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Subject: Comment Letter -- AB 2121 Policy

25 March 2010

VIA EMAIL

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Reference: Comment Letter - AB 2121 Policy
Revised Draft North Coast Instream Flow Policy, dated February 17, 2010

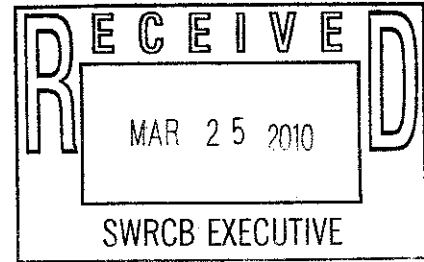
Dear Chairman Hoppin and Members of the Water Board:

I have read the recently revised North Coast Instream Flow Policy which was released on February 17, 2010, and some of the accompanying documents. I wish to provide brief public comments on a selected number of topics, which are numbered below corresponding to the Section numerals of the Revised Draft Policy. However, before I discuss the specifics, I would like to address two important issues.

1. The Revised Draft Policy, the two volumes of the Response to Comments and other information recently released through the Water Board website, contain over 600 pages. It's a lot to read, digest and evaluate. Therefore, I am respectfully requesting that the public comment period be extended an additional 90 days.

2. At the August 5 and 6, 2008 workshops held in Ukiah and Santa Rosa, the Water Board and staff were apprised of the ongoing work by Brian Johnson, attorney for Trout Unlimited (TU), Peter Kiel of the law firm Ellison Schneider and Harris (ESH), and Bob Wagner of Wagner & Bonsignore Consulting Civil Engineers (W&B). These three entities had formed a "loose coalition" to establish better criteria and procedures to meet goals of salmonid passage and improved salmonid spawning habitat while simultaneously not prohibiting agricultural diversions. Mr. Wagner pointed out that his firm represented more than half of the applicants, and that TU, ESH and W&B had worked in concert for three years to develop workable rules for agriculture that also ensured streamflow protection. In particular, as a professional engineer, Mr. Wagner pointed out that the Draft Policy as written was "flawed, and would severely limit water diversions." In his view, it did not balance the water needs for fish with the agricultural needs for diversion, and that the "costs for compliance are underestimated." He went on to say, "We need a policy" and "we need clear manageable guidelines structure." Mr. Johnson of TU said, "We agree on the point that in most streams there's enough water for agriculture and for fish. The question is the method and timing of diversion."

Given this cooperation among generally adversarial entities, and with the Water Board's verbal blessing at those workshops, TU, ESH and W&B continued work for another eight months and developed their Joint



Recommendations, released April 30, 2009. It covered nine topics, and they intended to write four more sections. However, the Water Board never acknowledged this work until the Response to Comments document came out, and then the Joint Recommendations were lightly criticized and heavily ignored. Their work was entirely discounted by the Division of Water Rights staff. TU, ESH and W&B together put in all this effort to develop the Joint Recommendations and nothing came of it; they may as well have never sat down to confer, let alone write a document.

However, there is a bit more to this story. The Water Board staff contracted with two firms, R2 Resource Consultants and Stetson Engineers, to respond in detail to the Joint Recommendations. It should be publicly noted that R2 Resource Consultants and Stetson Engineers did a thorough "trashing" of the Joint Recommendations, finding fault with nearly everything that their engineering colleagues Wagner and Bonsignore had prepared. And it also should be remembered that R2 Resource Consultants and Stetson Engineers were not independent peer reviewers of the Joint Recommendations, but rather these two companies were the very highly paid consulting firms which wrote the Scientific Basis for the original Draft Policy in August 2007. There is a profound conflict of interest. The Water Board should have hired an independent firm to evaluate the Joint Recommendations, not the firms which were contracted to write the original documents.

As you may be aware, I provided my own critique of these Joint Recommendations on September 14, 2009. While the Joint Recommendations may not be perfect, they are far more workable, scientifically sound and more defensible than the original Draft Policy, and now the Revised Draft Policy. So, my request is that the Board carefully examine the Joint Recommendations and meet with its authors to see what portions of the Joint Recommendations can be incorporated into a policy. It would be far better for anadromous fish and their habitats, and for farming for the Water Board to accept the Joint Recommendations instead of the Revised Draft Policy, and I support adoption of the Joint Recommendations.

