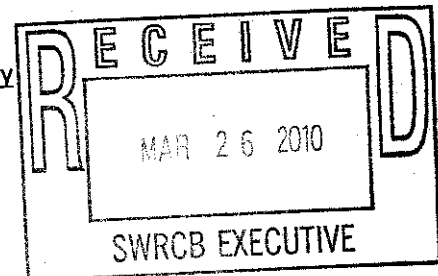


March 26, 2010

Via Email to commentletters@waterboards.ca.gov and Personal Delivery

Chair Charles Hoppin and Members of the Board
c/o Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



Re: Comment Letter – AB 2121 Policy: Joint Comments of Wagner & Bonsignore Consulting Civil Engineers, and Ellison, Schneider & Harris LLP

Dear Chair Hoppin and Members of the Board:

Wagner & Bonsignore Consulting Civil Engineers and Ellison, Schneider & Harris, LLC provide the following comments and recommendations on the State Water Resource Control Board staff's February 2010 "Proposed Policy for Maintaining Instream Flows in Northern California Coastal Streams" ("Revised Policy").

Overview of Prior Comments and General Observations on Revised Policy

These comments supplement the detailed technical, biological and legal critique of the December 2007 draft Policy ("Draft Policy") we submitted with Kronick, Moskovitz, Tiedemann & Girard on behalf of various organizations and water right applicants (see Kronick, Moskovitz, Tiedemann & Girard, *et al.*, May 1, 2008). In summary, we stated that the Draft Policy:

- was based on flawed assumptions;
- exceeded the limits of the data used as its foundation and imposed unjustified restrictions on water diversion;
- was inconsistent with legal requirements binding on the Water Board;
- should be rejected in favor of a watershed management-based policy.

These comments also augment our joint recommendations with Trout Unlimited, the primary sponsor of Assembly Bill 2121, and National Audubon Society, Peregrine Chapter. Our joint recommendations with these conservation organizations include recommended principles for the policy (May 1, 2008), the structure and framework to implement those principles (see December 2, 2008 Presentation to Board), and a proposed policy alternative to the Draft Policy (see April 30, 2009 Draft Joint Recommended Policy) (collectively, "Joint Recommendations"). Our Joint Recommendations have five basic parts: biological and hydrological framework, with an emphasis on flow management

objectives; resource stewardship incentives; water right administrative system procedural reform; monitoring and reporting of diversions and stream conditions; and meaningful policy effectiveness monitoring and review.

As you know, at the August 5 and 6, 2008 public workshops then Board Chair and current Board Member Doduc encouraged us to further develop our Joint Recommendations for consideration by the Board. Our presentation to the Board in December 2008 was well received and again we were encouraged to submit further detail. We submitted an alternative policy in April 2009, and on numerous occasions Chair Hoppin expressed his support for these recommendations. For these reasons, we are disappointed and somewhat surprised that the Revised Policy does not embrace the Joint Recommendations. Although the Revised Draft gives a nod to some of the concepts we have advanced (e.g., small watershed exceptions added to the Regional Criteria, more detailed enforcement criteria), the changes are superficial at best; unfortunately, the Revised Draft and its continued emphasis on the conservative "Regional Criteria" is an entrenchment of the Draft Policy criticized by hundreds of commenters. The most substantial effort that went into the Revised Draft seems to have been to attack the Joint Recommendations. Many pages were used to discredit the use of the "riffle crest thalweg" as a biological and hydrological reference point for managing instream flows because the concept has not been peer reviewed. The Revised Draft's criticism ignores the more fundamental element of our recommendations that the policy should utilize stream stage at critical reaches of streams as the principal biological and hydrological criteria for managing instream flows. The concept of utilizing stage for purposes of analyzing quantifiable biologic processes is so fundamental that peer review of the concept shouldn't be necessary. The Joint Recommendations present simpler, more coherent resource management criteria and improved water right procedures that will *expedite* water right permitting in contrast to the Revised Policy that continues to rely upon overly conservative Regional Criteria that will only *compound* the existing inefficient water right permitting system.

Framework and Scientific Basis of Revised Policy Remains Flawed and Unworkable

Conceptual Disconnects in the Policy Framework

The basic framework of the Revised Policy is the same as presented in the Draft Policy: five policy Principles; Regional Criteria; Site Specific Studies; and Onstream Dam Criteria. Principles encouraging diversions to occur in high flow periods and after the needs of salmonids are satisfied are reasonable foundations for an instream flow policy. We recommended refinement to these Principles in the Joint Recommendations (April 30, 2009). The "regionally protective criteria", however, are not practical guidance that can function as a meaningful "bridge" between the Principles and the actual instream resource needs of diverse North Coast streams. The Regional Criteria minimum bypass flow (MBF) and maximum cumulative diversion (MCD) are numeric standards that are not directly tied to any biological performance objective that can be studied in the field. Put differently, the Regional Criteria

MBF and MCD cannot be used to inform site specific studies. As discussed below, the Regional Criteria are too conservative for the vast majority of projects in the North Coast region, which will require them to conduct site-specific studies in lieu of using the Regional Criteria. The Revised Policy does not provide biological objectives to inform site specific studies.

