Information Quality Plan for Long-Term Experimental and Management Plan for Glen Canyon Dam

1. Introduction

This Information Quality Plan is a collaborative product of the U.S. Department of the Interior's Bureau of Reclamation, Upper Colorado Region; henceforth Reclamation, and the National Park Service, henceforth NPS. The two agencies are joint leads in the preparation of an environmental impact statement (EIS) entitled, *Long-Term Experimental and Management Plan for Glen Canyon Dam* (LTEMP EIS). The study area for the LTEMP EIS includes Glen Canyon Dam in Coconino County, Arizona, and downstream areas along the Colorado River in Glen Canyon National Recreation Area and Grand Canyon National Park to the Lake Mead National Recreation Area.

1.2 Notice of Intent

On July 6, 2011, Reclamation (on behalf of Reclamation and NPS) filed a notice of intent (NOI) to prepare the LTEMP EIS. Reclamation and the NPS are the joint lead agencies, and 14 agencies and American Indian tribes are participating as cooperating agencies.

1.3 Information Quality Guidelines

This Information Quality Plan was prepared in compliance with the "Final Information Quality Bulletin for Peer Review" issued by the Office of Management and Budget on December 16, 2004 (hereafter the "OMB Bulletin"). This OMB Bulletin has subsequently been incorporated into the U.S. Department of the Interior information quality guidelines (see References below). The two lead agencies are subject to these guidelines, and they also have their own policies and procedures that will apply to certain components of the NEPA process (NPS 2008, Bureau of Reclamation Information Quality Guidelines, http://www.usbr.gov/main/qoi/guidelines.html). Because this is a joint lead process and a non-delegated Department of the Interior (DOI) EIS, both agencies have agreed to use terminology from the OMB Bulletin as well as from the Environmental Protection Agency (EPA) 2006 guidelines for Peer Review (EPA 2006) rather than bureau specific terminology because the EPA guidelines are complete and consistent with the OMB Bulletin and address and resolve differences between the two lead agencies.

In compliance with the OMB Bulletin and the DOI guidelines, the purpose of this plan is to ensure that the quality of scientific information used in this project conforms to the standards of the scientific and technical community and to ensure that, per the DOI guidelines (see References below), the methods for assuring use of quality information will be made transparent, to the maximum extent practicable, through accurate documentation, use of appropriate internal and external review procedures, consultation with experts and users, and verification of information quality.

The purpose of this plan is also to meet the Council on Environmental Quality's (CEQ) regulatory requirements at 40 CFR 1502.22 and 43 C.F.R. Sec. 46.125 regarding the use of credible scientific evidence in evaluating the reasonably foreseeable significant adverse impacts on the human environment. The CEQ's regulations require that, when the specific information relevant to reasonably foreseeable significant adverse impacts cannot be obtained for certain reasons, the agency's evaluation of such impacts be based on theoretical approaches or research methods generally accepted in the scientific community (40 CFR 1502.22(b)(4)).

For purposes of this plan and in compliance with the CEQ regulations, OMB, Departmental and agency requirements, three categories of information are defined:

1) scientific or technical information,
2) influential scientific information, and
3) highly influential scientific assessments.

As defined by the OMB Bulletin "scientific information" means factual inputs, data, models, analyses, technical information, or scientific assessments related to such disciplines as the behavioral and social sciences, public health and medical sciences, life and earth sciences, engineering, or physical sciences.

“Scientific assessment” means an evaluation of a body of scientific or technical knowledge, which typically synthesizes multiple factual inputs, data, models, assumptions, and/or applies best professional judgment to bridge uncertainties in the available information. These assessments include, but are not limited to, state-of-science reports; technology assessments; weight-of-evidence analyses; meta-analyses; health, safety, or ecological risk assessments; toxicological characterizations of substances; integrated assessment models; hazard determinations; or exposure assessments.

