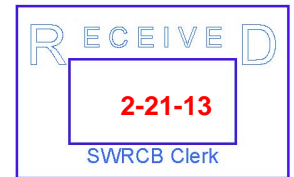




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February 21, 2013



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

Reference: "Comment Letter – Scientific basis for development of statewide policy for biological objectives."

To: State Water Resources Control Board:

The California Forestry Association (Calforests) would like to present for your consideration the following comments on the above-referenced policy under consideration by the State Water Resources Control Board (State Water Board).

Calforests presents these comments on behalf of our membership which includes the majority of large forest landowners, many small forest landowners, as well as forest management companies, loggers, foresters and environmental scientists throughout California. Calforests and our members have been actively engaged in the early development of biological objectives through participation in the Stakeholder Advisory Group. Additionally, Calforests has previously commented on various aspects of the State Water Board's biological objectives policy during the CEQA public scoping process (Calforests comment letter dated October 18, 2012), and prior to that, during the development of the stakeholder's Implementation Plans (Calforests letter dated June 29, 2012). In both of these letters, Calforests raised several significant issues with this proposed policy.

The development of this biological objective policy, and any related regulatory programs adopted by the State Water Board, will likely have significant and long-term consequences to the future of forestland management in California. Calforests and its members are deeply concerned with many of the developments of this policy to-date and this comment letter lists some of those issues as they relate to the scientific basis for a biological objectives policy.

Specifically, our concerns include the following:

The methods for the determination of reference sites and reference pools need improvement. The selection of reference sites and the development of reference pools and reference conditions are of paramount importance in this policy. We believe that although there has been a detailed methodology for the selection of these sites, additional reference sites may be included by small changes to the metrics used to select and de-select reference sites. Additional reference sites could result in additional statistical validity when assessing stream health and water quality from nearby non-reference areas. As an example, many possible reference sites in forested areas were excluded as reference sites simply because of their proximity to forest roads. This may not be necessary, as in most instances, impacts from forest roads have been mitigated through California's extensive Forest Practice Rules and by the implementation of additional Best Management Practices by forest landowners. Some potential reference watersheds may have been excluded because of fire history or unstable soils. These watersheds should be included as reference watersheds because they represent the natural variability of watershed conditions in California. A larger number of reference sites in any given watershed will allow for increased statistical significance of the resulting reference pool, and may preclude the need to include distant reference sites in any particular reference pool.

All reference sites need to be re-sampled Calforests was surprised to learn that over 90% of reference sites in California have only been sampled once. We believe that every reference site needs to be re-sampled, and this re-sampling needs to be accomplished over longer periods of time. And some sites need to be re-sampled at different times in the same year. This re-sampling will accomplish two major goals. First, it will help define natural, long-term trends in benthic macro-invertebrate (BMI) populations. This will be critical when these reference conditions are used to “score” subsequent test samples taken as part of any BMI-sampling process. Second, it will help to highlight the variability that can exist in BMI populations in any given watershed, at the same site in different years and at the same site at different times in the same year. This variability needs to be addressed before any statistically significant scoring process can be determined for future regulatory-related BMI sampling. We propose that those state agencies that obtained prior BMI samples at reference sites now begin extensive reference site re-sampling.

The California Stream Condition Index (CSCI) is a new scoring tool and needs further review and testing. The CSCI was developed as a result of concerns raised by the Scientific Advisory Group with previous scoring tools. The CSCI is a hybrid scoring tool with both an “Ecological Structure Component” and a “Taxonomic Loss Component,” and includes elements of the two associated mathematical models, both of which are extremely complicated and subject to sampling variability and error. The derivation of an accurate scoring tool, whether it is CSCI or any other method, is paramount in development of subsequent biological objectives sampling programs. Yet, as outlined in a previous Stakeholder Advisory Group meeting, in tests conducted on previous data, “...the CSCI is more likely to find impairment than other scoring tools in some cases, and less likely to find impairment in other cases.” This inconsistency indicates a possible shortcoming of this scoring tool, and this deficiency needs to be scrutinized and further tests need to be conducted before CSCI is utilized in any regulatory setting.

There are many well-established international indexes for evaluating BMI results. As a first test, these indexes should be applied to all BMI collections across California. The state can then focus its attention on the most impaired watersheds. Given preliminary results, it is unlikely that many forested watersheds will fall into a statewide impaired category. By creating focused indexes for regions and land uses, the state will over-regulate some forested watersheds while “passing” and under-regulating some seriously impaired watershed in other areas.

