

# Peer Review and Information Quality Plan for the Paradox Valley Unit Alternatives Study Environmental Impact Statement

## 1. Introduction

This Peer Review and Information Quality Plan for the Paradox Valley Unit Alternatives Study Environmental Impact Statement (Plan) has been developed by the U.S. Department of the Interior’s Bureau of Reclamation, Upper Colorado Region (Reclamation). Reclamation is the lead federal agency for preparation of an environmental impact statement entitled Paradox Valley Unit Alternatives Study Environmental Impact Statement (EIS). Inquiries regarding the specifics of this plan may be directed to Grand Junction’s Western Colorado Area Office Environmental and Planning Group Chief, Lesley McWhirter, at (970)248-0608 or [lmcwhirter@usbr.gov](mailto:lmcwhirter@usbr.gov).

## 2. Purpose and Definitions

This Plan was prepared in compliance with 70 FR 2664-2677 “Final Information Quality Bulletin for Peer Review” issued by the Office of Management and Budget (OMB) on December 16, 2004 (OMB Bulletin) (OMB 2004). The OMB Bulletin has subsequently been incorporated into the U.S. Department of the Interior (Department) information quality guidelines. Reclamation is subject to these guidelines, and also has its own policy and procedures that will apply to certain components of the National Environmental Policy Act (NEPA) and Reclamation policy CMP P14, “Peer Review of Scientific Information and Assessments” (Reclamation policy) (Reclamation 2016).

Consistent with the OMB Bulletin and Departmental and agency 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 Departmental guidance, the methods for producing 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 also is to meet the Council on Environmental Quality’s (CEQ) regulatory requirements at 40 CFR § 1502.22, 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 impact cannot be obtained for certain reasons, the agency’s evaluations of such impacts is to be based on theoretical approaches or research methods generally accepted in the scientific community (CEQ 1986).

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

- 1) scientific information
- 2) influential scientific information
- 3) highly influential scientific assessments, and
- 4) exempt information.

As defined by the OMB Bulletin, “scientific information” means factual inputs, data, models, analyses, technical information, or scientific assessments based on the behavioral and social sciences, public health and medical sciences, life and earth sciences, engineering, or physical sciences. This includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. This definition includes information that an agency disseminates from a web page, but does not include the provision of hyperlinks to information that other disseminate. This definitely does not include opinions, where the agency’s presentation makes clear that what is being offered is someone’s opinion rather than fact or the agency’s views.

“Scientific assessment” is defined by the OMB Bulletin as an evaluation of a body of scientific or technical information that 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 Environmental Protection Agency (EPA) in the 2015 “Science and Technology Policy Council’s Peer Review Handbook, 4<sup>th</sup> edition,” 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. The term “scientific and/or technical work” is generally consistent with the term “scientific information” in the OMB Bulletin. (EPA 2015)

As defined by the OMB Bulletin, “influential scientific information” is a subset of scientific information that the applicable agency director can reasonably determine does have a clear and substantial impact on the agency or other known public policies or private sector decisions.

“Highly influential scientific assessment,” as defined by the OMB Bulletin, is a subset of scientific information that could have a potential impact of more than \$500 million in any year, or which is novel, controversial, or precedent-setting, or has significant agency interest. A scientific assessment of this type requires external peer review.

“Exempt information,” in accordance with the OMB Bulletin, includes among other things, information whose dissemination arises in adjudications and permit proceedings, unless the agency, in its discretion, determines that peer review is practical and appropriate and that the

influential dissemination is scientifically or technically novel (i.e., a major change in accepted practice) or likely to have precedent-setting influence on future adjudications or permit proceedings. This exclusion is intended to cover, among other things, licensing, approval and registration processes for specific product development activities as well as site specific activities.