"Scientific and technical work products" are further defined by the EPA (2006) as including risk assessments, technical studies and guidance, analytical methods, scientific database designs, technical models, technical protocols, statistical survey/studies, technical background materials, technical guidance (except for guidance providing policy decisions), research plans, and research strategies. This plan uses the term “scientific and technical information” to equate to “scientific and technical work products”.

“Influential scientific information” is a subset of scientific and technical information defined by OMB as information agencies can reasonably determine to have a clear and substantial impact on important public policies or private sector decisions. OMB also directs agencies to consider the degree of potential economic impact of a scientific assessment in deciding whether it should be categorized as an influential scientific assessment. The EPA defines influential scientific assessments as those scientific assessments that may have an impact of more than $100 million in any year (EPA 2006).

“Highly influential scientific assessment” is a subset of influential scientific information or technical work products that require external peer review. OMB also directs agencies to consider the degree of potential economic impact of a scientific assessment in deciding whether it should be categorized as a highly influential scientific assessment. The EPA defines highly influential scientific assessments as those scientific assessments that may have an impact of more than $500 million in any year (EPA 2006). The OMB Bulletin additionally states that these assessments should be “novel, controversial, or precedent-setting or has significant interagency interest.” The EPA noted (EPA 2006) that Environmental Impact Statements and Records of Decision themselves do not require peer review, though some underlying work products, such as data and analytical models, may require peer review if they are considered influential scientific information or highly influential assessments.

Thus, the main point of this information quality plan for the LTEMP EIS is to explain the process that will be used for determining which work products are influential or highly influential and require peer review, and how that peer review will be approached if and when needed. The three levels of involvement discussed in this plan are public review, peer input (internal peer review) and external peer review.

1.4 Public Review and Comment on EIS

In compliance with CEQ regulations, the Draft EIS will be circulated to persons, organizations and agencies. This public review is not intended to take the place of any peer reviews deemed to be necessary. Of course, substantive and relevant public comments may be provided as part of a review package to peer reviewers if such information would assist with a peer review. The Environmental Impact Statement (EIS) and the Record of Decision are not scientific or technical work products and in their entireties will not be subject to peer review.

1.5 Peer Input for Scientific Information

A variety of scientific and technical work products will be used in the preparation of the EIS. Most of these work products are existing studies, models or assessments that have already undergone scientific peer review, and where that is the case, that existing peer review will be documented. Information that does not rise to the level of influential scientific information or highly influential scientific assessments does not necessarily require external peer review, but it might require what EPA calls peer input or peer consultation (EPA 2006) and, in some cases, what other agencies might call internal peer review. This would involve interaction during the development of the EIS, providing an open exchange of data, insights, and ideas. Peer input may be characterized by a continued and iterative interaction with scientific experts during scientific work product development.

Peer "input: is generally internal and peer "review" is generally external (independent of the work unit that produced the scientific work product). The key distinction between reviewers for peer input and peer review is the independence of the peer reviewers and their level of involvement (EPA 2006).

The decision as to which work products are or are not influential or highly influential and whether peer input or peer review is required will be a joint lead agency decision and will consider advice from the project science manager assigned by the U.S. Geological Survey (USGS). The OMB Bulletin does not require scientific information that is not influential or highly influential to be peer reviewed through an external process. For the LTEMP EIS, there is an extensive interdisciplinary team of experts within the USGS Grand Canyon Monitoring and Research Center (GCMRC), Bureau of Reclamation, National Park Service, Argonne National Laboratory, and cooperating agencies with relevant expertise who may be involved in internal peer input based on internal agency review policy, or by joint lead decision for specific work products. Nothing in this information quality would preclude the joint lead agencies from voluntarily seeking peer review for a work product even if it is not required by the OMB Bulletin or DOI guidelines.

There are certain work products which may become part of the LTEMP process or be related to the process, but which are originally GCMRC or GCDAMP documents that are anticipated to undergo peer input by the stakeholders in the GCDAMP or peer review by the "Science Advisors" to that Federal Advisory Committee. Some socioeconomic studies that originate in the GCDAMP that may be used in the LTEMP EIS and some of the GCMRC's long term scientific monitoring plans are expected to undergo this peer input or review process prior to being approved for use in the LTEMP EIS.

