

CQ512



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09/23/02 07:16 AM

To: <ceq\_nepa@fs.fed.us>  
cc:  
Subject: Comments to NEPA Taskforce

Please accept my comments regarding NEPA Analyses. The attached file is in Microsoft Word 97. Please contact me if you have any problems opening this file.



NEPA Comments.doc

## DRAFT

September 23, 2002

NEPA Task Force  
P.O. Box 221150  
Salt Lake City, UT 84122

Dear Task Force Members:

This letter presents the my comments on ways to improve the analyses and documentation associated with the National Environmental Policy Act (NEPA. As a citizen of the United States, I have volunteered for three full years of public service in the U.S. Peace Corps, in an Americorps/Peace Corps Fellowship program in the rural America, and numerous local volunteer efforts in Arizona, Oregon, Virginia, and Maryland. In addition, I have nearly seven years of civil service and have earned a Bachelor of Science in Natural Resource Management and a Masters in Planning. In my work, I am committed to improving established processes for minimizing our impact on environment. My comments below focus on the structuring NEPA environmental analyses.

### **Adaptive Management and Monitoring**

*1. What factors are considered when deciding to use an adaptive management approach?*

#### ***Considering Temporal Scale in Undisturbed Ecosystems***

Under an adaptive management approach, the temporal scale of a potential impact should be considered particularly for undisturbed ecosystems and for K-selected species. Since the temporal scale of an impact is potentially large (i.e., impact detected after considerable time has lapsed), long-term monitoring is critical to detect changes in biological structure (e.g., species diversity) and function (e.g., community replacement processes for a riparian forest stand) in undisturbed ecosystems. As described by Beeby (1993), ecosystems are complex systems composed of ecological components (e.g., individual predators, small mammal populations, plant community, invertebrate community) "nested" into a hierarchy" with each level in the hierarchy comprised of increasing complexity in terms of component interactions and processes.<sup>1</sup> This complexity at higher levels of undisturbed ecosystems helps to regulate disturbances at lower levels of organization (i.e., individual, population, community). As described by Beeby, this characteristic of undisturbed ecosystems conveys an "appearance of constancy" where changes at higher levels of ecological organization (e.g., community level) may occur at a slower rate. To capture these slower changes at higher levels of organization, key indicators of structural and functional integrity at these higher levels need to be monitored over time. After considering the trend in these key indicators, adjustments in management actions may be necessary to mitigate ecological stressors (i.e., impacts).

*2. How can environmental impact analyses be structured to consider adaptive management?*

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<sup>1</sup> Beeby, Alan. 1993. *Applying Ecology*. Chapman and Hall. New York

### **Using the U.S. EPA Ecological Risk Assessment Guidelines**

Rather than consume additional time and resources in “reinventing” another process for an environmental assessment, the U.S. Environmental Protection Agency’s (EPA) technique for ecological risk assessment and decision-making should be the standard framework for conducting an EA under NEPA.<sup>2 3 4</sup> According to EPA, ecological risk assessment is:

...a process for organizing and analyzing data, information, assumptions, and uncertainties to evaluate the likelihood that one or more stressors are causing or will cause adverse ecological effects. Ecological risk assessment provides risk managers with a tool for considering available scientific information when selecting a course of action...

This assessment technique has the following advantages and strengths:

- Was subjected to a public review via the Federal Register in 1996,
- Incorporates stakeholder involvement early in the process to identify statutory authorities and to select measurement and assessment endpoints,
- Utilizes science to link potential stressors (i.e., impacts) to potential biological impairment; and,
- Utilizes iterative monitoring/measurements to reduce the uncertainty of data supporting management decisions and to adjust management decisions.

EPA has invested a substantial amount of time and federal resources to refine, clarify, and provide guidance on the process of conducting an ecological risk assessment. Ecological risk assessment and decision-making is a well-structured and supported approach for determining if a federal (or federally funded) action would significantly affect the environment and, therefore, require an Environmental Impact Statement. This assessment approach also adheres to the adaptive management approach as described originally by Hollings (1978)<sup>5</sup> and not as is frequently practiced with monitoring as a process independent of the management effort.<sup>6 7</sup> In the latter approach, monitoring goals and objectives are formulated in consensus-building and policy-making realm of the management process. In this realm, Ralph and Poole (2002) indicate that monitoring goals and objectives are “scientifically incomplete and ineffective” producing “short-lived” and/or under-funded monitoring programs. This distortion of adaptive management yields inadequate scientific support for management actions. Ralph and Poole (2002) also note that the “socio-political” approach to adaptive management produces best management practices based upon consensus (or political compromise) and/or impasses rather than science.

Thank you for considering these comments. If you have any questions or concerns regarding these, please contact me at 541-687-8798 or syverbay@efn.org.

Sincerely,

Chris Bayham

<sup>2</sup> National Center for Environmental Assessment, U.S. Environmental Protection Agency. See: <http://cfpub.epa.gov/ncea/>

<sup>3</sup> *Guidelines for Ecological Risk Assessment*. 1998. U.S. Environmental Protection Agency (EPA 630-R-95-002F). See: <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12460>

<sup>4</sup> *Stressor Identification Guidance Document*. 2000. U.S. Environmental Protection Agency (EPA 822-B-00-0025). See: <http://cfpub.epa.gov/ncea/cfm/stressor.cfm>

<sup>5</sup> Holling, C.S. (ed.). 1978. *Adaptive Environmental Assessment and Management*. John Wiley, New York

<sup>6</sup> Ralph, Stephen C. and Geoffrey C. Poole. 2002. *Putting Monitoring First: Designing Accountable Ecosystem Restoration and Management Plans*. In: *Restoration of Puget Sound Rivers* (Edited by D.R. Montgomery, S. Bolton, D.B. Booth and L. Wall). University of Washington Press. Seattle, WA

<sup>7</sup> Ralph and Poole (2002) describe Holling’s approach as a “credible scientific foundation by envisioning land-use activities (e.g., laying out timber sales, setting prescribed fire, building roads, stream restoration, and so on) as experimental manipulations that are implemented within the context of well-designed monitoring experiments...to simultaneously generate economic value and scientific understanding of ecosystem response to human activities...”