The main purpose of this Plan for the Paradox Valley Unit Alternatives Study EIS is to explain the process that will be used for determining which work products will require peer review, and how that peer review will be approached. The four levels of involvement discussed in this plan are public review, peer input, internal peer review, and external peer review. For Reclamation and the Cooperating Agencies, it is anticipated the large majority of scientific information which will be used during preparation of the EIS is Exempt Information excluded from the OMB Bulletin requirements or which does not otherwise meet the criteria for external peer review set forth in Section 4.

### 3. Information Quality Guidelines

#### 3.1 Public Review and Comment on EIS

In compliance with CEQ regulations, the Draft and the Final EIS will be circulated to persons, organizations and agencies. These public reviews are not peer reviews. As the EPA noted, peer review and public comment are mutually exclusive. 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. Decision documents, including but not limited to the EIS (draft or final) and the Record of Decision, are not scientific or technical work products and will not be subject to peer review; however, underlying scientific and technical work products used in the EIS may be candidates for peer review. (EPA 2015)

#### 3.2 Peer Input for Scientific Information

A variety of scientific and technical work products will be used and cited, or their conclusions will be summarized in the EIS. Many are existing studies or assessments that have already undergone scientific peer review and, where that is the case, it will be documented. Information that does not rise to the level of influential scientific information or highly influential scientific assessments does not require peer review, but it might require what EPA calls peer input or peer consultation (EPA 2015). This connotes an interaction during the development of the EIS, providing for 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. Examples of work products that will be subject to peer input include cultural resource survey reports, biological field survey reports, or collection and summation of U.S. Census data used to characterize socio-economic conditions of affected communities. Reclamation will decide, with input from the Cooperating Agencies and advice from Reclamation's Director, Office of Research and Development (R&D Director) when necessary, which work products are neither influential nor highly influential and will require

only peer input at most. The OMB Bulletin does not require scientific information that is not influential or highly influential to be peer reviewed. For the EIS, there is an extensive interdisciplinary team of experts within Reclamation, and among the Cooperating Agencies and other federal action agencies, who may be involved in internal peer input based on internal agency review policy, or by the agencies' agreement for specific work products.

### 3.3 Internal Peer Review Process

The goal of peer review is to obtain an independent, third-party review of the product from experts in the relevant scientific disciplines having applicable technical expertise. In order to be independent, peer review requires that the reviewers have not participated in development of the work product being reviewed (OMB 2004, pp. 17-20). Scientific or technical work products that are less complex, novel, or controversial, or have a lower impact but nevertheless constitute non-exempt influential scientific information may be peer reviewed using internal federal government experts as long as the reviewers did not participate in the development of the work product. Examples of internal peer review include, but are not limited to the following:

- (a) Individual scientists or appropriately accredited experts employed by Reclamation or the Cooperating Agencies who did not participate in the development of the work product or the use of the work product in the EIS;
- (b) Individual scientists or appropriately accredited experts from other federal bureaus or offices;
- (c) An *ad hoc* panel of independent experts from within Reclamation, the Cooperating Agencies, and/or other federal bureaus or offices.

Internal peer review comments will be documented and saved as part of the EIS administrative record.

### 3.4 External Peer Review Process

Depending upon whether a scientific or technical work product is influential or highly influential, the product may need to be peer reviewed by external experts outside the federal government. External peer review mechanisms range from individual letter reviews by outside scientists or accredited technical experts, to a panel review by independent experts outside the federal government. The level and intensity of peer review should match the impact and complexity of the work product being reviewed. Peer reviewers shall be selected based on expertise, experience and skills, including specialists from multiple disciplines as necessary.

External peer reviewers will prepare a report that describes the nature of their review and their findings and conclusions which discloses the names of the reviewer(s) and organizational affiliation(s). Reclamation will discuss the external peer review in the EIS and post the report on the EIS website.