COMMENTS SPECIFIC TO THE REVISED DRAFT POLICY

Section 2.2.1.2 Minimum Bypass Flow

The formulas for bypass flows on small watersheds have been slightly changed from the original Draft Policy, and there are now two formulas: one for watersheds less than or equal to 1 square mile and one for watersheds from 1 square mile to 321 square miles.

Concerning the watersheds of less than 1 square mile, the formula requiring an instantaneous minimum bypass flow of nine times the mean annual flow is still very restrictive to most projects, especially those high in the watershed where most diversions occur, and especially to those with watershed areas of less than about 200 acres. Without access to actual streamflow data, I can't accurately assess the percent of water that would have to be bypassed compared to total flow, but the required instantaneous bypass amount must represent around 97% to 99% of the total annual flow, and the number of days it would be permissible to divert and store water surely cannot exceed more than about 15 days per water year. None but the very smallest of ponds would ever fill.

As for the slightly larger watersheds, say 1 to 15 square miles, the new formula provides a nearly identical number of diversion days as the old formula from the original Draft Policy. I presented a table and graph in my comments of August 5, 2008 and showed that unless the watershed area is at least 10 square miles (= 6,400 acres) only a few diversion days are possible each winter. In the case of a diversion at the Soda Creek USGS gauge 11467850, there is a watershed area of 1.53 square miles. Under the Draft Policy, there would be 7 allowable diversion days, and under the Revised Draft Policy, there would be 5 days. For Willits Creek, a watershed area of 3.72 square miles, at USGS gauge 11462160, under the Draft Policy there could be no more than 5 diversion days and under the Revised Draft Policy there can be no more than 7 days of allowable diversion. Data from other locations are comparable, so the conclusion is that the new formula provides nearly identical results to the old formula, and both are so restrictive to diversion that few if any diversions will be allowed.

To sum up, the Minimum Bypass Flow requirement is a project killer to small diversions. As I wrote for the August 5, 2008 workshop, "If this policy is adopted, especially with the Minimum Bypass Flow and Maximum Cumulative Diversion requirements, there will never ever be another pond built on a small drainage." As mentioned in the previous paragraph, I provided a table and graph which showed the number of actual permissive days of diversion for a variety of watershed areas and annual stream flow rates, and I concluded, "Unless your drainage area is at least 6,400 acres or 10 square miles, you'll never be able to build a pond." I still stand by these words, the possibility of exemption from Minimum Bypass Flow requirements for projects above the Upper Limit of Anadromy notwithstanding. The exemption criteria for projects above the Upper Level of Anadromy are discussed in Appendix A.1.8.1 and A.1.8.2. The three criteria plus the analyses required in Appendix B Sections B.3.5.4, B.3.5.5 and B.3.5.6 do not appear to be viable except for a very small number of projects. Moreover, it is doubtful that the Case-by-Case exceptions found in Section 9 would be allowed except under very rare circumstances.

Section 2.2.1.3 Maximum Cumulative Diversion

As with the original Draft Policy, the Maximum Cumulative Diversion will make many projects, especially small ones, impossible to build. The reason is that many ephemeral streams contribute significant amounts of water to a pond only during and soon after large storm events. If the Minimum Bypass Flow is in place, no water may be diverted and collected until that requirement is satisfied and on an ongoing basis. Some water can be diverted after that requirement is met. However, when the Maximum Cumulative Diversion begins to apply, the window of opportunity to fill a pond is small. Small ponds high in the watersheds need the "flashy" conditions caused by intense rainfall in order to fill because of the restrictions due to the Minimum Bypass Flow. But, if the large volume of water during a rainstorm is denied to a pond because of the Maximum Cumulative Diversion, few projects will ever be built.

Section 2.2.2 Site Specific Studies

The idea looks good on paper, but it is doubtful the approach will

succeed when requested by an applicant. Criteria are in general too difficult to meet.

Sections 5.0 - 5.2 Bypass System, Flow Monitoring and Reporting

While passive bypass systems are to be the norm, under special conditions, "an automated computer-controlled bypass system shall be designed, installed, and operated." One requirement of the automated computer-controlled bypass system is that, "compliance with the minimum bypass flow requirements shall be demonstrated by hourly recording using automated flow measuring devices(s). The flow data shall be recorded so that it is retrievable and viewable using commonly available computer software." It goes on to say the data must be put on a spreadsheet and sent electronically to the Water Board in tabular and chart forms.

