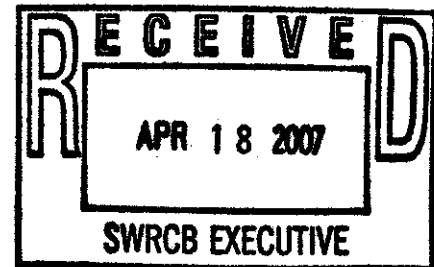


18 April 2007

Song Her, Clerk to the Board
Executive Office, State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100



Subject: Comment Letter – Wetland and Riparian Area Protection Policy CEQA Scoping

Dear Boardmembers and Staff:

The aquatic environment in California will benefit from a more forceful and clearly defined state presence in wetland and riparian area regulation, and I generally applaud the direction represented by the proposed policy. In a general context, I believe that Alternative 4 would be the most beneficial option for the state's aquatic ecosystems, although the information needs that would be established by Alternative 4 are substantial, and it's likely that existing scientific and technical knowledge will not stretch far enough to answer many of the technical and methodological questions that Alternative 4 raises.

I have two particular technical concerns with all of the alternatives under consideration, but these concerns are most likely to be significant for the potential elements included in Alternative 3 and Alternative 4. The two concerns arise in part from the natural and inherent variability that occurs within wetlands and riparian areas within the State of California, and in part from the fact that wetland regulation already has a multi-decade history in California that will affect how the proposed policy is implemented.

The first concern is that Alternatives 3 and 4 specify that the State of California would develop a definition of "wetland" for carrying out the purposes of this policy. It's unclear to me how this could be accomplished in ways that avoid potentially major conflicts in the application of the policy in different parts of the state. Any overly comprehensive wetland definition developed for the state will undoubtedly prove technically troublesome in application, considering the variation between the Colorado Desert in the southeast and the redwood forests of the northwest coast. However, it appears to me that the benefits of the policy would accrue to state waters even if the focus of the policy were on "waters of the state" and the precise meaning of "wetland" were left undefined.

As a practical matter, practicing wetland scientists are well aware that interactions among aquatic and terrestrial ecosystem elements are variable along a number of environmental gradients. The wetland definition used for federal jurisdictional determinations by the Corps of Engineers under

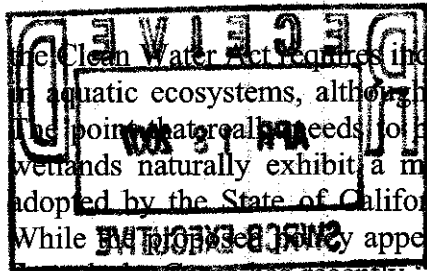
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The Clean Water Act requires indications of hydrology, substrate, and biotic conditions that occur in aquatic ecosystems, although actual conditions are generally interpreted somewhat flexibly. The point that really needs to be emphasized is that, absent good ecological reasons why not, wetlands naturally exhibit a mixture of all of these traits. A functional wetland definition adopted by the State of California would need to incorporate the same broad understanding. While ~~SWRCB~~ appears to reject or eschew the federal definition as being somehow flawed, the Corps has recently "regionalized" the application of the 1987 delineation manual in most of California, and has indicated an intention to follow through with a similarly regionalized manual for the remainder of the state in the near future.

The proposed policy refers to wetland definitions established by the Coastal Commission and the Department of Fish and Game as possible templates for a statewide wetland definition. In my opinion it would be unwise to adopt the Coastal Commission's definition for the purposes of this policy. It has been my experience (which I believe is shared by other wetland scientists who work as consultants in California) that identifying wetlands when only a single wetland "parameter" (e.g., vegetation) supports such a determination, as is common practice in the Coastal Zone, yields identifications of wetland conditions in coastal California that are incompatible with the understanding of many wetland scientists. It would be well if the SWRCB avoided a similar problem in applying this policy statewide.

I urge that the Board's technical staff consult broadly with wetland scientists practicing in California regarding the characteristics of wetlands before developing an expansive new policy-based definition for wetlands that are subject to State Board regulation. I don't see the benefits of a major investment of state staff time in clarifying the application of the proposed policy to "state wetlands" as opposed to "federal wetlands."

I urge that the policy focus for the State pursuant to the Porter-Cologne Act should be the aquatic environment as a whole, and that wetlands should be identified as only one aspect of that environment, in which riparian areas are another part, and groundwater is a part, and surface flow in streams is a part. That is, in my judgement the focus for this policy would better serve the state and its citizens if the focus were not specifically on the definition of "wetlands" (or "riparian") and were more on the effects of various stressors on aquatic ecosystems, on water quality, and on beneficial uses of the aquatic ecosystems that are to be protected. Arguments about definitions would be less useful or productive.