## 4. Peer Review Decisions

### 4.1 Second Well Alternative Investigations

The second well investigations will result in multiple reports based on scientific information, including data, models, analyses, technical information, and scientific assessments from the engineering and physical sciences. The results will be used as the basis for documents prepared pursuant to NEPA, and will inform decisions made by Reclamation regarding development of an alternative to the Paradox Valley Unit Injection Well #1. The reports are not expected to have a clear and substantial impact on important public policies or private sector decisions. These reports will be produced by Reclamation's Technical Services Center (TSC) technical, scientific and engineering staff, as well as by contractors. Prior to the preparation of the draft EIS, the results of these studies will be disseminated to the Colorado River Basin Salinity Control Forum (Forum), Colorado River Basin Salinity Control Forum Work Group (Work Group), and Cooperating Agencies for peer input.

Two types of external independent peer review are planned, including a panel review of all topics by a Consultant Review Board (CRB), and publication in a peer-reviewed scientific journal of selected topics. A CRB consisting of 4-8 members in the fields of deep-well drilling, petroleum engineering, petroleum/structural geology, seismic reflection, rock mechanics, and/or induced seismicity is expected to be empaneled by March 2017. The CRB will be charged with conducting an external review all of the studies. CRB members will be selected by Reclamation using a competitive contracting process. Submittal of selected studies to peer-reviewed journals is expected to be completed by April 2017, with publication later in 2017. It is not expected that the public will directly participate in the peer review, although all reports, journal articles, and the CRB's report will be made available to the public on Reclamation's web site. Reclamation will prepare an accountability report documenting Reclamation's responses to all CRB comments and recommendations.

Topics of planned studies are listed in the table below, along with the planned external review methods. Internal reports produced by Reclamation will also undergo internal peer review.

<b>Topic</b>	<b>Planned External Review Methods</b>
Pressure-flow modeling	CRB; peer-reviewed journal
Seismic reflection data	CRB
Aeromagnetic data	CRB
Well-logging data	CRB
INSAR data	CRB
Integrated geologic model	CRB; peer-reviewed journal
Geologic feasibility	CRB; peer-reviewed journal
Geomechanical & Flow Modeling	CRB; peer-reviewed journal

The second well investigation studies are not expected to have a clear and substantial impact on important public policies or private sector decisions. Because these studies are not considered influential scientific information, peer review is not required; however, Reclamation will elicit peer review for these studies. Peer review will be beneficial to Reclamation because it will

enhance the quality of scientific information produced, used, and disseminated by Reclamation. The external peer review planned for these studies goes above the requirements set forth for information that does not rise to the level of influential scientific information or highly influential scientific assessments; however, it is expected to result in increased credibility of the decisions to which this scientific information will contribute, and would be both cost effective and beneficial in defining the risk associated with implementing a second injection well in the Paradox Valley.

#### 4.2 Evaporation Pond Alternative Investigations

The evaporation pond investigation consists of four parts: the Hydrogen Sulfide Management Study, the Pond Design Optimization Study, the Brine Disposal Study, and the Ecological Risk Assessment. These studies will result in multiple reports which will be utilized in the NEPA process to help inform a decision on the preferred alternative to pursue for the Paradox Valley Unit. Prior to the preparation of the draft EIS, the studies will be disseminated to the Forum, Work Group, and Cooperating Agencies.

The Hydrogen Sulfide Management Study requires an Architectural and Engineering (A&E) firm to recommend a method to manage and remove hydrogen sulfide which is in the brine. A bench test will be conducted of the proposed process to demonstrate the viability. As hydrogen sulfide is a naturally occurring compound which is commonly dealt with in industries such as oil and gas production, it is not anticipated the solution for removing it from the brine will be novel or precedent setting. It is also not anticipated the solution will have a clear or substantial impact on important public policies or private sector decisions.

The Pond Design Optimization Study requires an A&E firm to propose an optimal strategy to design and operate evaporation ponds to dispose of 300 gallons per minute (GPM) of brine. This analysis shall not employ proprietary software unless that software is commercially available. The design shall be optimized for the location of the Paradox Valley Unit and include life cycle costs for 50 years. As evaporation ponds are utilized throughout the world for salt and bittern production, it is not anticipated the design of the ponds will be novel or precedent setting. It is also not anticipated the design will have a clear or substantial impact on important public policies or private sector decisions.

