Peer Review Processes

Peer Review Process: The IRG provides input and approval of the ATR Process for the POS. In general Agency Quality Control (AQC) and Technical (ATR) reviews will follow the Peer Review processes as outlined in the work performing agency guidance.

A summary of POS relevant processes from the USGS and USACE are provided below with links to their respective complete Peer Review guidance provided for reference. Peer Review process documentation from other performing organizations and contractors will be provided as they become available for specific products.

USACE Review Policy Excerpted:

DEPARTMENT OF THE ARMY EC 1165-2-214

U.S. Army Corps of Engineers

Washington, D.C. 20314-1000

5. Policy.

a. It is the policy of USACE that all of its planning, engineering and scientific work will undergo an open, dynamic, and rigorous review process. Technical, scientific and engineering information that is relied upon to support recommendations in decision documents or form the basis of designs, specifications, and/or O&M requirements will be reviewed to ensure technical quality and practical application.

Review approaches will be scalable and customized for each effort, commensurate with the level of complexity and relative importance of the actions being supported. All decisions on the types and scopes of review required on a particular product will be risk-informed … and documented.

Depending on the particular circumstances, reviews may be managed entirely within USACE or in various combinations with external parties. In cases requiring the most independence, the management of the review will be performed by an organization other than USACE and will involve independent experts…

All civil works planning, engineering, and O&M products must undergo review. As illustrated in Figure 1, all products shall undergo District Quality Control/Quality Assurance (DQC), described in paragraph 8 below. A subset of these work products will undergo Agency Technical Review (ATR).

Peer Review Guidance EC 1165-2-214 will be provided in an appendix and can be found online at: http://www.usace.army.mil/Missions/Civil-Works/Review-Policy/

U.S. PEER REVIEW GUIDELINES

Policy

Peer review is required for virtually all science information products regardless of media, whether published and disseminated by the USGS or by an outside entity if the author has full time, part time, or volunteer (including emeritus) USGS affiliation or shared affiliation (for example, between the USGS and a university).

The USGS defines peer review (also referred to as technical peer review, refereeing, or scientific peer review) as scrutiny of work or ideas by colleagues (peers) who are qualified.

A minimum of two scientific peer reviews by qualified peers is mandatory for all USGS science information products that require peer review. Depending on the product and the intended audience, more than two peer reviews may be necessary.

Involvement of non-USGS authors does not allow USGS authors to bypass the USGS peer review process. When a non-USGS author is the lead or senior author and a USGS scientist is a co-author, the USGS scientist must comply with USGS peer review requirements in this chapter or the USGS scientist may not be listed as a coauthor.

To safeguard unpublished USGS scientific information that has not received Bureau approval (refer to SM 502.5), authors must include the nondisclosure disclaimer statement in manuscripts that are to be sent to outside entities, such as peer reviewed journals for review.

Peer reviewed information products submitted for Bureau approval must include the original comments from all peer reviewers, reconciliation indicating how review comments were addressed, and the revised manuscript after reconciliation.

USGS information products intended for release in outside peer reviewed journals also require a minimum of two peer reviews. These peer reviews may be obtained in one of two ways: [1] both reviews are initiated and reconciled by the USGS and Bureau approval is obtained before submittal to the journal or [2] one review is initiated by the USGS, one review is initiated by the journal, and Bureau approval is obtained after all initial peer reviews are reconciled but before returning the reconciled manuscript to the journal.

Although different from peer review, specific quality-related reviews are required for data and software.

Peer Review Obligations

USGS Reviewer Selection

Peer reviewers of USGS information products may be external or internal to the Bureau. Peer reviewers should be selected for their relevant scientific and technical expertise. Peer reviewers will be from outside the project team in which the research was conducted or from outside the USGS as appropriate. Peer reviewers should not be cooperators or collaborators on the product.

Peer Reviews Are Rigorous and Thorough. Peer reviewers typically evaluate or critique the clarity of hypotheses, the validity of the research design, the quality of data collection procedures, the robustness of the methods employed, the appropriateness of the methods for the hypotheses being tested, the extent to which the conclusions follow from the analysis, and the strengths and limitations of the overall product. Reviewers should check that methods used to collect data and produce results are defensible and adequately documented; facts and interpretations are presented straightforwardly, without apparent bias; conclusions are based on the best available data interpreted with sound scientific reasoning that avoids speculation; forecasts and predictions of natural hazards are scientifically sound; and the manuscript is clear in presentation.

Reviewer Ethics and Conduct. The USGS pursues vigorous and open peer review of its science and its information products. Issues related to ensuring scientific excellence, objectivity, integrity, and conflict of interest are dealt with in accordance with the USGS code of scientific conduct.

Peer Reviews Are Deliberative and Pre-decisional. The final peer reviewed and Bureau-approved information product represents the agency's best scientific interpretation and factual data on the subject at that time. Peer review of USGS manuscripts is intended to ensure the accuracy of data, the scientific validity of interpretations, and the consideration of alternative interpretations.

Nondisclosure Prior to USGS Approval for Release. In agreeing to be a peer reviewer for a USGS information product, reviewers must agree to be bound by the strictest scientific ethics in ensuring confidentiality of the science that is being reviewed and to not disclose or divulge any results or conclusions or to make any public statements regarding the science before the science is published.

For more detail on USGS Peer Review: https://www2.usgs.gov/usgs-manual/500/502-3.html