The current pass/fail system for test sites is arbitrary and needs revision. Imposing a pass/fail system for tests sites based simply on an arbitrary threshold of one standard deviation below the mean CSCI value is not appropriate in many instances. In locations where BMI population variability is high, or where there are major natural year-to-year fluctuations in these population based on stream flow, climate, or other conditions, the pass/fail standards may need to be adjusted to account for this variability. If failure is based on a sample falling below one standard deviation of the average reference pool value, then it would also be possible—and probable—that many actual reference sites may actually fail this test also.

The “gray-zones” between pass and fail ranges for test sites may result in unnecessary and expensive follow-up sampling. Similar to the issue raised above with arbitrary pass/fail lines, the establishment of “gray-zones” between these pass and fail ranges needs to be analyzed. Test site results within these gray-zones could trigger a requirement for causal assessment or additional forensic sampling. Both of these activities could be labor-intensive and expensive processes. Many streams can have a large range of BMI population numbers, based largely upon sampling location, flows, weather patterns and other natural factors. To arbitrarily establish both pass/fail lines and gray-zones that require additional sampling is not appropriate. A better system needs to be devised.

SWAMP protocols for field sample collection of BMIs and for the subsequent laboratory analysis of these samples are extremely complicated and expensive. On October 18, 2012, the State Water Board released their Surface Water Ambient Monitoring Program (SWAMP) “Field Methods Course Module 7 for Biological and Physical Assessments.” The procedures in this manual outline the accepted sampling protocols for BMIs in California. Inferably, these protocols will be standard operating procedure for any required State Water Board BMI sampling program related to biological objectives. The procedures listed in this training module involve extensive in-stream and near-stream measurements, sampling and analysis well beyond the actual sample collection of BMIs. Collecting BMI stream samples using these procedures will be extremely labor-intensive and expensive, and would be totally cost-prohibitive for many forest landowners. The BMI sampling procedures specify collections at fixed distances along a stream reach regardless of the habitat type. This is incompatible with the current methods, California Stream Bioassessment Procedures (CDFG 2003), and international standards of collecting BMIs in riffles when present. The Module 7 protocols then specify combining the samples to make a “composite BMI sample” in the field. Riffle samples cannot then be separated from the other samples so the riffle results can be compared to previous BMI riffle studies. This seemingly small change will make new BMI data incompatible with decades of local and international data sets.

Then, on November 13, 2012, the State Water Board released their “Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California” which outlined laboratory procedures for BMI samples. These procedures were likewise complicated and expensive, will result in huge expenditures for the analysis of BMI samples, and will severely limit the number of labs available to analyze samples. These two SWAMP sampling requirements would result in sample collection and lab costs that would be economically unfeasible for most forest landowners.

Our final thoughts: Calforests wants to be perfectly clear. We support regulatory processes that fix existing problems, that are feasible to undertake, and that complement—but not overlap—other existing regulatory processes. We are increasingly concerned with various possible regulatory aspects of the biological objectives policy and program. Our concerns are based on the following:

- There have been many questions—but few answers—associated with the entire biological objectives policy and program. There are various components of this policy that have changed radically in the past few months (e.g., development of the CSCI scoring tool) that have not been fully vetted. Further discussion and analysis of these issues need to be conducted.
- Any discussion of the scientific aspects of this policy cannot be undertaken without some knowledge of the future regulatory implications of this policy. We are at that point now, where we are being asked to comment on the scientific aspects of a policy that could have huge regulatory implications, and grave economic consequences to forest management and the timber industry in California.
- Forest streams in general have some of the best water quality in California. This is not just our opinion – this has been confirmed by numerous studies conducted by state agencies, academic organizations, local water agencies and watershed groups. Expensive, complicated, and unnecessary BMI sampling required by this policy will do nothing but thwart and discourage the active forest management that will maintain this water quality.
- The current forest regulation system in California is the most comprehensive forest regulation system in the world. Calforests has outlined this extensive regulatory process in previous comment letters. Various forms of water monitoring are already part of the formal state’s inter-agency timber harvesting permitting process. Suffice it to say that additional forest stream monitoring is just one more layer of regulation that is not necessary at this time.

In conclusion, Calforests has numerous concerns and issues with both the scientific aspects of the biological objectives policy and with the possible resulting regulatory consequences. We urge the State Water Board to look at alternatives to required BMI sampling as part of their biological objectives policy. We will remain engaged in the development process of this policy and program, and look forward to providing additional comments in the future.

Thank you for the opportunity to comment on this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Bischel". The signature is stylized and cursive, with a large initial "D" and a long, sweeping underline.

David Bischel,
President