The Brine Disposal Study requires an A&E firm to evaluate the possible methods of disposal for 300 GPM of brine or the solid byproduct generated. This shall include evaluating the potential to develop a market for the brine or byproducts as well as identifying other disposal methods. It is not anticipated the Paradox Valley brine contains rare or unique chemistry which would produce highly valuable byproducts. Therefore, it is not anticipated the byproduct disposal methods will be novel or precedent setting. It is also not anticipated the solution will have a clear or substantial impact on important public policies or private sector decisions.

The Ecological Risk Assessment requires an A&E firm to conduct a predictive ecological risk assessment to evaluate the severity and extent of potential ecological impacts of an evaporation pond alternative on birds and other wildlife, as well as propose mitigation measures which will minimize ecological risk. This assessment will be conducted utilizing commercially available

scientific information, and mitigation measures are not anticipated to be novel or precedent setting. Therefore, it is not anticipated that the assessment will have a clear or substantial impact on important public policies or private sector decisions.

The Hydrogen Sulfide Management, the Pond Design Optimization, Brine Disposal, and Ecological Risk Assessment studies are all based upon commercially available scientific information and technology, and are not expected to have a clear and substantial impact on important public policies or private sector decisions. Because these studies are not considered influential scientific information, peer review is not required; however, Reclamation will elicit peer input for these studies. Peer input by the Cooperating Agencies and other reviewers will be beneficial to Reclamation because it will enhance the quality of scientific information produced, used, and disseminated by Reclamation.

#### 4.3 Brine Crystallization Alternative Investigations

The brine crystallization technology investigation will consist of a compilation of existing technologies which have the capability of separating salts as a solid waste product from liquid brine. This information will be derived based upon publically available technology literature. As part of the alternative investigation, commercial vendors who provide products with these technologies will be contacted with an information request. The information request will include topics such as the total life cycle cost of implementation, environmental impacts, chemical demand, reliability, and waste byproduct formation rate and composition. Vendors will also be asked if their technology can address hydrogen sulfide risks, which is a concern for human exposure and equipment corrosion. This information will be collected and evaluated by a team of engineers and scientists from the TSC. The TSC will evaluate the technologies and associated vendor responses for applicability to the Paradox Valley Unit Salinity Control Project.

It is anticipated that some of the technologies identified and determined to be reasonable during the brine crystallization technology investigation will warrant further investigation at a demonstration stage in order to verify the effectiveness of the proposed technology(s). Operation of one full-scale unit of one or two technologies for multiple months will provide information necessary to determine if the implementation of multiple full-scale units of each technology should be further considered as an alternative in this EIS.

The products and systems evaluated in the brine crystallization investigations are all based upon commercially available scientific information and technologies, and are not expected to have a clear and substantial impact on important public policies or private sector decisions. Because these studies are not considered influential scientific information, peer review is not required; however, Reclamation will elicit peer input for these studies. Peer input by the Cooperating Agencies and other reviewers will be beneficial to Reclamation because it will enhance the quality of scientific information produced, used, and disseminated by Reclamation.

#### 4.4 Value Planning Study

Once the second well, evaporation pond, and brine crystallization studies are complete and the reports submitted, a Value Planning Study will be performed. A Value Planning Study uses the

Value Method to optimize alternatives. The Value Method is a systematic and organized way to develop and compare alternatives which provide all of the essential functions for the desired project with the greatest project efficiency, economy, quality, and the least delay. The value method produces recommendations. The outcome of the Value Planning Study will be reflected in the Draft EIS, which will be distributed to Cooperating Agencies and the public.

The recommendations produced by the Value Planning Study are all based on commercially available scientific information and technology, and are not expected to have a clear and substantial impact on important public policies or private sector decisions. Because this study is not considered influential scientific information, peer review is not required.

