The Association of State Wetland Managers, Inc.

"Dedicated to the Protection and Restoration of the Nation's Wetlands

Dear Ms. Riley

Thank you for submitting to us a draft discussion paper: A Rapid Assessment System for Riparian and Stream Corridors for California: A Discussion on How Can We Improve a Rapid Assessment System for Streams.

Background:

We find your analyses, conclusions and recommendations consistent with the results of a series of Association of State Wetland Manager studies over the last decade concerning the use of wetland assessment techniques in the regulatory and other contexts:[1]

The debate over how to evaluate wetlands, riparian zones, streams, and related ecosystems has been going on for more than a decade. Federal agencies have proposed a wide variety of assessment methods such as HEP, WET, IBI models, HGM models, and GIS models. Some focus upon "condition" (IBI). Others attempt to assess "functions" (e.g., HGM). And still others, such as WET some GIS models, consider "value" as well as functions.

All of these models have useful features. However, all have proven to have substantial limitations if applied as a "stand alone" analysis in regulatory and other management contexts. None have proven to be the "silver bullet" hoped for by their authors (e.g., WET and HGM).

For example, at the federal level, the USACE and EPA developed and then rejected WET. It then spent many millions of dollars developing HGM as a substitute. But USACE and EPA have also chosen not to formally adopt HGM models because the models are too time-consuming and expensive to apply and provide only a small portion of the information needed for regulatory

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[1] Kusler, Jon. 2004. "Final Report 1: Assessing Functions and Values." Association of State Wetlands Managers, Inc., Berne, NY http://www.aswm.org/propub/functionsvalues.pdf
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Kusler, Jon. 2004. "Final Report 3: Integrating Wetland Assessment into Regulatory Permitting" Association of State Wetland Mangers, Inc., Berne, NY http://www.aswm.org/propub/integrating.pdf
Kusler, Jon. 2006. "Developing Performance Standards for the Mitigation and Restoration of Northern Forested Wetlands." Association of State Wetlands Managers, Inc., Berne, NY
http://www.aswm.org/propub/forestedwetlands91806.pdf
Kusler, Jon. 2004. "Multi-Objective Wetland Restoration in Watershed Contexts." Association of State Wetland Managers, Inc., Beren, NY http://www.aswm.org/propub/restoration.pdf
[1] Hruby, T. 1998. "The HGM Dialogue: What is Science and What is Belief?" Society of Wetland Scientists Bulletin. Vol. 15, No.2. Lawrence, K.S., pp. 7-8.

decision-making. No one assessment method has proven capable of meeting all information needs.

In addition, many states have developed their own assessment methods for a variety of nonregulatory and regulatory applications. These methods have also have proven to have limitations for use in regulatory and other management context because they oversimplify natural systems, require too much data, are subject to conceptual flaws, or are too subjective. Only a few (e.g., Florida) have been formally adopted for regulatory programs.

Conclusions and Recommendations in Your Discussion Paper:

We concur with the conclusions of your discussion paper that assessment of riparian, stream, or wetland "condition" must be approached with great care in regulatory contexts. Biological "condition" is only one a number of relevant wetland, riparian, or stream characteristics which must be considered in evaluating such areas for planning, acquisition, regulation, restoration and other management purposes. Riparian and stream ecosystems are highly dynamic and assessment must focus on hydrology and stream stability as well as biological condition. "Functions" and "values" are also highly relevant to regulation, restoration, and planning and not necessarily related to "condition". For example, Tom Hruby in a field study for the Washington Department of Ecology as part of an effort to develop a state HGM-related assessment model[2], concluded that relative condition as it was defined in their efforts did not necessarily reflect either function or societal value. If condition is to be used as a "surrogate" for functions and value, field testing to determine whether criteria used to suggest higher and lower condition does in fact relate to function is much needed.

Assessment of relative condition without considering other factors can result in short-sighted regulatory decisions contrary to the public interest. This is particularly true for wetlands, riparian areas, and streams in urban areas with rapidly changing ecology and hydrology. All systems in such contexts may be highly altered and in some instances of limited overall value as wildlife habitat but of high value to society for their flood conveyance, flood storage, erosion control, pollution control and other functions and values.

As we observed above, evaluation of relative condition can be valuable if it is done with care and if

--The shortcomings as well as benefits of evaluating condition are recognized,

--The parameters used to characterize and compare systems are field tested to determine whether they do have a meaningful relationship to "function" and "value" for both habitat and nonhabitat functions and values if they are used to imply such functions and values,

--A range of reference sites are identified not simply the least altered. This is particularly important if such sites are to be used to guide impact reduction and restoration efforts, and

--Other types of information relevant to needs of particular types of decision making (e.g., regulatory decision-making) must be gathered and not simply information relevant to "condition" For example, selection of restoration sites should reflect not only condition but

[2] Hruby, T. 1998. "The HGM Dialogue: What is Science and What is Belief?" Society of Wetland Scientists Bulletin. Vol. 15, No.2. Lawrence, K.S., pp. 7-8.

watershed hydrology, reasonably anticipated changes in hydrology, degree of fragmentation, and the host of other factors relevant to achievement of restoration goals.

Recommendations:

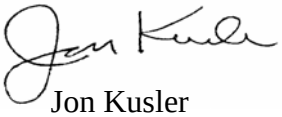
We concur with your recommendation that outside peer review and field testing of any assessment method in an actual management context take place before such a method is formally adopted. A peer review process by river and wetland scientists not involved in the development of the assessment should examine the science and assumptions and determine whether all critical resource characteristics are adequately reflected in assessment methods. Stream stability must be considered in assessing stream and riparian systems which are defined by dynamic forces.

We concur that manuals and workshops should specify the appropriate and inappropriate uses of assessment methods so that they are not inappropriately applied to regulatory and restoration programs and projects. Regulatory programs are typically better matched with functional evaluations with the possible use of relative condition assessment as a compliment to the former.

Based upon the experience of other states, no one assessment method will meet California's needs. Assessment methods should be well matched with the varied and unique needs of land use planning, regulatory programs, restoration, and watershed management. As suggested by your paper, it would be a good practice to query various stakeholders with regard to their information needs and design the collection and evaluation of information around these needs. Using this strategy will increase the likihood that assessments will become a successful part of programs and decision-making.

We appreciate the opportunity to comment on your draft paper.

Sincerely,



Jon Kusler