp.

The implementation and enforcement of a policy that achieves these objectives would minimize take of listed salmon and steelhead and substantially promote the recovery of these species. We fully support rules that limit the approval of new appropriative water rights to only periods when flows are naturally high. We agree that minimum bypass flows should be required for all projects that affect flow in reaches that support salmonid habitats, including seasonal streams that may not support fish but do support aquatic biological production that sustains fisheries (e.g., the growth and transport of fish food items such as aquatic macroinvertebrates). Without minimum bypass flows (MBF), water diversions have the potential to dewater streams or otherwise degrade salmonid habitats, thereby exposing salmon and steelhead to stranding, desiccation, reduced growth, or increased predation. We also agree that the construction of new on-stream dams must be restricted, and that cumulative adverse effects of diversions on stream functions must be considered and limited.

The primary differences in the proposed new policy's guiding principles and the basic principles of the NMFS/DFG draft guidelines are:

1. The new policy adopts a generally higher bypass flow in small and moderate sized watersheds (e.g., less than 20<sup>2</sup> mile drainages), while eliminating the need to analyze the cumulative effects of baseline and project diversions on flows needed for fish spawning and passage.
2. The new policy extends the possible season of diversion to the period October 1 to March 31. SWRCB (1997)<sup>5</sup>, SWRCB (2001)<sup>6</sup> and DFG and NMFS (2002) all recommended that new permits for the policy area be limited to the period December 15 to March 31.

During the past six years, SWRCB has been supportive of the DFG and NMFS guidelines for water diversions in mid-California coastal streams. We are aware that there has been difficulty in the implementation of these guidelines because of resistance to the need to implement MBFs to protect fisheries and resistance to analyze cumulative impacts of multiple diversions on salmonid spawning and upstream passage of adult fish. Resistance from the regulated community is in part due to the costs associated with these activities, and partly due to the belief that some diversions do not contribute to cumulative impacts to aquatic resources. Your newly proposed policy avoids the need to analyze cumulative effects to fish spawning and passage by increasing the MBF in relatively small or modest sized watersheds, which are where most of the pending water right applications are located.

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<sup>5</sup> SWRCB. 1997. Staff report Russian River Watershed. Proposed actions to be taken by the Division of Water Rights on pending water right applications within the Russian River watershed. August 15, 1997, Sacramento, CA. 40 pp. + Attachments.

<sup>6</sup> SWRCB. 2001. Division of Water Rights Staff Report. Assessing site specific and cumulative impacts on anadromous fishery resources in coastal watersheds in Northern California, January 23, 2001, Sacramento, CA. 6 pp.

### Adequacy of the MBF for protecting salmon and steelhead

If it is enforced, your proposed MBF should effectively minimize impacts to salmonid spawning and fish passage in the watersheds, because it seeks to conserve all flows that are equal to or less than those needed to facilitate spawning and passage. This approach to the conservation of aquatic habitats does not consider the principal factors that may be limiting a salmonid population, but it seems likely that it would adequately protect all individuals and life stages of a population potentially affected by a new water right permit. The conservative nature of the proposed MBF (*i.e.*, generally protective of all individuals and life stages of salmonids) avoids complex analysis of spawning flows, passage flows, and population limiting factors.

The policy's provisions for obtaining variances from the regional criteria (Section 4.1.8) presumably allows applicants to examine the issue of whether salmon spawning or passage flows are population limiting and allows them to potentially justify lower bypass flows. For example, an applicant might promote a project that has some minor effect on the duration of flows conducive to spawning in a tributary, while simultaneously enhancing salmonid populations by increasing limited summer rearing habitat through reduction of summer time diversions. Another project might reduce the duration of time that flows are conducive to upstream migration, but it might facilitate reduction in authorized diversions during April and May thereby enhancing survival of newly emerged salmonid fry and out-migrating juveniles (*i.e.*, reduce impacts from diversions for frost protection). Analyses of population limiting factors and trade-offs associated with diversion timing can be useful in decision making related to water allocation and resource protection. We agree that fisheries analyses related to variances from the regional criteria be performed by qualified fisheries biologists. However, analysis of instream flow needs for fisheries can often be technically complex and involve consideration of groundwater and surface water interactions. Therefore, we believe that the policy section on obtaining variances should also require a qualified hydrologist with a Bachelor's degree or higher (*e.g.*, in the field of geology, hydrology, hydraulic engineering or other equivalent course of study) and five years of experience with hydrologic analysis. We also recommend that such analyses be reviewed and approved by the responsible state fisheries resource agency, DFG. NMFS could assist in that review, if needed.