My second concern is that Alternatives 3 and 4 both specify the development of a "functional assessment" requirement for identifying impacts and assessing mitigation efforts. The informational document identifies the California Rapid Assessment Method (CRAM) as an example of the kind of methodology that would be required for such functional assessments. The proposed policy also identifies requiring "performance standards" that include "measuring parameters related to functions, services, and values," although no guidance is presented as to what this would include in practice.

Few wetland scientists in California would disagree that developing a useful and cost-effective functional assessment methodology should be a high priority. However, identifying wetland and

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riparian functions has a relatively poor scientific basis at the present time, and specifying required approaches to function assessment across the geographic variability occurring in wetlands and riparian areas in California will undoubtedly prove to be presently unworkable.

This concern is not based on the lack of benefit that focusing on wetland and riparian functions would provide, but upon the lack of scientific data and consensus concerning how the wetland functions are actually achieved and (more importantly from a regulatory perspective) how to measure them.

The Army Corps of Engineers, for example, was ordered by its commanding officer in 2002 to base impact assessments and mitigation proposal reviews for wetlands, pursuant to the Clean Water Act, on analyses of wetland functions (Regulatory Guidance Letter 2-2). The Corps invested research funding and staff time in assessment methodology development. These approaches failed to develop usable methods for assessing wetland functions, and the effort is apparently no longer being supported.

The policy proposal identifies the CRAM as a functional assessment methodology, and I infer that Board staff contemplate that the CRAM or similar methodology will supply the needed function assessments. A more thorough consideration of the CRAM in the context in which it's used (for information about the CRAM see URL: <http://www.cramwetlands.org/>) will indicate that such an expectation places a burden on the CRAM that it's incapable of carrying. The following text is quoted from the CRAM website:

“CRAM is ... is part of a comprehensive program plan in three levels to monitor the health of wetlands and riparian habitats throughout California.

“Landscape Assessment (Level 1) uses remote sensing data and field surveys to inventory the wetlands and riparian habitats. The California Wetland Inventory and the national (sic) Wetlands Inventory are examples of Level 1 assessments.

“Rapid Assessment (Level 2) uses visible field diagnostics and existing data to assess conditions at wetland and riparian sites. CRAM is an example of a Level 2 assessment method.

“Intensive Site Assessment (Level 3) provides quantitative field data to calibrate and validate Level 1 and level 2 methods, and to test hypotheses about the causes of habitat conditions.”

That is, the CRAM is not intended to provide quantitative assessments of wetland functions and services, which is either a currently undefined methodological assessment or a “level 3” research assessment. While I support the broad-scale application of the CRAM to wetlands and riparian areas in California, owing to the knowledge of wetland status and trends that would result, I believe that it would be unfortunate if the Board expected the CRAM methodology to bear an informational burden that it is not designed to carry.

It's unclear whether any currently available or widely used wetland assessment methodology can provide “level 3” data, which are characteristically the results of basic or applied research

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programs. It's likely that the application of such methods, were they available, would not be "rapid" and would involve substantial time and effort, and they would therefore not be inexpensive. I'm concerned that the Board may hasten to identify and require the implementation of function assessment methodologies that are not well based on wetland science or ecology, simply because the policy demands that "something" exist to fill a regulatory void.

As is true for the "wetland" definition question discussed above, there are a number of practicing wetland scientists in California working on assessment questions, and I urge that State Board staff should consult with them in developing the functionally equivalent assessment document. Many of the technical concerns are likely to benefit from such consultations, and if the Board were to provide funding for these practicing scientists it would be likely that we could collectively make progress in addressing these technical issues.

In the meantime, however, I do have the kinds of concerns expressed in this letter about the level of sophistication in the science available to address the proposed policy. As the Board's staff craft the functionally equivalent assessment document, I request that staff identify as clearly as possible how the technical requirements of the policy would be carried out, including identifying methodological approaches that are available to provide the kinds of information called for in the policy.

Notwithstanding these concerns, I believe that the state is well advised to move toward a policy that addresses the roles of all parts of the aquatic environment in protecting water quality and the beneficial uses of the state's waters, and I support the general thrust of the proposed policy. It seems most important to me that the state identify the relationships among the several elements in aquatic ecosystems that protect water quality and beneficial uses. These elements clearly include wetlands and riparian areas, from a policy perspective. It's really not clear to me that arguing about technical definitions for terms like "wetland" is necessary to carry out the Board's responsibilities to the environment or to the people of California.

Sincerely,



Chad Roberts, Ph.D.
SWS PCP Professional Wetland Scientist No. 268