Regional Criteria Lack Scientific Basis

We submitted a substantial critique of the Draft Policy and its purported scientific bases (May 1, 2008). We will not restate our prior comments in detail but note that most of these criticisms were not adequately addressed by the Response to Comments.

The Regional Criteria of the Revised Policy suffer the same flaws of those in the Draft Policy: in attempt to be "protective" in every stream in the region, the Regional Criteria were nominally based on accepted scientific concepts related to the Principles (e.g., flows should be high enough to support salmonid spawning and channel forming processes), but the scientific concepts were rendered meaningless by overextension and overgeneralization. This problem is most obviously manifested in the minimum bypass flow (MBF) equation that was manipulated by artificial factors of safety so as to be conservative and overly protective of the actual flow needs in North Coast streams. The maximum cumulative diversion (MCD) criterion is also extended beyond the limits of science under the guise of "protectiveness."

One of the Responses to Comment acknowledges the lack of scientific basis for the Regional Criteria. Comment 4.4.11 objected to a lack of basis for the threshold of 5% of 1.5-year flow rate for the MCD. The Response to this Comment was: "The fact that a threshold cannot be defined precisely does not mean that no threshold should be proposed. Staff require a value for processing water right applications. In the absence of a clearly defined, regionally applicable threshold above which impacts to channel maintenance can be defined explicitly, one must be derived based on professional experience and judgment."

Regional Criteria Are Very Restrictive to Small Watershed Projects

The minimum bypass requirement, MBF, is intended to be very restrictive for small watersheds. For drainage areas 1 square mile and less, all flows less than nine times Q-mean must be bypassed. On average in the Policy area, nine times Q-mean is exceeded only eight days per year.

No project under application was evaluated in the December 2007 Scientific Basis to observe effects of proposed diversion restrictions on flows important for fishery resources or on diversion project yields. At the February 2008 workshop, four applications were presented as examples, illustrating the required bypass rate and impact on average project yield. No information was provided about the effect of diversion restrictions on fishery resources at those locations.

In the February 2010 production of documents, the only evaluation of projects under application was provided in "Table 1 – Summary of Modeling Results" (attached to the Information Sheet) purporting to show how nine current applications would fare under the Revised Draft Policy. Only two sentences were used to describe or discuss this table. Table 1 shows the required bypass and the average project diversion yield associated with the Revised Draft Policy. Table 1 does not disclose the effect on fishery resources at these locations other than to assess whether these projects meet some of the regional screening criteria.

Table 1 shows a bypass of zero for five of the nine projects. This suggests that those projects would meet the requirements outlined in Section A.1.8.1 of the Revised Draft Policy which allows zero bypass for projects located on Class III streams so long as three measures of downstream flow conditions remain unchanged. However, this conclusion is misleading. Wagner & Bonsignore obtained from Water Board Staff the electronic spreadsheets from which the information in Table 1 was derived. Review of these spreadsheets revealed (a) not all of the flow tests set forth in the Revised Policy were performed, (b) flow tests were applied farther downstream than appropriate, thus muting the flow impact, and (c) the tests performed showed the projects violated an impacts test, but those impacts were deemed insignificant and ignored.

The flow tests, as written, do not appear to provide any tolerance for ignoring small violations. There is the following language in Section A.1.8.1:

"There is error associated with the estimation of daily flows. Because of this, on a case-by-case basis, the State Water Board may consider this condition to be satisfied when analyses show a minor change to the number of days the [required flow] is exceeded, provided that the minor change is due to a slight variability in the estimation of flow."

This statement is puzzling because these analyses are conducted with mathematical models that compare estimated flows with the project to estimated flows without the project. The difference in flows is due solely to the project. It is true that the mathematical/hydrological models used for these analyses are approximations. If that is the reason for the above language that seems to allow "minor change" in the number of days of flow at a specified level, then the language needs to be more definitive. Another reason to allow "minor change" in the number of days of flow at a specified level would be recognition that fishery protection and irrigation are both valued in society and deserve balancing. If that is the reason for the above language, then it should be stated.