There are two objections to the automated computer-controlled bypass system. First is excessive complexity and enormous cost. To automatically measure, record and change the bypass flow rate will require electronic sensors to measure pond volume for any given pond depth, and a sensor to measure the actual bypass flow rate just below the dam. But in addition to the sensors, there must be a switching system that activates a diesel engine or an electric pump to pump the water out of the pond at the desired rate, and not too much nor too little a rate. Pumps and valves must be automatically turned on and off and while pumping, must be adjusted to provide the exact required flow automatically by electro-mechanical means. So there must be sensors and a negative feedback system at the pump to obtain the correct rate of bypass. It would require purchasing a power source, e.g., a diesel engine or bringing in electricity. Then, one would have to buy a pump capable of pumping hundreds or even thousands of gallons per minute. Finally, there would have to be a complete control system of computers, valves, switches and much more. This is a difficult and costly problem that only a licensed engineer can attempt to solve. It is hard to give a cost estimate, but based on my own experiences I would suggest that for any individual pond of, say, 20 acre-feet capacity, this kind of system will cost at minimum \$50,000 and more likely \$80,000 or more. It's simply too complicated and too expensive to implement. Of course, for larger ponds, the cost will be more.

The second reason that this automated computer-controlled bypass system isn't feasible is that the Water Board staff will be overwhelmed by all the hourly recorded data it receives, even if only on the forms and spreadsheets reporting water use. Of course, if data must be submitted to the Water Board in real-time, the problem is even worse. Consider the amount of data from only 100 ponds employing this system, taking readings once per hour. There are 24 hours in a day and 365 days per year, so each pond annually delivers 8,760 data points. With 100 ponds, there are 876,000 individual data points each year, a huge amount of uninterpretable data containing very little valid and useful information.

The correct solution, as I have pointed out before, is to establish a number of USGS stream gauges at selected places on streams of interest. In this manner, valuable information may be gleaned.

Section 8.3 Continuing Authority to Amend Permits and Licenses

From the birth and early development of the North Coast Instream Flow Policy, the Division of Water Rights has taken the position both in writing and at many public meetings, that the Policy will apply only to applications for new water rights or to certain petitions. This stance has been clear through all of this prolonged process. It says so in the first paragraph of the Introduction of this Revised Draft Policy: "It [this policy] applies to applications to appropriate water, small domestic use and livestock stockpond registrations, and water right petitions." Under Section 3.3, the document repeats this sentence verbatim, "This policy applies to applications to appropriate water, small domestic use and livestock stockpond registrations, and water right petitions." In public meetings, this was reiterated many times, and staff has said the Policy would not affect existing licenses.

But now in Section 8.3 of the Revised Draft Policy, the rules are changed completely, using Water Code Sections 100 and 275, and it is clear the present intention differs from what the original Draft Policy contained and from what the Introduction and Section 3.3 of the Revised Draft Policy both state. It is manifest that the Revised Draft Policy now intends to apply to existing water rights, and with obvious intent to modify existing licenses. This is contrary to what staff has been saying for more than two years.

I can say with assurance that many landowners will view Section 8.3 as a threat. These landowners may not realize that the Water Board to some extent already has this power, but landowners will think it as a new authority. But precisely because the Water Board already has some of this authority, this language is not needed in the Revised Draft Policy. Moreover, since the Policy applies to a limited area of all or portions of only five counties, the language looks highly discriminatory with respect to the other 53 counties in the State. These Water Code Sections actually apply to the entire state and therefore should not appear in the Policy which is limited to this area. Unless, of course, it becomes the intention of the Water Board and staff to open up and modify existing water rights only in the region covered by the Policy. At the least, this topic must be clarified, but I think it is better that this section should be deleted completely.

Section 9.0 Case-by-Case Exceptions to Policy Provisions

This section is a welcome addition to the Revised Draft Policy. I sincerely hope that the Water Board staff and the Deputy Director for Water Rights will look favorably upon applicants who choose to exercise these provisions.

Thank you for your kind attention to these comments and for the opportunity to provide them.

Very truly yours,

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