## 5. Peer Review Plan

### 5.1 Second Well Alternative Peer Review Plan

The second well investigation studies meet the definition of scientific information and therefore do not require peer review. However, Reclamation intends to conduct external and internal peer review as well as elicit peer input from the Forum, Workgroup, and Cooperating Agencies. These studies are scheduled to be conducted with draft reports disseminated during the following timeframes:

<b>Study</b>	<b>Study Timeframe</b>	<b>External Review Dissemination</b>	<b>Peer Input Dissemination</b>
Pressure Flow Modeling	6/2014 – 10/2015	1/2015 – 12/2015	7/2017
Seismic Reflection Data	6/2015 – 11/2016	3/2017	7/2017
Aeromagnetic Data	3/2016 – 11/2016	3/2017	7/2017
Well-Logging Data	6/2015 – 11/2016	3/2017	7/2017
INSAR Data	1/2016 – 9/2016	3/2017	7/2017
Integrated Geologic Model	6/2016 – 2/2017	3/2017	7/2017
Geologic Feasibility	6/2015 – 3/2017	3/2017	7/2017
Geomechanical & Flow Modeling	10/2016 – 3/2017	3/2017	7/2017

Peer input will be requested from 18 Cooperating Agencies, and Forum and Work Group members from the seven Colorado River basin states, and will have a duration of approximately one month. Peer input will be obtained from individuals with backgrounds encompassing a multitude of disciplines who are associated with agencies who have jurisdiction and/or subject matter expertise over various resources analyzed in the EIS.

External review will be conducted for all the second well studies. Reclamation intends to solicit independent external panel review of all topics by a CRB, and publication in a peer-reviewed scientific journal of selected topics. Reviewers will be selected by Reclamation; outside organizations will not be asked to nominate potential peer reviewers. The CRB will consist of a highly-qualified panel of experts which will be selected through a competitive procurement process. Each proposed panel member will be evaluated by a Reclamation technical review team to determine the most qualified expert within each field. The top-ranked experts will be selected independent of the contractor (i.e., the panel may consist of experts from multiple contractors).

The overall scope of the external review is to provide expert review and recommendations of the scientific information used to establish the 2<sup>nd</sup> well alternative. The charge of the reviewers is to provide such a review. The reviewers will not provide advice on a policy or decision, such as the amount of uncertainty that is acceptable or the amount or precaution that should be embedded in an analysis, as such considerations are the purview of Reclamation. Study-specific primary disciplines or expertise needed during external review and the scope of the peer review/charge to the reviewers is outlined in the table below:

<b>Study</b>	<b>Anticipated Number of Reviewers</b>	<b>Primary Disciplines or Expertise Needed in Review</b>	<b>Scope of Peer Reviewers/ Charge to Reviewers</b>
Pressure Flow Modeling	7	Geomechanics, Rock Mechanics, Flow Modeling, Seismology, and Deep Well Injection	Review recent studies and professional publications, identify any analysis found to be inadequate, comment/make recommendations on any technical issues or concerns not addressed.
Seismic Reflection Data	3	Seismic Reflection Geophysics, Petroleum Geology, Structural Geology	Are the seismic reflection data, processing, and interpretation adequate to characterize the sedimentary structure of the region for the purposes of selecting potential second-well sites?
Aeromagnetic Data	3	Geophysics, Petroleum Geology, Structural Geology	Are the aeromagnetic data, processing, and interpretation adequate to characterize the basement structure of the region for the purposes of selecting potential second-well sites?
Well-Logging Data	3	Geophysics, Petroleum Geology, Structural Geology	Are the well-logging data adequate to interpret the seismic reflection data and to characterize the reservoir properties of the region, for the purposes of selecting potential second-well sites?
INSAR Data	3	Geophysics, INSAR, Structural Geology	Are the INSAR data adequate to interpret areas of potential uplift resulting from operations from the current injection well?
Integrated Geologic Model	3	Geophysics, Petroleum Geology, Structural Geology	Are the data, processing, and interpretations adequate to characterize the geologic structure of the region for the purposes of selecting potential second-well sites?
Geologic Feasibility	3	Seismology, Geophysics, Petroleum Geology, Structural Geology, Reservoir Engineering, Rock Physics	Are the data, processing, and interpretations adequate to characterize the geologic feasibility of selecting potential second-well sites?
Geomechanical & Flow Modeling	3	Geophysics, Petroleum Geology, Structural Geology	Are the data, processing, and interpretations adequate to characterize the geomechanical and flow structure of the region for the purposes of selecting potential second-well sites?