### Adequacy of the policy's proposed season of diversion for protecting salmon and steelhead

NMFS does not agree with the SWRCB's draft policy's proposition that new water rights should be permitted for a diversion season of October 1 through March 31. Instead we strongly recommend that SWRCB adopt the same season (December 15 to March 31) that its staff proposed in SWRCB (1997) and SWRCB (2001) as previously referenced. The latter season was also supported

by Moyle et al. (2000)<sup>7</sup> and DFG and NMFS (2002). The new policy's justification for extending the diversion season for new permits to October 1 is that any diversions during October or November (typically dry low flow months) would be implemented with the protective MBF. We disagree with this premise for the following reasons:

1. The period October through early December is usually a period of very low stream flows due to a combination of low rainfall and a high number of existing projects that are already permitted or licensed to store water during this time. Additional permitting of diversions during this time will adversely affect groundwater and aquifer recharge, with resulting delays in the occurrence or increase of fall and early winter baseflows needed to support listed salmonid species and the aquatic macroinvertebrates that sustain them. If all diversions in a watershed were operated with protective MBFs during the summer and fall, it may be reasonable to allow new diversions as early as October; however, existing permitted and licensed diversions generally do not have protective MBFs. Therefore new diversions prior to December 15 will only exacerbate cumulative impacts of existing diversions.
2. The principles guiding the SWRCB's policy includes the restriction of flows to periods when "instream flows are naturally high to prevent adverse effects to fish and fish habitat." In most years, October and November is not a period when flows are naturally high. Using the logic that implementation of a required minimum base flow will avoid impacts in October and November would also obviate the need for avoiding new diversions during spring and summer months, which we know are periods of limited flow and when cumulative diversions have significant impacts on flows and salmonid habitats in many watersheds.
3. The existing documentation supporting the policy show that with implementation of MBFs, the amount of water that is available to divert in October, November, and early December is minimal. New projects should wait until the actual season when instream flows are naturally high to prevent adverse effects to fish and fish habitat.
4. Adult coho salmon, a state and federally listed endangered species, typically annually migrate upstream and spawn in the policy area between late November and late January. Efforts to conserve stream flows to recharge aquifers in October and November will increase the likelihood that stream flows will be conducive to coho salmon migration and reproduction (see item 1 above).
5. The inclusion of October 1 to December 15 unnecessarily increases the difficulty of monitoring compliance of new projects. If new projects are given the opportunity to divert beginning in October 1, then there will be those who will divert or be tempted to divert without complying with the MBF. It would be easier to monitor compliance and promote compliance,

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<sup>7</sup> Moyle, P.B., G.M.Kondolf, and J.G.Williams. 2000. Fish bypass flows for coastal watersheds: a review of proposed approaches for the State Water Resources Control Board. Prepared for the SWRCB. June 2000. 38 pp.

if diversion were only allowed during the actual season when flows are usually naturally high (*i.e.*, December 15 - March 31).

Given that water will be infrequently available for diversion between October 1 and December 15, and the potential impacts of additional diversions on surface and subterranean flows at the end of the low flow season, and the potential compliance issues associated with maintaining MBF, it makes sense to retain the December 15 to March 31 window for new diversions.

#### Onstream dams, cumulative effects, and limits of anadromy

We support the draft policy's permitting requirements for onstream dams, as described in section 4.4 and subsections thereof.

Given that the MBF provides for the conservation of flows for salmonid spawning and migrations, we support the policy's recommendation for a maximum cumulative diversion equal to 5 percent of the 1.5-year instantaneous peak flow.