Regional Criteria Unlikely to Be Utilized by Applicants and Have Limited Applicability

The Draft Policy regional criteria are not applicable to most projects under application. Half of pending applications are for projects with a drainage area less than about 50 acres and 90 percent of projects are on drainage areas less than 320 acres. The Validation Sites used as a basis for developing

the Draft Policy are all much larger. The Responses to Comments admit that the regional criteria are not applicable and that site-specific analyses would be required. See Response to Peer Review Comment 6.2.2: "there were insufficient data to enable a detailed evaluation... the question could be answered by site-specific studies in small watersheds." See Response to Public Comment 4.3.21 "there are no representative-sized streams in the dataset used..." See Response to Comment 4.3.26: "to develop an accurate site-specific prediction tool ... would require years of data collection and analysis... the regional protective criteria developed for the Draft Policy should not be considered to have site specific accuracy." See Response to Comment 4.3.17: "the draft Policy does not attempt to predict instream flow needs for each stream, and instead relies on a protective regional criterion to establish a suitable threshold flow below which uncertainty on site-specific instream flow needs can only and must be addressed by site specific study." See Response to Comment 5.0.4: "Staff does not believe the regional protective criteria developed for the Draft Policy have site specific accuracy..." See Response to Comment 1.5.2; "Site specific studies are the best way to determine whether a project located in a small watershed would not adversely affect instream flows and anadromous salmonids in a particular stream." The Revised Policy admits that the approach utilized to develop the Regional Criteria is non-representative and inaccurate for many sites.

Guidelines for Site Specific Studies Are Not Adequate

The site specific study guidelines state in Section C.1.3: "A site specific approach may be proposed that may implement parameters other than a minimum bypass flow, maximum cumulative diversion, or season of diversion. A description of the alternative approach and a study plan shall be submitted to the State Water Board for review and approval prior to commencement of field work and analysis." Because the Regional Criteria are often not applicable, it is important for the Policy to recognize that alternative scientific approaches may not resemble the approach used to develop the Regional Criteria.

Section C.1.3 also states: "The alternative approach and any proposed site-specific criteria shall be consistent with the principles described in Section 2.1." However, the principles identified in Section 2.1 are without foundation. For example, the second principle states; "Water shall be diverted only when streamflows are higher than the minimum instream flows needed for fish spawning, rearing, and passage." But it has not been established that if the unimpaired streamflow is already inadequate for spawning, rearing and passage, that a small decrease in flow in this range would have any adverse incremental effect on fishery resources. Or for that matter, it has not been established that if the unimpaired streamflow is in the range of flows suitable for spawning, rearing and passage, that a small decrease in flow in that range has a detrimental effect on fishery resources.

Process for Identification of Alternative Regional Criteria Must Be Improved

Section 2.2 suggests that an alternative approach for evaluating protectiveness, such as the Joint Recommendations, could be approved. Section 2.2 requires that the alternative regional criteria be at least as protective of fishery resources as the criteria in the Revised Draft Policy. Section 2.2.1, however, states that "The regional criteria are by necessity conservative and err on the side of resource protection ... at some sites, therefore, more than adequate flows will be provided by regionally protective criteria." Why must alternative criteria that are tailored to actual stream conditions be "at least as protective" of the Regional Criteria that are by definition over-protective?

Regional Criteria Must be Decoupled from Site Specific Studies

We join in the March 25, 2010 comments of North Gualala Water Company regarding site specific study. North Gualala discusses Response to Comment 5.0.04 that acknowledges that the Regional Criteria do not "have site specific accuracy" and they were not "intended to be used to predict the site specific needs accurately for every stream." We concur with North Gualala that it was appropriate to eliminate the requirement to conduct site-specific studies in order to obtain "variances" from the Regional Criteria. We also concur with North Gualala's recommended clarification to Section 2.2.2:

When a site-specific study has been conducted pursuant to an approved study plan and a report of the study has been prepared, the regional criteria will not be considered for parameters for which proposed site-specific criteria have been developed.

The Policy Should be Based upon the Joint Recommendations' Flow Threshold and Management Objective Framework

The Joint Recommendations define two stream stage thresholds that provide significant biological functions, namely salmon or steelhead spawning and migration (Salmon Spawning Flow) and inundated riffles (Winter Low Flow). These management objectives have been designed to allow diversions to be permitted without creating significant cumulative impacts within watersheds sustaining, or potentially sustaining, anadromous salmonid populations. The Salmon Spawning Flow and Winter Low Flow thresholds are more practical than the Revised Policy because the thresholds may be calculated using site specific studies or by regional estimates.

Unlike the Revised Policy, the Joint Recommendations also include flow management objectives that define acceptable changes in stage to the Salmon Spawning Flow and Winter Low Flow thresholds, thus enabling the Board to make informed permitting decisions regarding project effects on instream resources.

