



**CHIEF OF ENGINEERS
ENVIRONMENTAL ADVISORY BOARD
WASHINGTON, D.C. 20314-1000 (CECW-P)**

2 March 2010

Council on Environmental Quality

Comments on proposed "Updated Principles and Guidelines for Water and Land Related Resources Implementation Studies"

The Corps of Engineers established the Environmental Advisory Board (EAB) in 1970 as a means for the Chief of Engineers to gain expert and independent advice from outside entities on environmental issues facing the Corps of Engineers. The EAB meets regularly with senior staff at the Corps of Engineers to review and address significant environmental issues associated with water resources nationwide. We have reviewed the proposed "Principles and Guidelines for Water and Land Related Resources Implementation Studies" submitted to the National Academy of Sciences and would like to provide the following comments.

The Chief of Engineers Environmental Advisory Board supports the "Proposed National Objectives, Principles and Standards for Water and Related Resources Implementation Studies" (P&S) as a crucial first step toward a more effective means for meeting the Nation's varied water resources needs. Expanding the focus of the P&S to include concepts and tools such as integrated water resource management, watershed approaches, ecosystem-based and adaptive management, and avoiding the unwise use of floodplains is essential in improving water resources management. Explicitly recognizing that climate change will alter water resources and how they are used is critical for addressing the water challenges of the future. Although the P&S present many important changes to how we manage the Nation's water resources, additional clarification and specificity is required to achieve the desired objectives.

The EAB presents the following recommendations:

- The scope of the P&S needs to be explicitly defined. There is a lack of specificity in regards to the water resources projects to which this will be applied, particularly with coastal projects. The scope of the P&S should be defined and repeatedly indicated throughout the document. The P&S should explicitly include coastal areas and include the necessary frameworks for evaluation of projects in coastal areas. The P&S should explicitly define and include portions of the coastal zone that have water resources projects (for example, deepwater ports and harbors) and include the necessary frameworks for their evaluation.
- We recognized that much of the needed specificity will likely come from Interagency Guidelines and Agency-Specific Procedures that will be developed later. Interagency Guidelines are to be developed by CEQ, "in cooperation with the Water Resources Council" (page 3). We assume that this means that the Water Resources Council, which has been dormant since the 1980s, will be reinvigorated and will play a role in efforts to implement the P&S. There is no discussion, however, of the role of the Water Resources Council other than in working with CEQ to issue Interagency Guidelines.

- Lack of specificity also manifests in other areas, for example on page 4, sub-paragraph (e):

“Any other Federal agency studies meeting the general criteria presented above.”

We recommend explicitly defining the federal agencies that would be affected by this proposal and/or the specific project types across agencies that will most commonly be affected by the P&S.

- Long-term environmental integrity and economic sustainability should be the national policy objective. The proposed approach should include a more specific focus on maintaining key physical and ecological processes such as flow, sediment, nutrients, connectivity, and biotic interactions, as the basis for how to achieve and evaluate long-term environmental integrity.
- Under Planning Standards on page 9 of the document in E (2), peer review is discussed. Peer review is a crucial component of the planning process. In order for peer review to be meaningful, it should not occur only at the end of the process, but must be integrated throughout the planning process, and this should be indicated in the P&S.
- Risk and uncertainty are included in the planning process, but there is no indication of how they should be considered in the decision-making process. There are some issues that are inherently uncertain such as climate change. The P&S indicate that planners should pursue improved models or data collection and analysis if there is uncertainty (page 11), but getting a firm answer will not always be possible. This has the potential for putting federal agencies into a never ending loop of scientific evaluation to reduce uncertainty in areas where it may never be possible. Incorporating an evaluation of risk and uncertainty into the project plan should be discussed. The use of adaptive management in making a decision should be clearly defined and its use specified in areas where there is risk and uncertainty.
- Climate change is not consistently included throughout the planning process. It is important to include climate change considerations with all decisions. This also applies to the risk and uncertainty associated with climate change.
- Additional and more specific guidance is needed on valuation. Monetized units can be used when they are available, tested and widely accepted, but if monetized units are not available or are less certain than non-monetized units, then non-monetized values should be used with equal importance as monetized units.
- Ecosystem services should be clearly defined as the benefits natural systems provide to humans or the contributions natural systems make to human well-being. The distinction between ecosystem processes and ecosystem services should be clarified.
- Given the degraded state of most areas, the draft should include a standard that projects result as net environmental gain (i.e. improvement). Consider including a standard of no net loss of ecosystem functions and services that could be applied to all projects.
- Environmental restoration projects should be evaluated separately from traditional water resource development projects (dams, levees, locks, etc). The framework should identify the need to define the end points of ecosystem restoration projects and how they will be evaluated.

- The watershed approach and ecosystem-based management should be combined into a single section so it is clear that a watershed is the primary unit of analysis and the method for analysis is ecosystem-based management. This analysis should focus on the key processes noted in the third bullet point.
- Project Evaluation: Correct the definition of efficiency so it is not the standard definition of cost-effectiveness, but rather reflects that efficiency is the maximization of net benefits (i.e., benefits minus costs) for society. Thus, the efficient project is the one that maximizes net benefits for society. The P&S should consider explicitly describing how multiple purpose projects will be evaluated so that the overall project benefits/costs/impacts/improvements will be evaluated in a multiple criteria approach, with varying weights assigned. Evaluation of projects should include analysis of life-cycle costs, including O&M, decommissioning, etc. so that full costs of structural projects can be appropriately evaluated.
- Frame alternatives to bracket range of future conditions so that the most 'robust' projects (e.g., those projects that perform best under multiple conditions) receive higher rankings.
- Baseline Conditions: The P&S should include an assessment of cumulative effects that ought to be included as part of the existing conditions. This information is important for assessing whether a proposed project is contributing, if only incrementally, to the cumulative degradation of a resource. The 'natural' baseline should be incorporated as a second baseline, in addition to existing conditions, so that the 'direction' of improvement can be measured against natural conditions. This would be for study/evaluation purposes only, not that the policy is to return every site to pre-impact conditions.

Sincerely,



James E. Kundell
Chairman
Chief of Engineers Environmental Advisory Board

cc: LTG VanAntwerp
Mr. Stockton