2. The Peer Review Process

Work products rising to the level of influential scientific information or highly influential scientific assessments that may be used for the *Long-Term Experimental and Management Plan Environmental Impact Statement for Glen Canyon Dam* have not yet been identified. The first step in determining which scientific work products would require external peer review is to identify those products that

are scientific and/or technical information per the OMB Bulletin (see also EPA 2006). The subset from this group of products that is identified as influential or highly influential and that has not already had external peer review relevant to this project will be submitted to external peer review according to provisions in the OMB Bulletin. Per the OMB Bulletin and EPA and DOI guidelines, the draft EIS, the final EIS and the Record of Decision are not subject to external peer review.

2.1 External Peer Review Decisions

Following OMB, DOI and EPA guidance, all 'influential and highly influential' scientific and technical work products used in agency decision-making will be peer reviewed. The program managers for the two joint lead agencies will identify, based on input from the appropriate staff within their agencies and from the USGS science manager, which work products they believe meet the criteria for influential and highly influential scientific information and that have not yet had appropriate external peer review. The program managers will forward their list of identified work products that may need peer review to upper management in each agency (the Regional Director for Reclamation and the LTEMP Executive Team for the NPS). The joint lead agency decision will be based on agreement by the upper management from both bureaus.

The following criteria will be used to determine which products, when considered individually and by themselves, will require external peer review (from EPA 2006):

a) Establishes a significant precedent, model, or methodology;
b) Likely to have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, Tribal, or Local governments or communities;
c) Addresses significant controversial issues;
d) Focuses on significant emerging issues;
e) Has significant cross-Agency/interagency implications;
f) Involves a significant investment of Agency resources;
g) Considers an innovative approach for a previously defined problem/process/methodology;
h) Satisfies a statutory or other legal mandate for peer review.

Additional details on economic and social science work products requiring peer review is incorporated by reference from EPA (2006, pp. 34-37).

For engineering work or any proposed modifications to Glen Canyon Dam, Reclamation's policies will apply. NPS and Argonne policies may apply to specific work products as well.

2.2 Anticipated Number of Reviewers.

The final determination of the number and types of reviews and reviewers required will also be made by team consensus. The number of reviewers may vary as required but in no case will be fewer than two.

2.3 Primary Review Disciplines and Expertise.

The process of choosing the needed peer reviewers will be made by the joint lead agencies, in association with the USGS science manager, and in coordination with individual agency policies and procedures and appropriate staff. Per the EPA guidelines (EPA 2006), decisions about the independence of reviews will be reviewed on a case by case basis following the OMB Bulletin and EPA guidelines.

3 Publication of Peer Review Documentation.

In compliance with OMB and agency transparency requirements, documentation for influential or highly influential peer reviews will be posted to the appropriate agency's peer review website or the joint agency project website and will allow for public comment. In addition, this Information Quality Plan will also be posted to each peer review website and the LTEMP project website.

References

U.S. Environmental Protection Agency, 2006. Peer Review Handbook. 3rd edition. Accessed on line.

DOI Departmental Manual. Integrity of Scientific and Scholarly Activities. January 28, 2011 (305 DM 3)

Code of Federal Regulations - Title 43: Public Lands: Interior: (40 CFR 1502.22 and 43 C.F.R. Sec. 46.125)

DOI Information Quality Guidelines and the Information Quality Act (P.L. 106-554 26 Section 515) and associated OMB Guidelines (67 FR 8452-8460)

Executive Order 12866 of September 30, 1993: Regulatory Planning and Review (E.O. 12866)

OMB Final Information Quality Bulletin for Peer Review (70 FR 2664-2677)

Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines. January 31, 2008. NPS.

Directors Order #79: Integrity of Scientific and Scholarly Activities. September 19, 2012.

Bureau of Reclamation Information Quality Guidelines, http://www.usbr.gov/main/qoi/guidelines.html