Environmental and Economic Impacts of Revised Policy Not Adequately Disclosed

Our May 1, 2008 Comments with Kronick, *et al.* identify numerous errors in the environmental and economic impact analyses for the Draft Policy. Most of those errors have not been addressed in the Revised Policy. We will not restate each of our prior comments, but note the following two significant errors.

Indirect Environmental and Economic Effects Have Been Underestimated

The Substitute Environmental Document ("SED") impermissibly defers all analysis of indirect environmental and economic effects associated with the policy, particularly regarding the effects associated with the reduction of water supply resulting from application of the policy criteria and denial of water right approvals. We commented on the Draft Policy that most of the pending projects cannot meet the Regional Criteria. This problem does not materially change with the Revised Policy Principles and Regional Criteria. We also commented that the SED and other policy documents do not disclose the additional indirect environmental and economic impacts that would result when water right approvals are denied under the policy. The Revised Policy still defers analysis of indirect economic impacts associated with the cost of compliance with the policy by suggesting that site specific studies will be available for projects that do not conform to the Regional Criteria and the ultimate manner of compliance is too speculative to analyze. This is an improper analysis; at a minimum the Water Board must conduct a program-level analysis of indirect environmental impacts and economic costs that assumes that all pending projects not meeting the Regional Criteria would be denied water right approvals. When the Board conducts this analysis it will find many significant impacts were not disclosed in the Draft Policy and Revised Policy analyses.

No Trade-off Analysis Conducted

Protection of fishery resources and beneficial use of water are both societal values supported by law. The Scientific Basis and Staff Responses to Comments make clear that "more than adequate flows will be provided by regionally protective criteria." But is that a fair balancing of values? Indeed, there was no balancing of values performed – the benefit to fishery resources was not quantified, nor, except in the few cases presented in Table 1 – Summary of Modeling Results, was the loss of water to diversion projects evaluated.

The Responses to Comments 4.0.29 and 4.0.31 claim the Substitute Environmental Document (SED) "adequately assess, at a programmatic level, the potential indirect environmental impacts of the Policy, on agricultural resources." Response to Comment 24.0.28 claims the "water cost analysis described in the SED ... in conjunction with the comparisons of protectiveness provided in the Scientific Basis... can be used as a type of "trade-off" analysis." However, Response to Comment 23.5.7 admits

"the water cost analysis presented in the SED was not intended to provide a measure of the reduction in water supplies that will results (sic) from the Policy."

This is understandable since the "water cost analysis" assumes diversions at the maximum rate allowed by the MBF and MCD parameters throughout the entire permitted season. This is completely unrealistic because there are no projects proposed at drainage area sizes represented by the Validation Sites that would divert anywhere near those volumes of water. Projects under application are primarily on much smaller watersheds. Those on larger watersheds generally are offstream diversions at limited rates. Most projects do not divert through the entire winter season in an average year. The June 2009 Sensitivity Study is based on the same fundamentally flawed representation of water diversion.

The Response to Comment 24.0.28 perpetuates the false conclusion that "The SED concludes that Policy criteria are protective, yet are among the least restrictive of the protective alternatives analyzed in terms of limiting diversion." This is contradicted by the Response to Comment 23.5.5 which pointed out that "as the drainage area decreases, the Draft Policy becomes dramatically more restrictive to diversions as compared to the Draft Guidelines," and the Response was "the restrictiveness of the Draft Policy in small drainage areas is noted. Staff is reevaluating the flow related criteria."

Comment 24.0.31 pointed out that "Wagner and Bonsignore's comment letter presents yield analyses for 21 pending projects in the Policy area. The reduction in yield among the 21 projects ranges from 2 percent to 98 percent, and averages 62 percent on a project-by-project basis. The reduction in yield will greatly impact project viability." The Staff Response did not refute these findings. Instead the Response refers to the "water cost analysis" which does not represent any actual project but instead assumes maximum permitted diversions by unrealistic projects at the large Validation Sites. The only analysis by Staff of projects under application is the flawed Table 1 Summary of Modeling Results. It is not apparent that the Scientific Basis, SED, or Response to Comments evaluates the benefit or detriment to fishery resources attributable to imposition of any proposed diversion policy to an actual project under application.

Recommendations

- Commenters urge that the Revised Policy, as proposed by the Water Board staff, be rejected.
- Further revisions of the Draft Policy should be based on the Joint Recommendations submitted on April 30, 2009.
- Adopt the criteria in the Joint Recommendations for processing water right applications and petitions on small watersheds.
- Further develop and apply biological metrics for evaluating potential impacts to instream resources discussed by Dr. Trush in the Joint Recommendations.
- Adopt the Joint Recommendations criteria for reforming water right processing.

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We strongly encourage the Board reconsider our Joint Recommendations. We believe that a collaborative approach of staff working with stakeholders could produce substantial improvements to the Draft Policy.

Sincerely,



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