## 5.2 Evaporation Pond Alternative Peer Review Plan

The hydrogen sulfide management study, pond design optimization study, byproduct disposal study, and ecological risk assessment meet the definition of scientific information and therefore

do not require peer review. However, Reclamation intends to elicit peer input from the Forum, Workgroup, and Cooperating Agencies. These studies are scheduled to be conducted February 2016 to December 2016, with a draft report disseminated for peer input in June 2016. Peer input will be requested from 18 Cooperating Agencies, and Forum and Work Group members from the seven Colorado River basin states, and will have a duration of approximately one month.

Peer input will be obtained from individuals with backgrounds encompassing a multitude of disciplines who are associated with agencies who have jurisdiction by law or special expertise regarding various resources analyzed in the EIS. These reviewers are selected by Reclamation, and have not been designated by an outside organization. The public will not be asked to nominate potential peer reviewers. Reclamation will elicit peer input from the Forum, Work Group, and Cooperating Agencies during the studies' work product development in the form of promoting an open exchange of data, insights, comments, questions, and ideas from the inputters. The inputters will not provide advice on a policy or decision, such as the amount of uncertainty that is acceptable or the amount or precaution that should be embedded in an analysis, as such considerations are the purview of Reclamation.

### 5.3 Brine Crystallization Alternative Peer Review Plan

The brine crystallization technology assessment and demonstration project meet the definition of scientific information and therefore do not require peer review. However, Reclamation intends to elicit peer input from the Forum, Workgroup, and Cooperating Agencies. The assessment is scheduled to be conducted November 2015 to March 2016, with a final report disseminated for peer input in the summer of 2016. The demonstration project schedule is unknown at this time. Peer input will be requested from 18 Cooperating Agencies, and Forum and Work Group members from the seven Colorado River basin states, and will have a duration of approximately one month.

Peer input will be obtained from individuals with backgrounds encompassing a multitude of disciplines who are associated with agencies who have jurisdiction by law or special expertise regarding various resources analyzed in the EIS. These reviewers are selected by Reclamation, and have not been designated by an outside organization. The public will not be asked to nominate potential peer reviewers. Reclamation will elicit peer input from the Forum, Work Group, and Cooperating Agencies during the studies' work product development in the form of promoting an open exchange of data, insights, comments, questions, and ideas from the inputters. The inputters will not provide advice on a policy or decision, such as the amount of uncertainty that is acceptable or the amount or precaution that should be embedded in an analysis, as such considerations are the purview of Reclamation.

### 5.4 Value Planning Study

The Value Planning Study meets the definition of scientific information and therefore does not require peer review. However, Reclamation intends to elicit peer input from the Forum, Workgroup, and Cooperating Agencies. The study schedule is anticipated to be within the first half of calendar year 2018. Peer input will be requested from 18 Cooperating Agencies, and

Forum and Work Group members from the seven Colorado River basin states, and will have a duration of approximately one month.