Of the methods intended to identify the upper limit of anadromy, none require consultation with DFG or NMFS. We recommend that all determinations of the upper limit of anadromy be done in consultation with and have written concurrence from DFG. We also recommend that the policy provide DFG with the opportunity to review and approve any determination of stream classification (section 4.2).

#### The Watershed Approach

NMFS supports in principal the new policy's alternative watershed approach in which a watershed group forms to address mutual water supply and water right permitting issues while protecting the environment and public trust resources. However, this approach needs substantial additional definition and boundaries. The Russian River and Napa Rivers are themselves watersheds with huge numbers of existing and pending water right permits. A proposed group to address water rights throughout either of these large watersheds would be untenable. The size of a watershed must be limited for it to qualify for the watershed approach.

The composition of the watershed group is also important. Some limitation might be applied to the minimum percentage of the watershed area that is influenced by that group, or perhaps some minimum percentage of participating landowners in the watershed might be stipulated. However, several landowners could pool resources and collaborate effectively in addressing instream flow needs for a watershed even though they represent a minority of the landowners within that watershed. Some criteria should be developed and applied to ensure that a watershed group has the capacity to effectively address historic water use and instream flow needs for fisheries throughout the subject watershed.

The policy also does not clearly identify who would be permitted for diversions evaluated by a watershed approach and who would be responsible for compliance of any terms and conditions for permits stemming from a watershed approach to permitting. We question the feasibility and long term stability of a policy that issues water right permits and licenses to a "watershed group." We assume that the best and most viable avenue to a watershed approach would be to provide the individual landowners with water right permits that would be processed as a batch with common technical support documents and watershed agreements developed by the group. Individual landowners would then be responsible for compliance with their permit's terms and conditions.

NMFS also recommends that the policy include a reasonable time schedule for the conduct of studies associated with the watershed approach and the development and approval of those studies by SWRCB in order to ensure due diligence.

Given the unique nature of the watershed approach to addressing water right permits, we recommend that DFG be consulted throughout the process of identifying seasons of diversion, cumulative rates of diversion, and minimum bypass flows for all projects evaluated by the watershed group. DFG should be consulted on matters related to study scopes before they are executed, and the results and interpretation of those studies following their completion. Given the responsibility of DFG as trustee of the state's natural resources, we recommend that DFG be provided opportunity to comment on proposed study designs and study results as the assessments by a watershed group progress. NMFS could assist in that review, if needed.

In conclusion, with projections of continued, high sustained population growth in California, and the diminished availability of water in many streams, it is critical that our society come to terms with the consequences of human population growth on aquatic ecosystems that contribute importantly to our quality of life. A dramatic increased demand for water as the result of high human population growth and agricultural expansion has significantly depleted stream flows in many rivers and creeks in the policy area. Pressures to augment water supply often directly conflict with efforts to conserve and protect salmon, steelhead, and other sensitive natural resources. Unrelenting population growth will necessitate that we as a society develop technologies and infrastructure (desalination; reclamation of treated wastewaters; offstream storage of winter flow) to address water demands so that we do not inadvertently destroy our remaining, limited natural aquatic resources. Fisheries and aquatic ecosystems can only benefit from efforts to offset deleterious spring, summer, and fall water diversion practices with projects providing alternative sources of water. We find the proposed policy acceptable for the purpose of balancing competing, beneficial uses of fresh water resources in the project area, with the exception of the provision for an expanded season of water diversion to October 1, and other comments provided in this letter. However, the policy will be effective only if it is applied consistently,

there is adequate staff to implement and enforce the policy (especially the maintenance of the limited season of diversion and MBFs), and projects are monitored for their effectiveness in protecting fisheries resources.

Thank you for the opportunity to support and comment on your draft water rights policy. We look forward to continued opportunities for NMFS and the State Water Resources Control Board to cooperate in the conservation of listed species. If you have any questions or comments concerning the contents of this letter please contact Dr. William Hearn at (707) 575-6062.

Sincerely,

A handwritten signature in black ink, appearing to read "Dick Butler", with a long horizontal line extending to the right.

Dick Butler, Supervisor  
Protected Resources Division  
Santa Rosa Area Office

Cc: R. Strach, NMFS  
S. Edmondson, NMFS  
C. Armor, CDFG, Yountville