Peer input will be obtained from individuals with backgrounds encompassing a multitude of disciplines who are associated with agencies who have jurisdiction by law and/or specific expertise regarding various resources analyzed in the EIS. These reviewers are selected by Reclamation, and have not been designated by an outside organization. The public will not be asked to nominate potential peer reviewers. Reclamation will elicit peer input from the Forum, Work Group, and Cooperating Agencies during the studies' work product development in the form of promoting an open exchange of data, insights, comments, questions, and ideas from the inputters. The inputters will not provide advice on a policy or decision, such as the amount of uncertainty that is acceptable or the amount or precaution that should be embedded in an analysis, as such considerations are the purview of Reclamation.

### 5.5 Design, Estimating, and Construction (DEC) Review

A DEC Review is an internal peer review process which will be utilized by Reclamation as a component of the peer review plan for this EIS. DEC Reviews are internal independent expert team oversight reviews of large Reclamation technical projects. DEC Reviews are conducted by a panel consisting of a team leader, four to five team members, and occasionally technical advisors. The objective of a DEC Review is to ensure that project cost estimates are appropriate, there are no major technical flaws, that project risks and uncertainties are identified and addressed, and executive-level management decisions and products are sound at both the project and corporate levels. A DEC Review of the project costs will be completed for the preferred alternative once the preferred alternative is identified. This review will occur after public comments on the Draft EIS have been incorporated, and is anticipated to take approximately one week to complete.

### 5.6 Draft EIS Quality Assurance and Quality Control

The Draft EIS will undergo quality assurance and quality control (QA/QC) management and quality improvement activities in an effort to ensure quality standards are met in accordance with various laws, regulations, and policies. An internal QA/QC review will be conducted by Reclamation in tandem with the Draft EIS development. Reclamation will also be conducting a final QA/QC review of the completed Draft EIS prior to dissemination. This final internal review is anticipated to begin in July 2018 and extend for a period of three months. Reclamation will elicit peer input from the Cooperating Agencies, Forum, and Workgroup on the Draft EIS during development, as well as requesting comments on the disseminated document. In addition, the Draft EIS will be disseminated for public review and comment for a period of approximately 60 days (anticipated schedule includes public comment between October to December 2018).

## 6. Potential for Additional Studies

The potential exists that a need for additional studies may be identified at a future point during the development of the EIS. It is unlikely that any potential studies will reach the level of influential scientific information or highly influential scientific information. In the event

additional studies are required, Reclamation will elicit peer input as described throughout this Peer Review Plan, and the Peer Review Plan will not be updated. In the unlikely event additional studies are required which will result in influential scientific information or highly influential scientific information, Reclamation will update this Peer Review Plan.

## 7. Publication of Peer Review Documentation

In order to be compliant with OMB's transparency requirements, documentation for influential or highly influential peer reviews will be posted to the Paradox Valley Unit Alternatives Study EIS website and/or Reclamation's peer review website. While none of the studies identified for the EIS investigations are anticipated to rise to the level of influential, Reclamation plans on publishing the finalized studies to the EIS website.

## References Cited

- CEQ 1986. Council on Environmental Quality. National Environmental Policy Act Regulations; Incomplete or Unavailable Information, Final Rule. Federal Register Vol. 51, No. 80. April 25, 1986. Web Accessed June 7, 2016.  
<https://www.law.cornell.edu/cfr/text/40/1502.22>.
- EPA 2015. U.S. Environmental Protection Agency, Science and Technology Policy Council. Peer Review Handbook, 4<sup>th</sup> Edition. Web Accessed June 7, 2016.  
<https://www.epa.gov/osa/peer-review-handbook-4th-edition-2015>.
- OMB 2004. Executive Office of the President, Office of Management and Budget to Heads of Departments and Agencies. December 16, 2004. Issuance of OMB's "Final Information Quality Bulletin for Peer Review." Web Accessed June 7, 2016.  
<https://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-03.pdf>.
- Reclamation 2016. Reclamation Manual Policy CMP P14. Peer Review of Scientific Information and Assessments. Web Accessed June 7, 2016.  
<http://www.usbr.gov/recman/cmp/cmp-p14.pdf>.